

[MS-EXSPWS3]:

Excel Calculation Web Service Version 3 Protocol

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1 Introduction

The Excel Calculation Web Service Version 3 Protocol enables communication between a protocol client that displays workbooks for viewing and editing with a protocol server that loads and calculates workbooks.

Sections 1.5, 1.8, 1.9, 2, and 3 of this specification are normative. All other sections and examples in this specification are informative.

1.1 Glossary

This document uses the following terms:

A1: A reference style in which each **column (2)** is identified sequentially from left-to-right with a letter or series of letters in alphabetical order. Column headings are ordered A-Z, then AA-AZ, BA-BZ... ZA-ZZ, AAA-AAZ, and so forth. Each row is numbered sequentially from the top down.

absolute path: A string that identifies the location of a file and that begins with a drive identifier and root directory or network share and ends with the complete file name. Examples are C:\Documents\Work\example.txt and \\netshare\Documents\Work\example.txt.

active cell: The cell that is currently selected in a worksheet.

active sheet: The sheet that is currently selected.

adjacent cell: A cell that is in the same row as and adjoins the current cell in a worksheet.

alert: A message that is passed to a protocol client to notify it when specific criteria are met.

ancestor: A PivotTable member that is above the current PivotTable member in a hierarchy.

anonymous user: A user who presents no credentials when identifying himself or herself. The process for determining an anonymous user can differ based on the authentication protocol, and the documentation for the relevant authentication protocol should be consulted.

array formula: A formula that performs multiple calculations on one or more sets of values, and then returns either a single result or multiple results. Array formulas are enclosed in braces ({}) and are entered by pressing CTRL+SHIFT+ENTER.

ascending order: A sort order in which text strings are arranged in alphabetical order, numerical values are arranged from smallest to largest, and dates and times are arranged from oldest to newest.

AutoFilter: A mechanism that can be used to filter tabular data based on user-defined criteria such as values, strings, and formatting.

automatic calculation mode: A **calculation mode** in which formulas in a worksheet are recalculated automatically whenever the data changes. See also **manual calculation mode**.

border: A line that can be applied to the outer edge of a cell, shape, object, or chart element. A border can be variously formatted for style, color, and thickness.

border thickness: A property of a border that specifies how thick a border line is drawn.

bottom N filter: A filter that matches the smallest numerical values or oldest time and date values in a specified range.

bottom N filter by count: A type of **bottom N filter** that matches the N smallest numerical values or the N oldest time and date values.

bottom N filter by percent: A type of **bottom N filter** that matches the N percent smallest numerical values or the N percent oldest time and date values.

bottom N filter by sum: A type of **bottom N filter** that matches the smallest numerical values or the oldest time and date values whose sum is equal to or greater than N.

calculate: The process by which computations in a workbook are performed.

calculation mode: A setting that determines whether the formulas in a worksheet are recalculated automatically or manually. See also **automatic calculation mode** and **manual calculation mode**.

caption: One or more characters that can be used as a label for display purposes or as an identifier.

cell: A box that is formed by the intersection of a **row (2)** and a **column (2)** in a worksheet or a table. A cell can contain numbers, strings, and formulas, and various formats can be applied to that data.

cell contents: The data inside a cell, such as text, values, formulas, and cell error values.

cell error value: Any of a number of special values that are returned as a result of an unsuccessful formula calculation.

cell formatting: The set of properties that, as a whole, specify the appearance of a cell, such as font characteristics and fill color.

cell value: The text or numeric content of a cell, or the results of a formula. A cell value does not include a formula expression, cell formatting, or other metadata.

chart sheet: A single logical container that is used to create and store charts in a workbook.

checked out: A publishing level that indicates that a document has been created and locked for exclusive editing by a user in a version control system.

child: An object that is immediately below the current object in a hierarchy.

child PivotTable member: A PivotTable member that is one level lower in a dimension hierarchy, relative to another PivotTable member, which is referred to as its parent member. For example, a child of a Year member might be Quarter.

clear all state: A condition in which no filter is applied to a worksheet, list, or PivotTable report.

collapse: The process of closing a level in a dimension hierarchy on a PivotTable report to hide or aggregate lower-level details in the data.

collapsed outline state: A state in which the content that is nested within an outline is not displayed.

color stop: A color at a specific position in a color gradient.

column: (1) See field.

(2) A single set of data that is displayed vertically in a worksheet or a table.

confirmation: A message that asks a user to verify an action before the user performs it.

connected data: Data that is stored in the same workbook from which it is being referenced, or data that is stored in a database repository.

control button: A button in the user interface.

cube: A set of data that is organized and summarized into a multidimensional structure that is defined by a set of **dimensions (1)** and measures.

cube function: A function that is used to extract and display Online Analytical Processing (OLAP) data sets and values.

custom filter: A filter that contains preconfigured expressions in which users can optionally enter a string to filter data.

custom label filter: A custom filter that is applied to string labels for data.

custom value filter: A custom filter that is applied to the numerical values of data.

data connection: (1) A link between an application and a data source. Data connections can be used to query and submit data.

(2) A collection of information, such as the type and location, that defines how to connect to an external data source, such as a database, **web service**, SharePoint list, or **XML** file.

data culture: The language that is used to specify number formatting for data.

data provider: A known data source that is specific to a target type and that provides data to a collector type.

data source: A database, web service, disk, file, or other collection of information from which data is queried or submitted. Supported data sources vary based on application and data provider.

data table: A range of cells that is designated to perform what-if analysis for formulas, based on various input values.

default column: The **column (2)** that is used if no column is specified.

default filter value: The filter value that is used if no filter is specified.

default row: The row that is used if no row is specified.

default sheet: The sheet that is displayed if no sheet is specified.

default sheet tab color: The color that is used for a worksheet tab if no color is specified.

descendant: A member that is below the current member in a hierarchy.

descending order: A sort order in which text strings are arranged in reverse alphabetical order, numerical values are arranged from largest to smallest, and dates and times are arranged from newest to oldest.

dimension: (1) A structural attribute of a cube, which is an organized hierarchy of categories (levels) that describe data in a fact table. These categories typically describe a similar set of members upon which the user bases an analysis.

(2) A categorization of data in rows or **columns (2)** in an Excel worksheet.

display name: A text string that is used to identify a principal or other object in the user interface. Also referred to as title.

document library: A type of list that is a container for documents and folders.

edit session: A **session (2)** that is based on a workbook file and during which changes by one or more users are persisted to that file.

embedded image: An image that is stored within a document rather than being linked to a source file that is outside the document.

encrypted document: A document that was converted from plaintext into cipher text to disguise the content of the document when it is stored or sent.

end user presence: A set of attributes for a user who is participating in an **edit session**.

expand: The process of opening a level in a dimension hierarchy on a PivotTable report to view data from lower levels in the user interface.

expanded outline state: A state in which nested content within an outline is displayed.

expire: A process in which an object, such as an external data connection, becomes invalid because its allotted time period has ended.

external data: Data that is stored in a repository outside a workbook.

fallback data culture: A data culture that is selected through an algorithm as a substitute for a data culture that is not installed or is otherwise unavailable.

fallback UI culture: A user interface (UI) culture that is selected through an algorithm as a substitute for a UI culture that is not installed or is otherwise unavailable.

farm: A group of computers that work together as a single system to help ensure that applications and resources are available. Also referred to as server farm.

field: An element or attribute in a data source that can contain data.

file: A single, discrete unit of content.

fill color: A color that is used to fill the background of a cell, shape, or chart element.

filter: A mechanism by which a set of data is scoped to display only those entries that meet specified logical criteria.

filter date value: Any one of a set of possible date values that can be used to define the filter criteria for an **AutoFilter**.

filter value: Any one of a set of possible values that can be used to define the filter criteria for an **AutoFilter**.

filtering state: A setting that indicates whether a filter value or filter date value is included as part of the criteria that is used to define the filter for an **AutoFilter**.

font face color: A property of a cell that specifies the color that is used to render a font.

font face decoration: Any of the set of font properties that specify how to render a font, such as italics and underline.

font face weight: A value that specifies the thickness of a font.

formula: A logical equation or function that produces a result in a spreadsheet application.

function: A code module that takes a value as input, performs an operation, and returns the results to a worksheet.

globally unique identifier (GUID): A term used interchangeably with universally unique identifier (UUID) in Microsoft protocol technical documents (TDs). Interchanging the usage of these terms does not imply or require a specific algorithm or mechanism to generate the value. Specifically, the use of this term does not imply or require that the algorithms described in [\[RFC4122\]](#) or [\[C706\]](#) must be used for generating the **GUID**. See also universally unique identifier (UUID).

gradient fill: A type of fill that applies gradient formatting to the background of a cell or an object.

grow: The process of increasing the number of rows or **columns (2)** in a PivotTable report.

Help topic identifier: A unique identifier for an article that contains Help content.

hierarchy: A logical tree structure that organizes the members of a dimension such that each member has one parent member and zero or more child members.

horizontal indent: An indent that is used in a cell to adjust cell content horizontally.

host data language: The **data culture** of a site.

hyperlink: A relationship between two anchors, as described in [\[RFC1866\]](#).

Hypertext Transfer Protocol Secure (HTTPS): An extension of HTTP that securely encrypts and decrypts web page requests. In some older protocols, "Hypertext Transfer Protocol over Secure Sockets Layer" is still used (Secure Sockets Layer has been deprecated). For more information, see [\[SSL3\]](#) and [\[RFC5246\]](#).

Information Rights Management (IRM): A technology that provides persistent protection to digital data by using encryption, certificates, and authentication. Authorized recipients or users acquire a license to gain access to the protected files according to the rights or business rules that are set by the content owner.

interactive report: A visualization that has a presentation mode that provides sort, filter, and pivot capabilities for displaying different views of the data. The underlying data can be stored either in the workbook or in an external data source.

item: A unit of content that can be indexed and searched by a search application.

key performance indicator (KPI): A predefined measure that is used to track performance against a strategic goal, objective, plan, initiative, or business process. A visual cue is frequently used to communicate performance against the measure.

level: A relative position in a hierarchy of data. A level is frequently used when describing how to navigate a hierarchy in an Online Analytical Processing (OLAP) database or a PivotTable report.

license key: An array of bytes that enables access to a control according to the usage policies for that control.

list: An organization of a region of cells into a tabular structure in a workbook.

locked: The condition of a cell, worksheet, or other object that restricts edits or modifications to it by users.

manual calculation mode: A **calculation mode** in which the formulas in a workbook are calculated only when specified by a user. See also **automatic calculation mode**.

manual filter: A filter that lets users select a set of individual data items or dimension hierarchies by using a user interface that displays levels from the hierarchies.

measure group: A collection of related measures in a **cube** that derive from a single fact table, typically in a data source view.

member: A user in the Members group of a site.

member property: An attribute on a data item within a specific dimension in an Online Analytical Processing (OLAP) database.

merged cell: A single cell that is created by combining two or more **adjacent cells**.

Message Bar notification: A message that appears in the area below the ribbon in an application window. It can be a security **alert**, or information about a workflow task, the active document, or a policy.

Multidimensional Expressions (MDX): A syntax that is used for defining multidimensional objects, and for querying and manipulating multidimensional data.

named object: A **list**, PivotTable report, chart, or range that can be referenced by name. A sheet is not a type of named object.

named object view: A mode in which only named objects are rendered.

named range: See defined name.

new workbook session: A **session (2)** that is not based on an existing workbook file.

non-contiguous range: A selected **range** that includes non-adjacent cells.

number format: A property of a cell or other type of object that determines how numerical data is displayed or interpreted. For example, a currency number format affixes the proper currency symbol to the number.

Office Web Extension: See Office Add-in.

OLAP measure: A set of numeric values in an OLAP cube that is used in aggregation and analysis.

Online Analytical Processing (OLAP): A technology that uses multidimensional structures to provide access to data for analysis. The source data for OLAP is stored in data warehouses in a relational database. See also **cube**.

Open Data Protocol (OData): A web protocol for querying and updating data specified in the OData protocol.

Open Item permission: An authorization that enables users to retrieve an entire file.

outline: A nested grouping of rows or **columns (2)** that are in a worksheet.

outline collapse: A process in which rows or **columns (2)** of an **outline** are made invisible.

outline expand: A process in which rows or **columns (2)** of an **outline** are made visible.

outline level: A type of paragraph formatting that can be used to assign a hierarchical level, Level 1 through Level 9, to paragraphs in a document. After outline levels are assigned, an outline of a document can be viewed by using Outline view, the document map, or the navigation pane.

outline state: A setting that specifies whether an outline is currently outline expanded or outline collapsed.

permission: A rule that is associated with an object and that regulates which users can gain access to the object and in what manner. See also **rights**.

PivotChart report: A chart that uses a PivotCache for source data and inherits filtering and sorting functionality from a PivotTable report.

PivotTable: An interactive table that summarizes large amounts of data from various sources by using format and calculation methods. Row and column headings can be rotated to view different summaries of the source data, filter the data, or display detail data for specific areas.

PivotTable area: A logical zone that is used to organize data in a PivotTable report.

PivotTable data field: A PivotTable field that is contained in the PivotTable area where data values are shown.

PivotTable field: An element in a PivotTable report that represents a logical collection of data. A PivotTable field can represent a dimension hierarchy or actual data values.

PivotTable field list: A user interface element that displays a list of all of the fields in a PivotTable report. It can be used to populate a PivotTable report and to manipulate the fields.

PivotTable filter parameter: The value that a filter on a PivotTable report is set to, which indicates that matching values are included in the result set.

PivotTable member: An individual data item within a specific dimension as it is displayed in a PivotTable report. For example, a member in the Geography dimension might be North America.

PivotTable page field: A filter in a PivotTable report that applies to all of the data in the report, including any hierarchies.

pixel: A discrete unit of display on a computer display device.

point: A unit of measurement for fonts and spacing. A point is equal to 1/72 of an inch.

published: A condition of portions of a workbook that are marked as being available to the user when that workbook is processed by a protocol server.

published item: A specific named object that is in a published workbook.

published items snapshot: A snapshot that contains only the published items or published sheets from a workbook. If no published items are defined, a snapshot contains an entire workbook.

published range: A specific type of published item that represents a range of cells.

published sheet: A **sheet (2)** that is published.

query: A formalized instruction to a data source to either extract data or perform a specified action. A query can be in the form of a query expression, a method-based query, or a combination of the two. The data source can be in different forms, such as a relational database, XML document, or in-memory object. See also search query.

R1C1 notation: A notation that is used to specify a row and **column (2)** of cells in a workbook, as described in [\[ECMA-376\]](#) and [\[ISO/IEC-29500:2008\]](#).

range: An addressable region that is in a workbook. A range typically consists of zero or more cells and represents a single, contiguous rectangle of cells on a single sheet.

reading order: The positioning of characters in words and the positioning of words in sentences. This can be left-to-right or right-to-left.

reference: (1) A link in a project to another project, a .NET Framework assembly, or a compatible Component Object Model (COM) library. Adding a reference to a project enables use of the referenced item in a project, but does not copy it to the current project folder.

(2) A means by which cells, objects, and chart elements can be referenced in a formula.

refresh: A process that retrieves values from a data source and populates a workbook with those values.

rights: Tasks that a user is permitted to perform on a computer, site, domain, or other system resource. See also **permission**.

right-to-left: A reading and display order that is optimized for right-to-left languages.

row: (1) A collection of **columns (1)** that contains property values that describe a single item in a set of items that match the restriction specified in a query.

(2) A single set of data that is displayed horizontally in a worksheet or a table.

scatter chart: A chart that displays values on both the x and y axes to represent two variables as a single data point.

search down: A process of searching for information by ascending row and column numbers.

search up: A process of searching for information by descending row and column numbers.

selected: The condition of a set of items that has focus in a workbook.

session: (1) A unidirectional communication channel for a stream of messages that are addressed to one or more destinations. A destination is specified by a resource URL, an identity URL, and a device URL. More than one session can be multiplexed over a single connection.

(2) A representation of application data in system memory. It is used to maintain state for application data that is being manipulated or monitored on a protocol server by a user.

session identifier: A key that enables an application to make reference to a session.

session recycling: A process in which active **sessions (2)** are closed to start new sessions and to limit the total number of active sessions.

sheet: (1) A part of an Excel workbook. There are four types of sheets: **worksheet**, macro sheet, dialog sheet, and **chart sheet**. Multiple sheets are stored together within a workbook.

(2) A worksheet. The term sheet frequently refers to a worksheet because worksheets are the most common type of sheet.

sheet tab: A control that is used to select a sheet.

site collection: A set of websites that are in the same content database, have the same owner, and share administration settings. A site collection can be identified by a **GUID** or the URL of the top-level site for the site collection. Each site collection contains a top-level site, can contain one or more subsites, and can have a shared navigational structure.

site identifier: A GUID that is used to identify a site in a **site collection**.

slicer: A mechanism that is used to filter data in one or more PivotTable reports or cube functions.

slicer header: A user interface element that displays the **caption** for a slicer that can be or is being used to filter one or more PivotTable reports or cube functions. It also provides a command button for removing all applied filters.

slicer item: A user interface element that displays filter values that can be applied to one or more PivotTable reports or cube functions by using a slicer.

snapshot: A copy of a workbook that contains only values and formatting. It does not contain any formulas or data connections.

SOAP action: The HTTP request header field used to indicate the intent of the SOAP request, using a **URI** value. See [\[SOAP1.1\]](#) section 6.1.1 for more information.

SOAP body: A container for the payload data being delivered by a SOAP message to its recipient. See [\[SOAP1.2-1/2007\]](#) section 5.3 for more information.

SOAP fault: A container for error and status information within a SOAP message. See [\[SOAP1.2-1/2007\]](#) section 5.4 for more information.

SOAP fault detail: A string containing a human-readable explanation of a **SOAP fault**, which is not intended for algorithmic processing. See [SOAP1.2-1/2007] section 5.4.5 for more information.

sort: A process that arranges cells in ascending or descending order, based on cell content.

sort order: A specific arrangement of cells that is based on cell content. The order can be ascending or descending.

sparkline: A miniature chart that can be inserted into text or embedded in a cell on a worksheet to illustrate highs, lows, and trends in data.

state changing: A type of operation that changes the state of a session.

system resources: The physical resources of a server computer, such as memory, disk space, CPU, and network bandwidth.

table: A **list** that is defined in a workbook.

time zone bias: The positive, zero, or negative offset in minutes from Coordinated Universal Time (UTC). For example, Middle European Time (MET, GMT+01:00) has a time zone bias of "-60" because it is one hour ahead of UTC. Pacific Standard Time (PST, GMT-08:00) has a time zone bias of "+480" because it is eight hours behind UTC.

time zone daylight bias: The positive, zero, or negative offset in minutes that is added to the time zone bias during daylight saving time. For example, daylight saving time advances the clock by one hour. The time zone daylight bias is set to "-60".

time zone daylight date: The date and time when the change from standard time to daylight saving time occurs.

time zone standard bias: A positive, zero, or negative offset in minutes that is added to the time zone bias outside daylight saving time.

time zone standard date: The date and time when the change from daylight saving time to standard time occurs.

timestamp: A condition of a digital signature that indicates whether the signature was created with a valid certificate that has expired or was created with a certificate that had expired already. If the certificate expired after the signature was created, the signature can be trusted. If it expired before the signature was created, it cannot be trusted.

top N filter: A filter that matches the top or bottom N items or N% of items in a specified **column (2)**.

top N filter by count: A type of top N filter that matches the N largest numerical values or the N newest time and date values.

top N filter by percent: A type of top N filter that matches the N percent largest numerical values or the N percent newest time and date values.

top N filter by sum: A type of top N filter that matches the largest numerical values or the newest time and date values whose sum is equal to or greater than N.

trusted location: A directory with properties that indicate how an application processes documents.

UI culture: The language that is used to display strings and graphical elements in a user interface.

Uniform Resource Identifier (URI): A string that identifies a resource. The URI is an addressing mechanism defined in Internet Engineering Task Force (IETF) Uniform Resource Identifier (URI): Generic Syntax [\[RFC3986\]](#).

Universal Naming Convention (UNC): A string format that specifies the location of a resource. For more information, see [\[MS-DTYP\]](#) section 2.2.57.

URL zone: A specific base Uniform Resource Locator (URL) that can be used to access a resource within a web application. A web application can have multiple URL zones.

user display name: A user profile property that contains the preferred name of a user. See also [display name](#).

user-defined function (UDF): A function that is coded in a Microsoft Visual Basic for Applications (VBA) module, macro sheet, add-in, or Excel Linked Library (XLL). A UDF can be used in formulas to return values to a worksheet, similar to built-in functions.

view session: A [session \(2\)](#) that is based on a workbook file and during which the file can be viewed by one or more users. Any changes to the file, such as sorting or filtering data, are not persisted to that file.

view-only mode: A display mode in which data in a workbook can only be viewed, sorted, and filtered by users. Users cannot change any of the data in the workbook and any changes to the display of the data are not persisted to the workbook file.

visible: A condition of an object that allows it to be displayed in rendered output.

Web Part: A reusable component that contains or generates web-based content such as [XML](#), HTML, and scripting code. It has a standard property schema and displays that content in a cohesive unit on a webpage. See also [Web Parts Page](#).

web service: A unit of application logic that provides data and services to other applications and can be called by using standard Internet transport protocols such as HTTP, Simple Mail Transfer Protocol (SMTP), or File Transfer Protocol (FTP). Web services can perform functions that range from simple requests to complicated business processes.

Web Services Description Language (WSDL): An XML format for describing network services as a set of endpoints that operate on messages that contain either document-oriented or procedure-oriented information. The operations and messages are described abstractly and are bound to a concrete network protocol and message format in order to define an endpoint. Related concrete endpoints are combined into abstract endpoints, which describe a network service. WSDL is extensible, which allows the description of endpoints and their messages regardless of the message formats or network protocols that are used.

workbook: A container for a collection of [sheets \(1\)](#).

workbook file: A file that contains a byte stream representation of a workbook.

workbook parameter: A single cell that is designated to receive input from users.

worksheet: A single logical container for a set of tabular data and other objects in a workbook.

worksheet header: The row and column headings of a worksheet.

WSDL message: An abstract, typed definition of the data that is communicated during a [WSDL operation \[WSDL\]](#). Also, an element that describes the data being exchanged between web service providers and clients.

WSDL operation: A single action or function of a web service. The execution of a WSDL operation typically requires the exchange of messages between the service requestor and the service provider.

XML: The Extensible Markup Language, as described in [\[XML1.0\]](#).

XML namespace: A collection of names that is used to identify elements, types, and attributes in XML documents identified in a URI reference [RFC3986]. A combination of XML namespace and local name allows XML documents to use elements, types, and attributes that have the same names but come from different sources. For more information, see [\[XMLNS-2ED\]](#).

XML namespace prefix: An abbreviated form of an **XML namespace**, as described in [\[XML\]](#).

XML schema: A description of a type of XML document that is typically expressed in terms of constraints on the structure and content of documents of that type, in addition to the basic syntax constraints that are imposed by **XML** itself. An XML schema provides a view of a document type at a relatively high level of abstraction.

zero-based index: An index in which the first item has an index of "0" (zero).

MAY, SHOULD, MUST, SHOULD NOT, MUST NOT: These terms (in all caps) are used as defined in [\[RFC2119\]](#). All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

1.2 References

Links to a document in the Microsoft Open Specifications library point to the correct section in the most recently published version of the referenced document. However, because individual documents in the library are not updated at the same time, the section numbers in the documents may not match. You can confirm the correct section numbering by checking the [Errata](#).

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information.

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[JFIF] Hamilton, E., "JPEG File Interchange Format, Version 1.02", September 1992, <http://www.w3.org/Graphics/JPEG/jfif.txt>

[MS-EXSPXML3] Microsoft Corporation, "[Excel Calculation Version 2 Web Service XML Schema](#)".

[MS-ODATA] Microsoft Corporation, "[Open Data Protocol \(OData\)](#)".

[MS-ODBCSTR] Microsoft Corporation, "[ODBC Connection String Structure](#)".

[MS-ODCFF] Microsoft Corporation, "[Office Data Connection File Format](#)".

[MS-OFFMACRO2] Microsoft Corporation, "[Office Macro-Enabled File Format Version 2](#)".

[MS-OLEDBSTR] Microsoft Corporation, "[OLEDB Connection String Structure](#)".

[MS-XLSB] Microsoft Corporation, "[Excel \(.xlsb\) Binary File Format](#)".

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- [RFC1766] Alvestrand, H., "Tags for the Identification of Languages", RFC 1766, March 1995, <http://www.ietf.org/rfc/rfc1766.txt>
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- [RFC4122] Leach, P., Mealling, M., and Salz, R., "A Universally Unique Identifier (UUID) URN Namespace", RFC 4122, July 2005, <http://www.rfc-editor.org/rfc/rfc4122.txt>
- [SOAP1.1] Box, D., Ehnebuske, D., Kaktivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", W3C Note, May 2000, <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>
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1.2.2 Informative References

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1.3 Protocol Overview (Synopsis)

This protocol is used for communication between a protocol server, which provides access to **workbooks**, and a protocol client, which renders the data provided by the protocol server. The communication is always initiated by the protocol client using different operations, whose functionality is outlined in section [1.3.2](#).

1.3.1 Session-based Protocol

The protocol is **session (2)** based and uses a unique **session identifier**. This session identifier is generated when a new session is created and is used thereafter to refer to that particular session.

Multiple sessions (2) can exist at the same time. Multiple participants can share an individual **edit session**. Sessions can be created and closed independently.

1.3.2 Protocol Operations

The protocol provides the following functionality, which can be performed on workbooks:

- Open, create new, and close.
- Save or retrieve the contents of an open **session (2)**.
- Recalculation.
- **Refresh connected data**.
- Set specific values into a **range**.
- Set the formatting, including formatting using a **number format**, for a range.
- Get specific values from a range.
- Get rendering data for a range.
- Retrieve charts and images.
- **Sort and filter tables**.
- Sort, filter, **expand**, and **collapse PivotTables**.
- Filter **cube functions**.
- Find values.
- Cancel a request.
- Get information about a session.

- Get the version of the protocol.
- Create a new Office Web Extension binding
- Retrieve, modify, and remove an existing Office Web Extension binding.

1.3.3 Published Items and Results Returned by this Protocol

A protocol server can have functionality where only portions of the workbook are available for consumption by protocol clients. The parts of the workbook that are available to be accessed by the protocol client are known as **published**. Some of the operations in this protocol could fail if the workbook item being exposed or changed is not published or if the user does not have sufficient permissions to view items that are not published.

1.4 Relationship to Other Protocols

This protocol uses the SOAP message protocol for formatting request and response messages, as described in [\[SOAP1.1\]](#), [\[SOAP1.2/1\]](#) and [\[SOAP1.2/2\]](#). It transmits those messages by using HTTP, as described in [\[RFC2616\]](#), or **Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**, as described in [\[RFC2818\]](#).

The following diagram shows the underlying messaging and transport stack used by the protocol:

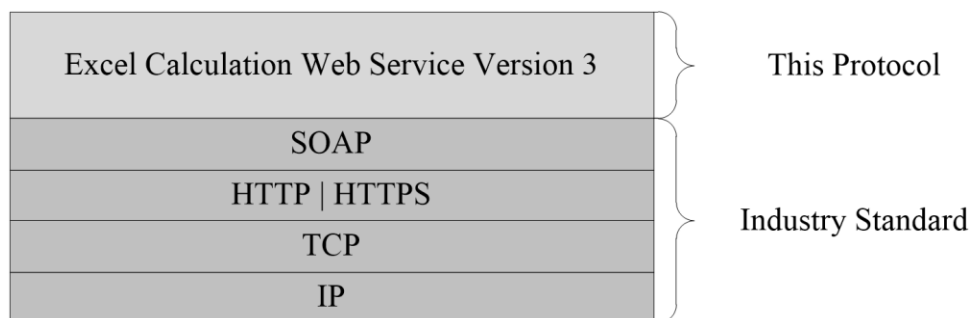


Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

This protocol operates against a protocol server that exposes one or more endpoint **URIs** that are known by protocol clients. The endpoint URI of the protocol server and the transport that is used by the protocol server are either known by the protocol client or obtained by using the discovery mechanism that is described in [\[MS-SPTWS\]](#).

The protocol client obtains the requisite ApplicationClassId and ApplicationVersion values and the endpoint URI of the protocol server that provides the discovery mechanism, as described in [\[MS-SPTWS\]](#), by means that are independent of either protocol.

This protocol requires the protocol client to have permission to call the methods on the protocol server.

The protocol client implements the token-based security mechanisms that are required by the protocol server and related security protocols, as described in [\[MS-SPSTWS\]](#).

1.6 Applicability Statement

This protocol enables communication between a protocol server, which **calculates workbooks**, and a protocol client which does the following:

- Displays workbooks and allows users to interact with those workbooks.
- Provides programmatic access to those workbooks through a public **web service**.

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

- **Supported Transports:** This protocol can be implemented by using transports that support sending Simple Object Access Protocol (SOAP) messages, as described in section 2.1.
- **Protocol Versions:** This protocol is not versioned.

Capability Negotiation: This protocol does not support version negotiation.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

In the following sections, the schema definition might differ from the processing rules imposed by the protocol. The **WSDL** in this specification matches the WSDL that shipped with the product and provides a base description of the schema. The text that introduces the WSDL might specify differences that reflect actual Microsoft product behavior. For example, the schema definition might allow for an element to be **empty**, **null**, or **not present** but the behavior of the protocol as specified restricts the same elements to being **non-empty**, **not null**, and **present**.

2.1 Transport

Protocol servers **MUST** support SOAP over HTTP or **HTTPS**.

All protocol messages **MUST** be transported by using HTTP bindings at the transport level.

Protocol messages **MUST** be formatted as specified in either [\[SOAP1.1\]](#) section 4 or [\[SOAP1.2/1\]](#) section 5. Protocol server faults **MUST** be returned by using either HTTP status codes, as specified in [\[RFC2616\]](#) section 10, or **SOAP faults**, as specified in [\[SOAP1.1\]](#) section 4.4 or [\[SOAP1.2/1\]](#) section 5.4.

If the HTTPS transport is used, a server certificate **MUST** be deployed.

This protocol **MAY** transmit an additional SOAP header, the **ServiceContext** header, as specified in [\[MS-SPSTWS\]](#).

This protocol does not define any means for activating a protocol server or protocol client. The protocol server **MUST** be configured and begin listening in an implementation-specific way. In addition, the protocol client **MUST** know the format and transport that is used by the protocol server, for example, the SOAP format over an HTTP transport.

2.2 Common Message Syntax

This section contains common structures used by this protocol. The syntax of the structures uses **XML schema**, as specified in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and **Web Services Description Language (WSDL)**, as specified in [\[WSDL\]](#).

2.2.1 Namespaces

This specification defines and references various **XML namespaces** using the mechanisms specified in [\[XMLNS\]](#). Although this specification associates a specific **XML namespace prefix** for each XML namespace that is used, the choice of any particular XML namespace prefix is implementation-specific and not significant for interoperability.

Prefix	Namespace URI	Reference
q1	http://schemas.microsoft.com/2003/10/Serialization/Arrays	
q2	http://microsoft.com/wsdl/types/	
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server	
tns1	http://schemas.microsoft.com/2003/10/Serialization/	TBD
tns2	http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/	

Prefix	Namespace URI	Reference
tns3	http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Imports	
wsaw	http://www.w3.org/2006/05/addressing/wsdl	Web Service Addressing [WSA1.0]
wsdl	http://schemas.xmlsoap.org/wsdl/	[WSDL]
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEMA 1] [XMLSCHEMA 2]

2.2.2 Messages

In the event of an application error the protocol server returns a soap fault as a response to the operation, as specified in [\[SOAP1.1\]](#) section 4.4 or [\[SOAP1.2/1\]](#) section 5.4.

The protocol client MUST ignore all elements of the soap fault, except for the **SOAP fault detail** element.

The soap fault detail element MUST contain the protocol server alert as specified in **ExcelServerMessage** (section [2.2.4.24](#)).

This specification does not define any common **WSDL message** definitions.

2.2.2.1 Common List of Id Element Values

The **Id** element of the **ExcelServerMessage** SHOULD [<1>](#) be one of the following values, unless specified otherwise:

- **CollabLocaleMismatch**
- **ConfirmDataRefresh**
- **EditModeAccessDenied**
- **EditModeCannotAcquireLockUnknownReason**
- **InternalError**
- **InvalidEditSession**
- **InvalidOrTimedOutSession**
- **MaxRequestDurationExceeded**
- **NewWorkbookSessionTimeout**
- **OperationOnInvalidState**

- **RefreshLockFailed**
- **RequestLimitsExceeded**
- **RetryError**
- **SavingWorkbookFailed**
- **SessionMemoryQuotaExceeded**
- **SpecifiedRangeNotFound**
- **UnableToLoadEditSession**
- **WrongEcs**

2.2.3 Elements

This specification does not define any common **XML schema** element definitions.

2.2.4 Complex Types

The following table summarizes the set of common **XML schema** complex type definitions defined by this specification. XML schema complex type definitions that are specific to a particular operation are described with the operation.

Complex type	Description
ArrayOfAnyType	The ArrayOfAnyType type is an array of anyType elements.
ArrayOfArrayOfString	The ArrayOfArrayOfString complex type is an array of ArrayOfString elements
ArrayOfAutoFilterCriteria	The ArrayOfAutoFilterCriteria type is an array of AutoFilterCriteria elements (section 2.2.4.12).
ArrayOfAutoFilterDateNodeInfo	The ArrayOfAutoFilterDateNodeInfo complex type is an array of AutoFilterDateNodeInfo elements (section 2.2.4.13).
ArrayOfBindingMetadata	Unordered list of BindingMetadata (section 2.2.4.80).
ArrayOfClientUdfCall	A collection of ClientUdfCall elements.
ArrayOfClientUdfDefinition	A collection of ClientUdfDefinition elements.
ArrayOfDataConnectionInfo	An array of DataConnectionInfo elements as specified in section 2.2.4.92 .
ArrayOfExcelServerMessage	The ArrayOfExcelServerMessage type is an array of ExcelServerMessage elements (section 2.2.4.23).
ArrayOfInt	The ArrayOfInt type is an array of integer elements.
ArrayOfInteractiveReportsItem	The ArrayOfInteractiveReportsItem type specifies an array of InteractiveReportsItem elements.
ArrayOfObjectStateResultColumn	The ArrayOfObjectStateResultColumn type specifies an array of ObjectStateResultColumn elements.

Complex type	Description
ArrayOfPivotField	The ArrayOfPivotField type contains a list of PivotField elements (section 2.2.4.99).
ArrayOfPivotFieldListItem	The ArrayOfPivotFieldListItem type is an array of PivotFieldListItem elements (section 2.2.4.53).
ArrayOfPivotFilterItem	The ArrayOfPivotFilterItem type is an array of PivotFilterItem elements (section 2.2.4.26).
ArrayOfPivotFilterParameter	The ArrayOfPivotFilterParameter type contains a list of PivotFilterParameter elements (section 2.2.4.100).
ArrayOfPresenceUserInfo	The ArrayOfPresenceUserInfo type is an array of PresenceUserInfo elements (section 2.2.4.30).
ArrayOfRangeValuesA1	The ArrayOfRangeValuesA1 type is an array of RangeValuesA1 elements (section 2.2.4.31).
ArrayOfScenarioThrottlingInformation	MUST NOT be used.
ArrayOfScenarioThrottlingInformation	MUST NOT be used.
ArrayOfServerEventMetadata	An unordered list of ServerEventMetadata (section 2.2.4.83) items.
ArrayOfSheetName	An array of SheetName elements.
ArrayOfSlicerFormatElement	An array of SlicerFormatElement elements (section 2.2.4.37).
ArrayOfSlicerInfo	The ArrayOfSlicerInfo type contains a list of SlicerInfo elements (section 2.2.4.104).
ArrayOfSlicerItem	An array of SlicerItem elements (section 2.2.4.39).
ArrayOfSlicerItemRange	An array of SlicerItemRange as defined in section 2.2.4.116 .
ArrayOfstring	The ArrayOfstring type specifies an array of string elements.
ArrayOfString	The ArrayOfString complex type is an array of string elements.
ArrayOfWebExtensionMetadata	An unordered list of WebExtensionMetadata (section 2.2.4.84) items.
ArrayOfWorksheetChangeInfo	MUST NOT be used.
ArrayOfWorksheetData	An array of WorksheetData items.
AutoFilterCriteria	Used to instruct the protocol server on how to apply a filter on an AutoFilter in the workbook . This complex type is used as part of the AutoFilterOptions complex type (section 2.2.4.14) through the ArrayOfAutoFilterCriteria complex type (section 2.2.4.2).
AutoFilterDateNodeInfo	Specifies how AutoFilter filter date values are filtered by the protocol server.
AutoFilterOptions	Used to specify the filter applied to an AutoFilter column (2) .
BindingData	Contains cell data and headers depending on the coerce type specified in this structure.
BindingMetadata	Information about a single Office Web Extension binding that Excel uses to implement features related to bindings.

Complex type	Description
BindingReference	Describes a simple worksheet range, intended for BindingMetadata to describe the range to which a binding refers.
BorderFormat	Specifies the formatting to apply to the border of the slicer visual components.
CellCompoundValue	The CellCompoundValue complex type contains the number formatted and the unformatted value of a cell . The CellCompoundValue type MUST only be used in the elements in the rangeRequests element of GetRangeValuesA1Response (section 3.1.4.24.2.2).
ClientUdfCall	Represents the information needed for a single client-side user-defined function (UDF) result protocol server requires from the protocol client.
ClientUdfCallInfo	Contains a list of ClientUdfCall elements that the protocol server requires from the protocol client to complete a workbook calculation.
ClientUdfDefinition	Represents a client side UDF that the protocol client can calculate for the server.
ClientUdfListInfo	Contains a list of ClientUdfDefinition elements.
CollaborationParameter	The CollaborationParameter complex type encapsulates input about end user presence .
CollaborationResult	The CollaborationResult complex type encapsulates output about end user presence.
CollaborationState	The CollaborationState complex type encapsulates information about the state of the end user presence information.
CommandParameter	The CommandParameter complex type is an input used by some protocol server operations.
CommandResult	The CommandResult complex type is an operation response message used by most protocol server operations.
CommandResultExtendedInfo	The CommandResultExtendedInfo complex type provides extended information for CommandResult (section 2.2.4.21).
CultureCommandParameter	The CultureCommandParameter is used to specify UI culture , data culture and host data language related information when creating a new session.
DataConnectionInfo	Specifies information about a data connection (2) .
DataConnectionsInfo	Specifies information about data connections (2) in the workbook.
DdaSettings	List of settings for an instance of an Office Web Extension.
ExcelServerMessage	An alert information returned by the protocol server.
ExcelServerMessage	An alert information returned by the protocol server.
InteractiveReportsItem	The InteractiveReportsItem type specifies an interactive report item.
ObjectStateResult	The ObjectStateResult type specifies information about an object state returned by protocol server.

Complex type	Description
ObjectStateResultColumn	The ObjectStateResultColumn type specifies column information about object state return by the protocol server.
OpenWorkbookInParameters	Input parameters for OpenWorkbook (section 3.1.4.30).
OpenWorkbookOutParameters	Output parameters for OpenWorkbook (section 3.1.4.30) are as follows.
OperationStates	Indicates the current enabled state of undo and redo operations.
PeriodicRefreshInfo	The PeriodicRefreshInfo complex type is used to return expired external data related information.
PivotField	The PivotField type contains information about a PivotTable field.
PivotFieldListItem	The PivotFieldListItem complex type is used to specify a PivotTable field , visual state information for the PivotTable field, and child PivotTable fields.
PivotFilterItem	A PivotTable member that is part of a PivotTable manual filter hierarchy .
PivotFilterItemList	A list of PivotTable members.
PivotFilterParameter	The PivotFilterParameter type specifies a PivotTable custom filter applied to a PivotTable field.
PivotMenu	The PivotMenu type contains information about a PivotTable area that is returned by the protocol server.
PivotOperationOptions	<p>The PivotOperationOptions complex type is a container for common information that is used by the following operations related to PivotTables:</p> <ul style="list-style-type: none"> ▪ ApplyPivot (section 3.1.4.47) ▪ ApplyPivotFilter (section 3.1.4.2) ▪ ApplyPivotSort (section 3.1.4.3) ▪ ApplyPivotTop10Filter (section 3.1.4.4) ▪ ApplyPivotValueFieldSettings (section 3.1.4.61) ▪ BixDrill (section 3.1.4.58) ▪ ConnectAndGetPivotFilterItemList (section 3.1.4.9) ▪ ConnectAndGetPivotMenu (section 3.1.4.78) ▪ ExpandPivotFieldListLevels (section 3.1.4.49) ▪ GetBixAnalysis (section 3.1.4.51) ▪ GetPivotFieldListData (section 3.1.4.52) ▪ GetPivotFieldManagerData (section 3.1.4.53)

Complex type	Description
	<ul style="list-style-type: none"> ▪ GetPivotFilterItemList (section 3.1.4.18) ▪ GetPivotMenu (section 3.1.4.19) ▪ GetPivotValueFieldSettings (section 3.1.4.63) ▪ RemovePivotFilter (section 3.1.4.37) ▪ TogglePivotDrill (section 3.1.4.46) <p>Some of the elements of this type have a common usage among all of the preceding operations and are specified in this section. Other elements have particular usage information that is specified in the sections of this document addressing the particular operations.</p>
PresenceUserId	The PresenceUserId complex type contains identifying information about end user presence for a single participant in the session (2) .
PresenceUserInfo	The PresenceUserInfo complex type contains information about end user presence for a single participant in the session (2).
RangeValuesA1	The RangeValuesA1 type is used to transfer the values of the cells specified by RangeName .
RequestLimits	Specifies a limit on a protocol server operation.
RestApplySlicerSelectionRequest	Contains information about the operation to update a slicer.
RestApplyTimelineSelectionRequest	Contains information about the operation to update a timeline.
RestChartPngRequest	When passed as the request element of the ProcessRestRequest input (section 3.1.4.56.2.1), it specifies the chart to retrieve and information about its image.
RestChartPngResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestChartPngRequest (section 2.2.4.54) is passed as the input.
RestCloseWorkbookRequest	Indicates a request to the protocol server to close the session (2) identified by SessionId field of the RestRequest type (section 3.1.4.56.3.1).
RestInteractiveReportsListRequest	The RestInteractiveReportsListRequest type specifies the parameters for a list of interactive reports to be returned by the protocol server.
RestInteractiveReportsListResult	The RestInteractiveReportsListResult type specifies a list of interactive reports returned by the protocol server.
RestInteractiveReportsStoreRequest	The RestInteractiveReportsStoreRequest type specifies the parameters for an interactive report store to be returned by the protocol server.
RestInteractiveReportsStoreResult	The RestInteractiveReportsStoreResult type specifies the information about the interactive report returned by protocol server.
RestObjectStateGetRequest	The RestObjectStateGetRequest type specifies the parameters for the object state to be returned by the protocol server.
RestObjectStateRequest	The RestObjectStateRequest type specifies the parameters for a rest object state to be returned by protocol server.

Complex type	Description
RestObjectStateResult	The RestObjectStateResult type specifies information about state operation options of a rest object.
RestObjectStateSetRowSortRequest	The RestObjectStateSetRowSortRequest type specifies parameters for a rest object row sort state to be returned by the protocol server.
RestODataRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.56.2.1), indicates retrieving an OData response, as specified in [MS-ODATA] .
RestODataResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestODataRequest (section 2.2.4.56) is passed as the input.
RestOpenWorkbookRequest	When passed as the request parameter of the ProcessRestRequest (section 3.1.4.56.2.1) input, indicates that the protocol server opens the workbook specified in section 3.1.4.56 .
RestOpenWorkbookResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestOpenWorkbookRequest (section 2.2.4.75) is passed as the input.
RestPngResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestRangePngRequest (section 2.2.4.61) is passed as the input and it is the base type for RestChartPngResult (section 2.2.4.55).
RestPublishedObjectsRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.56.2.1), indicates retrieving a list of published objects.
RestPublishedObjectsResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestPublishedObjectsRequest (section 2.2.4.59) is passed as the input.
RestRangePngRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.56.2.1), indicates retrieving an image representing a range .
RestRangeValuesRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.56.2.1), indicates retrieving the sheet (2) cell values of a range.
RestRangeValuesResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestRangeValuesRequest (section 2.2.4.62) is passed as the input.
RestRangeXmlRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.56.2.1), indicates retrieving a representation of a range as specified in [MS-EXSPXML3] .
RestRangeXmlResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestRangeXmlRequest (section 2.2.4.64) is passed as the input.

Complex type	Description
RestSlicerItemsListRequest	Specifies the parameters for the list of items in a slicer.
RestSlicerItemsListResult	Specifies information about a list of slicer items. This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestSlicerItemsListRequest is passed as the input.
RestSlicersListRequest	The RestSlicersListRequest type specifies the conditions for a list of slicers or timelines to be returned by the protocol server.
RestSlicersListResult	The RestSlicersListResult type specifies the list of slicers returned by the protocol server.
RestTimelineInfoRequest	Identifies a timeline.
RestTimelineInfoResult	Specifies information about a timeline.
RestWorkbookRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.56.2.1), indicates retrieving the workbook file .
RestWorkbookResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.56.2.2) when a RestWorkbookRequest (section 2.2.4.66) is passed as the input.
ScenarioThrottlingInformation	MUST NOT be used.
ScenarioThrottlingInformation	MUST NOT be used.
ServerEventMetadata	An event of a particular type that occurred during server processing.
ServerHealthInformation	Used to return information about the health of the protocol server.
ServerHealthInformation	Used to return information about the health of the protocol server.
ServerThrottlingInformation	MUST NOT be used.
ServerThrottlingInformation	MUST NOT be used.
SheetCell	Specifies the coordinates of a cell in a sheet (2).
SheetName	Specifies the name , type and visible condition of a sheet (1).
SheetRange	Specifies a range on a worksheet in a workbook.
SlicerFontType	Font specification for a slicer visual component.
SlicerFormatElement	A slicer formatting specification.
SlicerFormatElementList	Contains an ArrayOfSlicerFormatElement element (section 2.2.4.9).
SlicerInfo	Information about a slicer.
SlicerItem	Specifies the visual representation for a slicer item .
SlicerItemList	Contains an ArrayOfSlicerItem element (section 2.2.4.10).
SlicerItemRange	Represents a contiguous range of slicer items.
SlicerOptions	A container for common information related to a slicer.
SlicerView	Specifies slicer attributes such as display properties specific to the

Complex type	Description
	slicer and attributes describing the slicer items.
Top10FilterParameter	The Top10FilterParameter type contains information about the top N filter or bottom N filter that is applied to a PivotTable field.
TypeExporter	MUST NOT be used.
VisibleSheetRange	<p>The VisibleSheetRange complex type is used to specify the Workbook ([MS-EXSPXML3] section 2.1.1) to be returned in the response message. The baseline range, in the context of this type and the operation that uses it, is the raw range initially found on the workbook before it is modified to only include visible worksheet cells. If the ObjectName element is present and not empty, and if the associated session is not an edit session, and if DisallowAutoNOV is false, the following apply:</p> <ul style="list-style-type: none"> ▪ If the ExcelRange element is present and not empty: <ul style="list-style-type: none"> ▪ The sheet (2) of the baseline range is determined in the following manner: <ul style="list-style-type: none"> ▪ If a sheet (2) was specified by ExcelRange, that is the sheet (2) which will be used. ▪ Otherwise, the protocol server will locate a published item by matching ObjectName to the name of the published item. <ul style="list-style-type: none"> ▪ If a match is found, the sheet (2) which contains the matching published item MUST be used. ▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in section 2.2.4.24. The Id element of the ExcelServerMessage MUST be EcsInvalidNamedObject. ▪ The protocol server will locate a published range which exactly matches ExcelRange on the baseline range's sheet. <ul style="list-style-type: none"> ▪ If a match is found, the published range is the baseline range. ▪ Otherwise, the protocol server MUST locate a published item on the baseline range's sheet (2), which exactly matches ExcelRange. <ul style="list-style-type: none"> ▪ If a match was found, the published item is the baseline range. ▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in section 2.2.4.24. The Id element of the

Complex type	Description
	<p data-bbox="885 205 1230 262">ExcelServerMessage MUST be EcsInvalidNamedObject.</p> <ul style="list-style-type: none"> <li data-bbox="695 302 1419 422">▪ If ExcelRange is not present or is empty, the protocol server will locate ObjectName in all the published items that belong to the workbook by matching ObjectName to the name of the published item. <ul style="list-style-type: none"> <li data-bbox="743 464 1393 520">▪ If a match was found, the baseline range MUST be the published item's range. <li data-bbox="743 562 1419 682">▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be EcsInvalidNamedObject. <li data-bbox="695 724 1393 781">▪ The protocol server MUST NOT use any range outside of the baseline range to retrieve data from. <p data-bbox="695 808 1403 884">If ObjectName is not present or is empty, and the workbook contains published items, and if the associated session is not an edit session, and if DisallowAutoNOV is false:</p> <ul style="list-style-type: none"> <li data-bbox="695 898 1435 1810">▪ If ExcelRange is present and not empty: <ul style="list-style-type: none"> <li data-bbox="743 961 1419 1115">▪ The sheet (2) of the baseline range MUST be determined in the following manner: <ul style="list-style-type: none"> <li data-bbox="792 1058 1435 1115">▪ If a sheet (2) was specified by ExcelRange, that is the sheet (2) which MUST be used. <li data-bbox="792 1157 1354 1213">▪ Otherwise, the sheet (2) which contains the first published item MUST be used. <li data-bbox="743 1255 1386 1333">▪ The protocol server will locate a published range which exactly matches ExcelRange on the baseline range's sheet (2). <ul style="list-style-type: none"> <li data-bbox="792 1375 1338 1432">▪ If a match is found, the published range is the baseline range. <li data-bbox="792 1474 1403 1558">▪ Otherwise, the protocol server will locate a published item on the baseline range's sheet (2), which contains ExcelRange in its entirety. <ul style="list-style-type: none"> <li data-bbox="841 1600 1393 1656">▪ If a match was found, the published item is the baseline range. <li data-bbox="841 1698 1419 1810">▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be

Complex type	Description
	<p style="text-align: center;">EcsInvalidNamedObject.</p> <ul style="list-style-type: none"> ▪ If ExcelRange is not present or is empty, the baseline range MUST be the range of the first published item. ▪ The protocol server MUST NOT use any range outside of the baseline range to retrieve data from. <p>If ObjectName is not present or is empty and the workbook does not contain any published items, or if the associated session is an edit session, or if DisallowAutoNOV is true:</p> <ul style="list-style-type: none"> ▪ If SheetName is not present or empty, the baseline range MUST be the default sheet. Otherwise, SheetName MUST be the sheet (2) of the baseline range. ▪ If FirstRow is -1, the default row MUST be the first row (2) of the baseline range. Otherwise, FirstRow MUST be the first row (2) of the baseline range. ▪ If FirstColumn is -1, the default column MUST be the first column of the baseline range. Otherwise, FirstColumn MUST be the first column of the baseline range. ▪ First row (2) of baseline range+VisibleRowsRequested MUST be the last row (2) of the baseline range. ▪ First column of baseline range+VisibleColumnsRequested MUST be the last column of the baseline range. ▪ FirstColumn MUST be -1 if FirstRow is -1. ▪ FirstRow MUST be -1 if FirstColumn is -1. <p>The product of VisibleRowsRequested and VisibleColumnsRequested MUST be less than or equal to 1,000,000.</p> <p>The first row (2) of the retrieved range MUST be one of the following:</p> <ul style="list-style-type: none"> ▪ The first visible row (2) at or after first row (2) of baseline range+VisibleFirstRowOffset, if VisibleFirstRowOffset is greater than or equal to 0. ▪ The first visible row (2) at or before first row (2) of baseline range+VisibleFirstRowOffset, if VisibleFirstRowOffset is less than 0. ▪ If baseline range+VisibleFirstRowOffset is less than 0, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be

Complex type	Description
	<p data-bbox="792 205 1097 233">SpecifiedRangeNotFound.</p> <ul data-bbox="695 268 1422 489" style="list-style-type: none"> <li data-bbox="695 268 1422 426">▪ If there are less than VisibleRowsRequested visible rows (2) between that first visible row (2) and the last visible row (2) of the baseline range, the first row (2) will be the first visible row (2) such that there are VisibleRowsRequested rows (2) between it and the last visible row (2) of baseline range. <li data-bbox="695 457 1422 489">▪ Greater than or equal to 0, and less than or equal to 1,048,575 <p data-bbox="695 520 1437 646">The number of visible rows (2) in the retrieved range MUST be equal to VisibleRowsRequested, unless there are not enough visible rows (2) in the baseline range to retrieve, in which case all the remaining visible rows (2) in the baseline range MUST be retrieved.</p> <p data-bbox="695 657 1219 684">The first column of the retrieved range MUST be:</p> <ul data-bbox="695 695 1437 1392" style="list-style-type: none"> <li data-bbox="695 695 1437 789">▪ The first visible column at or after first column of baseline range+VisibleFirstColumnOffset, if VisibleFirstColumnOffset is greater than or equal to 0. <li data-bbox="695 821 1437 1104">▪ The first visible column at or before first column of baseline range+VisibleFirstColumnOffset, if VisibleFirstColumnOffset is less than 0. <ul data-bbox="743 947 1437 1073" style="list-style-type: none"> <li data-bbox="743 947 1437 1073">▪ If baseline range+VisibleFirstColumnOffset is less than 0, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be SpecifiedRangeNotFound. <li data-bbox="695 1136 1437 1325">▪ If there are less than VisibleColumnsRequested visible columns between that first visible column and the last visible column of the baseline range, the first column will be the first visible column such that there are VisibleColumnsRequested columns between it and the last visible column of baseline range. <li data-bbox="695 1356 1437 1392">▪ Greater than or equal to 0 and less than or equal to 16,383. <p data-bbox="695 1423 1437 1549">The number of visible columns in the retrieved range MUST be equal to VisibleColumnsRequested unless there are not enough visible columns in the baseline range to retrieve, in which case all the remaining visible columns in the baseline range MUST be retrieved.</p> <p data-bbox="695 1560 1437 1793">If the retrieved range is encompassed by a published chart, and either a) ObjectName is present and not empty, or b) ObjectName is not present or is empty, and the workbook contains published items, then the returned Workbook ([MS-EXSPXML3] section 2.1.1) will contain the CT_Images element ([MS-EXSPXML3] section 2.3.34) with a single CT_Image element ([MS-EXSPXML3] section 2.3.33). The type attribute for the CT_Image element ([MS-EXSPXML3] section 2.3.33) MUST be chart, as specified in [MS-EXSPXML3] section 2.3.33.</p>

Complex type	Description
WebExtensionMetadata	Information associated with an Office Web Extension .
WorkbookMetadata	This is a container that encapsulates information about features in the workbook.
WorkbookMetadataParameter	Container for workbook metadata.
WorkbookMetadataResult	Contains information about the state of features in the workbook.
WorkbookMetadataState	State of an associated WorkbookMetadata as specified in section 2.2.4.69 .
WorkOnBehalf	MUST NOT be used.
WorksheetChangeInfo	MUST NOT be used.
WorksheetData	Contains metadata for any sheet (1) in the workbook.

2.2.4.1 ArrayOfAnyType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfAnyType** type is an array of **anyType** elements.

```
<xs:complexType name="ArrayOfAnyType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="anyType" nillable="true"/>
  </xs:sequence>
</xs:complexType>
```

anyType: An element of any arbitrary object type.

2.2.4.2 ArrayOfAutoFilterCriteria

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfAutoFilterCriteria** type is an array of **AutoFilterCriteria** elements (section [2.2.4.12](#)).

```
<xs:complexType name="ArrayOfAutoFilterCriteria" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="AutoFilterCriteria" nillable="true"
      type="tns2:AutoFilterCriteria"/>
  </xs:sequence>
</xs:complexType>
```

AutoFilterCriteria: An **AutoFilter** criteria as specified in section 2.2.4.12.

2.2.4.3 ArrayOfAutoFilterDateNodeInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfAutoFilterDateNodeInfo** complex type is an array of **AutoFilterDateNodeInfo** elements (section [2.2.4.13](#)).

```
<xs:complexType name="ArrayOfAutoFilterDateNodeInfo"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="AutoFilterDateNodeInfo"
nillable="true" type="tns2:AutoFilterDateNodeInfo"/>
  </xs:sequence>
</xs:complexType>
```

AutoFilterDateNodeInfo: An **AutoFilter** filter date values as specified in section 2.2.4.13.

2.2.4.4 ArrayOfExcelServerMessage

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfExcelServerMessage** type is an array of **ExcelServerMessage** elements (section [2.2.4.23](#)).

```
<xs:complexType name="ArrayOfExcelServerMessage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ExcelServerMessage" nillable="true"
type="tns2:ExcelServerMessage"/>
  </xs:sequence>
</xs:complexType>
```

ExcelServerMessage: An **alert** as specified in section 2.2.4.23.

2.2.4.5 ArrayOfInt

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfInt** type is an array of integer elements.

```
<xs:complexType name="ArrayOfInt" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="int" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

int: An integer value.

2.2.4.6 ArrayOfPivotFilterItem

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfPivotFilterItem** type is an array of **PivotFilterItem** elements (section [2.2.4.26](#)).

```
<xs:complexType name="ArrayOfPivotFilterItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PivotFilterItem" nillable="true"
type="tns2:PivotFilterItem"/>
  </xs:sequence>
```



```
</xs:complexType>
```

PivotFilterItem: A **PivotFilterItem** element as specified in section 2.2.4.26.

2.2.4.7 ArrayOfPresenceUserInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfPresenceUserInfo** type is an array of **PresenceUserInfo** elements (section [2.2.4.30](#)).

```
<xs:complexType name="ArrayOfPresenceUserInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PresenceUserInfo" nillable="true"
type="tns2:PresenceUserInfo"/>
  </xs:sequence>
</xs:complexType>
```

PresenceUserInfo: A **PresenceUserInfo** element as specified in section 2.2.4.30.

2.2.4.8 ArrayOfRangeValuesA1

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfRangeValuesA1** type is an array of **RangeValuesA1** elements (section [2.2.4.31](#)).

```
<xs:complexType name="ArrayOfRangeValuesA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="RangeValuesA1" nillable="true"
type="tns2:RangeValuesA1"/>
  </xs:sequence>
</xs:complexType>
```

RangeValuesA1: A **RangeValuesA1** element as specified in section 2.2.4.31.

2.2.4.9 ArrayOfSlicerFormatElement

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **SlicerFormatElement** elements (section [2.2.4.37](#)).

The position of the **SlicerFormatElement** in the array indicates which **slicer** visual component the **SlicerFormatElement** is applied to.

The array MUST have 10 elements. The following table lists the index in the array and the corresponding slicer visual component to which the **SlicerFormatElement** at that index is applied.

Index	Slicer visual component
0	Equivalent to the meaning of TseType TSEWHOLETABLE specified in [MS-XLSB] section 2.5.149
1	Equivalent to the meaning of TseType

Index	Slicer visual component
	TSEHEADERROW specified in [MS-XLSB] section 2.5.149
2	Equivalent to the meaning of TseType TSESLICERITEMSELECTED specified in [MS-XLSB] section 2.5.149
3	Equivalent to the meaning of TseType TSESLICERITEMUNSELECTED specified in [MS-XLSB] section 2.5.149
4	Equivalent to the meaning of TseType TSESLICERITEMNODATA specified in [MS-XLSB] section 2.5.149
5	Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTED specified in [MS-XLSB] section 2.5.149
6	Equivalent to the meaning of TseType TSESLICERITEMSELECTEDHOVER specified in [MS-XLSB] section 2.5.149
7	Equivalent to the meaning of TseType TSESLICERITEMUNSELECTEDHOVER specified in [MS-XLSB] section 2.5.149
8	Equivalent to the meaning of TseType TSESLICERITEMNODATAHOVER specified in [MS-XLSB] section 2.5.149
9	Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTEDHOVER specified in [MS-XLSB] section 2.5.149

```

<xs:complexType name="ArrayOfSlicerFormatElement"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="SlicerFormatElement"
nillable="true" type="tns2:SlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>

```

SlicerFormatElement: A **SlicerFormatElement** element as specified in section 2.2.4.37.

2.2.4.10 ArrayOfSlicerItem

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **SlicerItem** elements (section [2.2.4.39](#)).

```

<xs:complexType name="ArrayOfSlicerItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="SlicerItem" nillable="true"
type="tns2:SlicerItem"/>
  </xs:sequence>

```

```
</xs:complexType>
```

SlicerItem: A **SlicerItem** element as specified in section 2.2.4.39.

2.2.4.11 ArrayOfString

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfString** complex type is an array of string elements.

```
<xs:complexType name="ArrayOfString" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="string" nillable="true"
type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

string: A string value.

2.2.4.12 AutoFilterCriteria

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Used to instruct the protocol server on how to apply a **filter** on an **AutoFilter** in the **workbook**. This complex type is used as part of the **AutoFilterOptions** complex type (section [2.2.4.14](#)) through the **ArrayOfAutoFilterCriteria** complex type (section [2.2.4.2](#)).

```
<xs:complexType name="AutoFilterCriteria" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns2:AutoFilterOperationType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Relation"
type="tns2:AutoFilterRelationOperator"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Value" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Type: The type of comparison method as specified in section [2.2.5.3](#). Used when comparing the **Value** element.

Relation: Specifies how to combine an instance of this filter with one appearing after it in a **ArrayOfAutoFilterCriteria**. When this complex type is the last element inside an **ArrayOfAutoFilterCriteria**, it MUST contain the Nil value specified in section [2.2.5.4](#). When this complex type is not the last element inside an **ArrayOfAutoFilterCriteria**, it MUST contain either the "And" or "Or" values specified in section 2.2.5.4.

Value: The string that will be used to filter a **worksheet** or a **table**. MUST be present. MUST NOT be longer than 32,768 characters.

2.2.4.13 AutoFilterDateNodeInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies how **AutoFilter filter date values** are filtered by the protocol server.

```

<xs:complexType name="AutoFilterDateNodeInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="NodeType"
type="tns2:AutoFilterDateNodeType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Year" type="xs:short"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:short"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:short"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Hour" type="xs:short"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Minute" type="xs:short"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Second" type="xs:short"/>
  </xs:sequence>
</xs:complexType>

```

NodeType: The type of the node. Specifies the element that is included in the **filter** as specified in section [2.2.5.2](#).

Year: The year part of a date. MUST be greater than or equal to 1900 and less than or equal to 9999.

Month: The month part of a date. MUST be greater than or equal to 0 and less than or equal to 12. The protocol server MUST ignore the value 0.

Day: The day part of a date. MUST be greater than or equal to 0 and less than or equal to 31, and SHOULD [<2>](#) be a valid day of the month for the year specified in the **Year** element and month specified in the **Month** element. The protocol server SHOULD [<3>](#) ignore the value 0.

Hour: The hour part of a date. MUST be greater than or equal to 0 and less than or equal to 23.

Minute: The minute part of a date. MUST be greater than or equal to 0 and less than or equal to 59.

Second: The second part of a date. MUST be greater than or equal to 0 and less than or equal to 59.

2.2.4.14 AutoFilterOptions

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Used to specify the **filter** applied to an **AutoFilter column (2)**.

```

<xs:complexType name="AutoFilterOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterType" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Criteria"
type="tns2:ArrayOfAutoFilterCriteria"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CriteriaType"
type="tns2:AutoFilterCriteriaType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Id" type="xs:unsignedInt"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectView" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

AutoFilterType: The object on which the filter operates. MUST be either "Sheet" or "Table".

Criteria: The list of **AutoFilterCriteria** complex types (section [2.2.4.12](#)) that specify how values are filtered. If the **CriteriaType** element contains a value different from Nil, then this element MUST NOT be present. If **Criteria** contains two **AutoFilterCriteria** elements, they MUST be one of the following:

- The **Type** and **Relation** elements of the first **AutoFilterCriteria** MUST be **GTEQ** and **And** respectively. The **Type** and **Relation** elements of the second **AutoFilterCriteria** MUST be **LTEQ** and Nil respectively.
- The **Type** and **Relation** elements of the first **AutoFilterCriteria** MUST be **LT** and **Or** respectively. The **Type** and **Relation** elements of the second **AutoFilterCriteria** MUST be **GT** and Nil respectively.

CriteriaType: The type of filter to apply as specified in section [2.2.5.1](#).

Id: The identifier of the **table** that has the filter applied to it. If the **AutoFilterType** element contains the string "Sheet" then this element MUST be ignored. If the **AutoFilterType** element contains the string "Table", then this element MUST contain a value that was previously returned from the protocol server in the **ID** attribute of **CT_autofilter** complex type, as specified in [\[MS-EXSPXML3\]](#) section 2.3.19.

SheetName: The name of the **worksheet** or **named object** containing the AutoFilter. MUST be present. MUST NOT be empty. If the **NamedObjectView** element is set to **true**, the following apply:

- The value in the **SheetName** element is a named object on the **workbook**.
- The length of **SheetName** MUST NOT be longer than 287 characters.

If the **NamedObjectView** element is set to **false**, the following apply:

- The value in the **SheetName** element is a worksheet on the workbook.
- The length of **SheetName** MUST NOT be longer than 31 characters.

Column: Specifies the one-based index of the column of the AutoFilter. If the **AutoFilterType** element contains the value "Table" then this value MUST be greater than or equal to 1 and less than or equal to the number of column in the Table containing the AutoFilter. If the **AutoFilterType** element contains the value "Sheet" then this value MUST be greater than or equal to 1 and less than or equal to the last numeric index of the column on the worksheet that contains an AutoFilter.

NamedObjectView: Specifies whether this filter is to be applied to an AutoFilter that is located on a worksheet or on a named object. MUST be set to **true** if AutoFilter is located on a named object; MUST be **false** otherwise.

2.2.4.15 BorderFormat

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the formatting to apply to the border of the **slicer** visual components.

```
<xs:complexType name="BorderFormat" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Thickness" type="tns2:ArrayOfInt"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Color" type="tns2:ArrayOfInt"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LineStyle" type="tns2:ArrayOfInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Position" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Thickness: An array of **border thickness** in **pixels**. MUST be present. The array MUST contain 4 elements. The first element is the Top **border**, the second element is Bottom border, the third element is the Left border, and the fourth element is the Right border. The value of each element in the array MUST be greater than or equal to 0, and MUST be less than or equal to 3.

Color: An array of border colors. MUST be present. The array MUST contain 4 elements. The first element is the Top border, the second element is Bottom border, the third element is the Left border, and the fourth element is the Right border. The value of each element in the array MUST be a **LongRGBA** as specified in [\[MS-XLSB\]](#) section 2.5.89.

LineStyle: An array of border line styles. MUST be present. The array MUST contain 4 elements. The first element is the Top border, the second element is Bottom border, the third element is the Left border, and the fourth element is the Right border. The value of each element in the array MUST be one of the values described in the following table.

Value	Name	Meaning
0	None	No border.
1	Continuous	Equivalent to the [ISO/IEC29500-1:2012] ST_BorderStyle medium enumeration value.
2	Dash	Equivalent to the [ISO/IEC29500-1:2012] ST_BorderStyle dash enumeration value.
3	Dot	Equivalent to the [ISO/IEC29500-1:2012] ST_BorderStyle dot enumeration value.
4	DashDot	Equivalent to the [ISO/IEC29500-1:2012] ST_BorderStyle dashDot enumeration value.
5	DashDotDot	Equivalent to the [ISO/IEC29500-1:2012] ST_BorderStyle dashDotDot enumeration value.
6	SlantDashDot	Equivalent to the [ISO/IEC29500-1:2012] ST_BorderStyle slantDashDot enumeration value.
7	Double	Equivalent to the [ISO/IEC29500-1:2012] ST_BorderStyle double enumeration value.

Position: Edge or set of edges of the slicer visual component to which the border information applies. If none of the edges of the slicer visual component have a border then **Position** MUST be 0. Otherwise the value for **Position** MUST be the sum of one or more of the values listed in the following table:

Value	Meaning
1	Bottom border
2	Top border
4	Left border
8	Right border

2.2.4.16 CellCompoundValue

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CellCompoundValue** complex type contains the number formatted and the unformatted value of a **cell**.

The **CellCompoundValue** type MUST only be used in the elements in the **rangeRequests** element of **GetRangeValuesA1Response** (section [3.1.4.24.2.2](#)).

```
<xs:complexType name="CellCompoundValue" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Value"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Formatted" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Value: The unformatted value of a cell. If present MUST be one of the following types:

- Boolean
- Double
- String
- **CellError** as specified in section [3.1.4.34.4.2](#).

Formatted: The number formatted value of the cell. MUST be present.

2.2.4.17 CollaborationParameter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CollaborationParameter** complex type encapsulates input about **end user presence**.

```
<xs:complexType name="CollaborationParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CollaborationState"
type="tns2:CollaborationState"/>
  </xs:sequence>
</xs:complexType>
```

CollaborationState: A **CollaborationState** as specified in section [2.2.4.19](#). MUST be present.

2.2.4.18 CollaborationResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CollaborationResult** complex type encapsulates output about **end user presence**.

```
<xs:complexType name="CollaborationResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CollaborationState"
type="tns2:CollaborationState"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Users"
type="tns2:ArrayOfPresenceUserInfo"/>
  </xs:sequence>
</xs:complexType>
```

CollaborationState: A **CollaborationState** as specified in section [2.2.4.19](#). MUST be present.

Users: An **ArrayOfPresenceUserInfo** as specified in **ArrayOfPresenceUserInfo** (section [2.2.4.7](#)).

2.2.4.19 CollaborationState

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CollaborationState** complex type encapsulates information about the state of the **end user presence** information.

```
<xs:complexType name="CollaborationState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="UserListVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

UserListVersion: The version number of the user list. MUST be 0 or greater.

2.2.4.20 CommandParameter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CommandParameter** complex type is an input used by some protocol server operations.

```
<xs:complexType name="CommandParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfListInfo"
type="tns2:ClientUdfListInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="VisibleSheetRangeRequest"
type="tns2:VisibleSheetRange"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkOnBehalfRequest"
type="tns2:WorkOnBehalf"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Confirmation"
type="tns2:ExcelServerMessageId"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ProtocolClientId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Zone" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreviousOwnerId" type="xs:string"/>
    <xs:element xmlns:q2="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
name="RequestSiteId" type="q2:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RequestId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CompleteResponseTimeout" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns2:CommandParameterFlags"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RequestLimits" type="tns2:RequestLimits"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CollaborationParameter"
type="tns2:CollaborationParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataParameter"
type="tns2:WorkbookMetadataParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FrontEndMachineName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfListInfo: A list of client side UDFs that the protocol client knows how to execute. When this element is present, the protocol server will start using the content as the list of client side UDFs.

WorkbookId: The **session identifier** that is returned in the **workbookId** as specified in **OpenWorkbookResponse** (section [3.1.4.30.2.2](#)). See section [2.2.5.33](#). If present, it MUST NOT be empty. For all operations other than **OpenWorkbook** (section [3.1.4.30](#)), MUST have a value which has been obtained from a previous call to **OpenWorkbook**. For the **OpenWorkbook**, the following apply:

- If a session identifier has already been returned by the protocol server for a previous **OpenWorkbook**, **WorkbookId** MUST have that value.
- If this operation is used to create a new **session (2)** on the protocol server then MUST NOT be present.

StateId: The state identifier as specified in Section [3.1.1](#). MUST be incremented by the protocol server on every operation that changes the state of the session.

VisibleSheetRangeRequest: The requested **range** that will be returned by the protocol server in **SpreadsheetData**, as specified in section [2.2.4.21](#). See section [2.2.4.44](#).

WorkOnBehalfRequest: MUST NOT be present.

Confirmation: The **external data refresh confirmation**. MUST be either "ConfirmDataRefresh" or "Blank". MUST be **ConfirmDataRefresh**, with the **ConfirmationChoiceTrue** value of **Flags** set to allow external data refresh for the lifetime of the session, or with **ConfirmationChoiceTrue** value of **Flags** not set to prevent external data refresh for the current operation. Otherwise, the protocol server MUST ignore the **ConfirmationChoiceTrue** value of **Flags**.

ProtocolClientId: The protocol server MUST ignore the value unless specified otherwise. The protocol client MAY pass any value.

Zone: The **URL zone** of the **site collection**. MUST be present. MUST be set to either one of the following values: "Internet", "Intranet", "Extranet", "Default", or "Custom".

PreviousOwnerId: The instance identifier of a protocol server as specified in section 3.1.1. If the current request is not **OpenWorkbook**, then MUST NOT be present. Otherwise, if the last response from a protocol server has returned a soap fault, as specified in section [2.2.2](#), with the **WrongEcs** value in the **Id** element of the returned **ExcelServerMessage**, then the protocol client MUST send a **PreviousOwnerId** with the value of the **WrongEcsServerId** element from that **ExcelServerMessage**.

RequestSiteId: The **site identifier**. MUST be present.

RequestId: An identifier of an ongoing asynchronous request on the protocol server, as specified in section 3.1.1. If the last response on the same session from the protocol server has returned a **CommandResult** which contained a non-empty value for the **RequestId** element, then it MUST contain the same value. Otherwise, MUST NOT be present.

CompleteResponseTimeout: The estimated timeout, in milliseconds, after which the protocol server returns a response in cases where the operation has not yet finished, as specified in section 3.1.1.

Flags: Control flags as specified in section [2.2.5.5](#).

RequestLimits: Request limits as specified in section [2.2.4.32](#).

DebugInfo: An opaque string sent to the protocol server – it does not affect the operation.

CollaborationParameter: **End user presence** information as specified in section [2.2.4.17](#). MUST NOT be present if the associated session (2) is not an **edit session**. The **UserListVersion** element of **CollaborationState** will contain the last non-empty **CollaborationState** value received in a response on the same session from the protocol server.

WorkbookMetadataParameter: A **WorkbookMetadataItem** that represents the **workbook** metadata state known by the protocol client.

FrontEndMachineName: The protocol client machine name.

2.2.4.21 CommandResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **CommandResult** complex type is an operation response message used by most protocol server operations.

```
<xs:complexType name="CommandResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TransientEditSessionToken"
type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SpreadsheetData" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExtendedInfo"
type="tns2:CommandResultExtendedInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfCallInfo"
type="tns2:ClientUdfCallInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PeriodicRefreshInfo"
type="tns2:PeriodicRefreshInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HealthInformation"
type="tns2:ServerHealthInformation"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SecondsBeforeNextPoll" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="EditSessionIsDirty" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="EditSessionHasMultipleCollaborationUsers"
type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="OperationStates"
type="tns2:OperationStates"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RequestId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CollaborationResult"
type="tns2:CollaborationResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataResult"
type="tns2:WorkbookMetadataResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ServerEvents" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataConnections"
type="tns2:DataConnectionsInfo"/>
  </xs:sequence>
</xs:complexType>
```

DebugInfo: An opaque string returned from the protocol server – it has no effect on the protocol client.

TransientEditSessionToken: A unique string associated with the current **session (2)**. MUST NOT be present if the associated session (2) is not an **edit session**. MUST be present and non-empty if the associated session (2) is an edit session.

StateId: The state identifier as specified in section [3.1.1](#). The protocol server MUST set **StateId** to the state identifier value for the current session.

SpreadsheetData: The **range** to be returned as the result of a **VisibleSheetRangeRequest**. See section [2.2.4.44](#). MUST NOT be present if the **Messages** element of **CommandResultExtendedInfo** (section [2.2.4.22](#)) contains at least one element. Otherwise, MUST NOT be present if

VisibleSheetRangeRequest was not present in **CommandParameter** (section [2.2.4.20](#)) in the request message of the same operation. MUST be present if **VisibleSheetRangeRequest** was present in **CommandParameter** in the request message of the same operation.

ExtendedInfo: More information about the result of the operation, as specified in **CommandResultExtendedInfo**.

ClientUdfCallInfo: When present, represents a set of calls the protocol server needs results for to be able to calculate the workbook.

PeriodicRefreshInfo: Information about **connected data** on the workbook that can **expire**, as specified in **PeriodicRefreshInfo** (section [2.2.4.25](#)). MUST NOT be present if the **Messages** element of **CommandResultExtendedInfo** contains at least one element.

HealthInformation: The health information of the protocol server, as specified in **ServerHealthInformation** (section [2.2.4.34](#)).

SecondsBeforeNextPoll: MUST be ignored by the protocol client.

EditSessionIsDirty: Specifies whether the associated session (2) has unsaved changes. MUST be present. MUST be false if the associated session (2) is not an edit session. Otherwise, the following apply:

- MUST be **true** if the associated session (2) has unsaved changes.
- MUST be **false** if the associated session (2) does not have unsaved changes.

EditSessionHasMultipleCollaborationUsers: Specifies whether the associated session (2) has multiple participants. MUST be false if the session (2) is not an edit session.

OperationStates: Contains information about the enabled state of undo and redo operations as specified in **OperationStates** (section [2.2.4.93](#)).

RequestId: An identifier of an ongoing asynchronous request on the protocol server, as specified in section 3.1.1. If the asynchronous request has not yet finished, **RequestId** MUST be present and MUST uniquely identify the request. Otherwise, MUST NOT be present.

CollaborationResult: End user presence information as specified in **CollaborationResult** (section [2.2.4.18](#)). MUST NOT be present if the associated session (2) is not an edit session. MUST be present and non-empty if the associated session (2) is an edit session. The **UserListVersion** element of **CollaborationState** will contain the version of the user list tracked by the protocol server. The **Users** element MUST be present and non-empty if the **UserListVersion** element of **CollaborationState** received in the current request's **CommandParameter** is lesser than the **UserListVersion** of the session (2). It will contain a list of **PresenceUserInfo** elements, representing the current participants of the session (2), as specified in **PresenceUserInfo** (section [2.2.4.30](#)).

WorkbookMetadataResult: Contains information about features in the **workbook** as specified in **WorkbookMetadataResult** (section [2.2.4.71](#)). MUST be present.

ServerEvents: An XML string in the form of **CT_ServerEvents** ([\[MS-EXSPXML3\]](#) section 2.3.45) that contains information about server events generated during the processing of the command. If the corresponding **CommandParameterFlags** value **WantServerEvents** is not set this SHOULD NOT be present.

DataConnections: Information about **data connections (2)** as specified in **DataConnectionsInfo** (section [2.2.4.98](#))

2.2.4.22 CommandResultExtendedInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CommandResultExtendedInfo** complex type provides extended information for **CommandResult** (section [2.2.4.21](#)).

```

<xs:complexType name="CommandResultExtendedInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Messages"
type="tns:ArrayOfExcelServerMessage"/>
    <xs:element minOccurs="1" maxOccurs="1" name="WarnOnManualDataRefresh"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UnsupportedFeaturesRemoved"
type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

Messages: **Alert** information. See section [2.2.4.4](#). MUST be present.

WarnOnManualDataRefresh: Specifies whether **external data refresh confirmation** is needed. MUST be present. MUST be **true** if external data refresh has never been confirmed as specified in **CommandParameter** (section [2.2.4.20](#)). MUST be **false** if external data refresh has been confirmed or if it is not required as specified in **CommandParameter**, or if **WorkbookId** is not present inside **parameter** in the **OpenWorkbook** element, as specified in the **OpenWorkbook** operation (section [3.1.4.30](#)).

UnsupportedFeaturesRemoved: Specifies whether unsupported content has been removed from the workbook. MUST be **true** if both of the following conditions are true: 1) **HasUnsupportedFeatures** was present in the **OpenWorkbookOutFlags** (section [3.1.4.30.4.1](#)) of the **OpenWorkbookResponse** (section [3.1.4.30.2.2](#)), and 2) the **workbook** no longer contains unsupported content. Otherwise, MUST be false.

2.2.4.23 ExcelServerMessage

Namespace: <http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server>

An **alert** information returned by the protocol server.

```

<xs:complexType name="ExcelServerMessage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="Appearance" type="tns:ExcelServerMessageAppearance"/>
    <xs:element minOccurs="0" name="Caption" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="DebugInfo" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="Description" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="DisplaysCorrelationId" type="xs:boolean"/>
    <xs:element minOccurs="0" name="ExtendedDescription" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="HasClientUrl" type="xs:boolean"/>
    <xs:element minOccurs="0" name="HasOpenItemPermission" type="xs:boolean"/>
    <xs:element minOccurs="0" name="HealthInformation" nillable="true"
type="tns:ServerHealthInformation"/>
    <xs:element minOccurs="0" name="HelpDisplayText" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="HelpTopicId" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="Id" type="tns:ExcelServerMessageId"/>
    <xs:element minOccurs="0" name="Severity" type="tns:ExcelServerMessageSeverity"/>
    <xs:element minOccurs="0" name="Type" type="tns:ExcelServerMessageType"/>
    <xs:element minOccurs="0" name="WrongEcsServerId" nillable="true" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

Appearance: The **control buttons** of the alert as specified in section [2.2.5.11](#). MUST be present.

Caption: A **caption** for the alert. MUST be present. MUST be in the language **UI culture** of the **session (2)**.

DebugInfo: An opaque string returned from the protocol server – does not have any effect on the protocol client.

Description: A text description of the alert. MUST be present. MUST NOT be empty. MUST be in the language UI culture of the session (2).

DisplaysCorrelationId: Specifies whether the protocol client includes debug information in the alert. If set to **true** the protocol client includes debug information in the alert. If set to **false** the protocol client excludes debug information from the alert.

ExtendedDescription: An extended description of the alert. MUST be present. MUST be in the language UI culture of the session (2).

HasClientUrl: Specifies an **absolute path** exists for the **workbook file**. MUST be **true** if the value of the **ClientWorkbookUri** element of **OpenWorkbookOutParameters** (section [2.2.4.52](#)) is present and is not empty, and MUST be set to **false** otherwise.

HasOpenItemPermission: Specifies whether the user has **Open Item permission** to the workbook file. MUST be set to true if the user has Open Item permission, MUST be set to false otherwise. MUST be present.

HealthInformation: The health information of the protocol server as specified in section [2.2.4.34](#). MUST be present.

HelpDisplayText: A description of the help topic. MUST be present. MUST be in the language UI culture of the session (2).

HelpTopicId: The **Help topic identifier**.

Id: The identifier of the alert as specified in section [2.2.5.14](#). MUST be present.

Severity: The severity of the alert as specified in section [2.2.5.16](#). MUST be present.

Type: The type of the alert as specified in section [2.2.5.18](#). MUST be present.

WrongEcsServerId: The instance identifier of a protocol server as specified in section [3.1.1](#).

2.2.4.24 ExcelServerMessage

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An **alert** information returned by the protocol server.

```
<xs:complexType name="ExcelServerMessage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="HasOpenItemPermission" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasClientUrl" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Id" type="tns2:ExcelServerMessageId"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Severity"
type="tns2:ExcelServerMessageSeverity"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns2:ExcelServerMessageType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Appearance"
type="tns2:ExcelServerMessageAppearance"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Description" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExtendedDescription" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HelpTopicId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplaysCorrelationId" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HelpDisplayText" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HealthInformation"
type="tns2:ServerHealthInformation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WrongEcsServerId" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

</xs:complexType>

HasOpenItemPermission: Specifies whether the user has **Open Item permission** to the **workbook file**.

HasClientUrl: Specifies an **absolute path** exists for the workbook file. MUST be **true** if the value of the **ClientWorkbookUri** element of OpenWorkbookOutParameters (section [2.2.4.52](#)) is present and is not empty, and MUST be set to **false** otherwise.

Id: The identifier of the alert as specified in section [2.2.5.13](#).

DebugInfo: An opaque string returned from the protocol server – does not have any effect on the protocol client.

Severity: The severity of the alert as specified in section [2.2.5.15](#).

Type: The type of the alert as specified in section [2.2.5.17](#).

Appearance: The **control buttons** or **Message Bar notification** flag associated with the alert as specified in section [2.2.5.12](#).

Description: A text description of the alert. MUST be present. MUST NOT be empty. MUST be in the language **UI culture** of the **session (2)**.

ExtendedDescription: An extended description of the alert. MUST be present. MUST be in the language UI culture of the session (2).

Caption: A **caption** for the alert. MUST be present. MUST be in the language UI culture of the session (2).

HelpTopicId: The **Help topic identifier**.

DisplaysCorrelationId: Specifies whether the protocol client includes debug information in the alert. If set to **true** the protocol client includes debug information in the alert. If set to **false** the protocol client excludes debug information from the alert.

HelpDisplayText: A description of the Help topic. MUST be present. MUST be in the language UI culture of the session (2).

HealthInformation: The health information of the protocol server as specified in section [2.2.4.34](#).

WrongEcsServerId: The instance identifier of a protocol server as specified in section [3.1.1](#).

2.2.4.25 PeriodicRefreshInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **PeriodicRefreshInfo** complex type is used to return expired external data related information.

```
<xs:complexType name="PeriodicRefreshInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ExpirationTime" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ConnectionNames"
type="tns2:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>
```

ExpirationTime: The number of seconds left before the next external data expires. MUST be greater than or equal to 0.

ConnectionNames: The names of the **data connections (2)** that will expire after the number of seconds specified by **ExpirationTime**. MUST be present. MUST have one or more entries. Each entry MUST NOT have the xsi:nil attribute set to true and MUST NOT be empty.

2.2.4.26 PivotFilterItem

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A **PivotTable member** that is part of a **PivotTable manual filter hierarchy**.

```
<xs:complexType name="PivotFilterItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:PivotFilterItemList">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="CalculatedMember" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="LeafItem" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Selected" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Id" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayString" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

CalculatedMember: Specifies whether the PivotTable member is a calculated PivotTable member. MUST be set to true if the PivotTable member is a calculated PivotTable member, and MUST be set to false otherwise.

LeafItem: Specifies whether the PivotTable member has no **child** objects in the PivotTable manual filter hierarchy. MUST be set to true if the PivotTable member has no child objects in the PivotTable manual filter hierarchy, and MUST be set to false otherwise.

Selected: Specifies whether the PivotTable member or all its **descendants** in the hierarchy are selected. If **LeafItem** is **true**, MUST be set to true if the PivotTable member is selected, and MUST be set to false otherwise. If **LeafItem** is **false**, MUST be set to true if all the descendants of the PivotTable member in the hierarchy are selected, and MUST be set to **false** otherwise.

Id: A unique identifier of the PivotTable member. MUST be greater than or equal to 0. MUST be unique across all the PivotTable members in the PivotTable manual filter hierarchy.

DisplayString: The **caption** of the PivotTable member. MUST be present. MUST NOT be empty.

2.2.4.27 PivotFilterItemList

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A list of **PivotTable members**.

```
<xs:complexType name="PivotFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemListMaxExceeded" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsBlanksSelected" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="PivotFilterItems"
type="tns2:ArrayOfPivotFilterItem"/>
  </xs:sequence>
</xs:complexType>

```

ItemListMaxExceeded: Specifies whether there were more PivotTable members available on the protocol server than the amount returned in **PivotFilterItems**, as specified in **ConnectAndGetPivotFilterItemList** (section [3.1.4.9](#)) and **GetPivotFilterItemList** (section [3.1.4.18](#)). MUST be set to **true** if there are more than 1000 **child PivotTable members**, and MUST be set to **false** otherwise.

IsBlanksSelected: Unused. MUST be set to **false** and MUST be ignored by the protocol client.

HasBlanks: Unused. MUST be set to **false**.

PivotFilterItems: A list of PivotTable members. MUST be present. MUST contain **PivotFilterItem** elements (section [2.2.4.26](#)) as specified in **ConnectAndGetPivotFilterItemList** and **GetPivotFilterItemList**. MUST contain an empty list if **LeafItem** is true for the **PivotFilterItem** element. MUST contain an empty list if all the child PivotTable members are **selected** and **Selected** is true for the **PivotFilterItem** element or if all the child PivotTable members are not selected and **Selected** is false for the **PivotFilterItem** element. Otherwise, it MUST be present and contain the list of all the child PivotTable members if there are 1000 or less child PivotTable members, and MUST contain the first 1000 child PivotTable members if there are more than 1000 child PivotTable members.

2.2.4.28 PivotOperationOptions

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotOperationOptions** complex type is a container for common information that is used by the following operations related to **PivotTables**:

- **ApplyPivot** (section [3.1.4.47](#))
- **ApplyPivotFilter** (section [3.1.4.2](#))
- **ApplyPivotSort** (section [3.1.4.3](#))
- **ApplyPivotTop10Filter** (section [3.1.4.4](#))
- **ApplyPivotValueFieldSettings** (section [3.1.4.61](#))
- **BixDrill** (section [3.1.4.58](#))
- **ConnectAndGetPivotFilterItemList** (section [3.1.4.9](#))
- **ConnectAndGetPivotMenu** (section [3.1.4.78](#))
- **ExpandPivotFieldListLevels** (section [3.1.4.49](#))
- **GetBixAnalysis** (section [3.1.4.51](#))
- **GetPivotFieldListData** (section [3.1.4.52](#))

- **GetPivotFieldManagerData** (section [3.1.4.53](#))
- **GetPivotFilterItemList** (section [3.1.4.18](#))
- **GetPivotMenu** (section [3.1.4.19](#))
- **GetPivotValueFieldSettings** (section [3.1.4.63](#))
- **RemovePivotFilter** (section [3.1.4.37](#))
- **TogglePivotDrill** (section [3.1.4.46](#))

Some of the elements of this type have a common usage among all of the preceding operations and are specified in this section. Other elements have particular usage information that is specified in the sections of this document addressing the particular operations.

```
<xs:complexType name="PivotOperationOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="AnchorType"
type="tns2:SharedPivotMenuAnchorType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SourceIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NamedObject" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FieldId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberPropertyId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterValue1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterValue2" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns2:PivotFilterType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ParentId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Row" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Items" type="tns2:ArrayOfInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortByValue" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DataFieldIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HierarchyIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LevelIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NavDrillDown" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ChartIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ChartElementValue1" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ChartElementValue2" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="WholeDays" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

AnchorType: The type of item on which the anchor operation is occurring. The default value is 0. The following table lists all the possible values.

Value	Type of item
0	A PivotTable.
-1	Neither a PivotTable nor a PivotChart .
1	A PivotChart series.
2	A PivotChart category.
3	A PivotChart data point.
4	A PivotChart filter button.

Value	Type of item
5	A PivotChart series button.
6	A category button.
7	A general PivotChart area.
8	A PivotChart hierarchy.
9	A PivotTable hierarchy.
10	A field list that was brought up by a PivotChart but is not on the PivotChart.
11	A field list that was brought up by a PivotTable but is not on the PivotTable.

SheetName: The name of either the **worksheet** or the **named object** on which the operation is being performed. MUST be present and MUST NOT be empty. If the **NamedObject** element is set to **true**, the following constraints apply:

- The **SheetName** element MUST refer to a named object in the **workbook**.
- The length of **SheetName** MUST NOT be longer than 287 characters.

If the **NamedObject** element is set to **false**, the following constraints apply:

- The **SheetName** element MUST refer to a worksheet in the workbook.
- The length of **SheetName** MUST NOT be longer than 31 characters.

SourceIndex: The index of the connected data. MUST be the value of the **ExternalSourceIndex** attribute of the **CT_PivotTable** element, as specified in [\[MS-EXSPXML3\]](#) section 2.3.27, that is the PivotTable on which the operation is being performed (except when used in the **GetPivotMenu** operation, which specifies a different behavior).

NamedObject: A value that specifies whether the operation is being performed on a named object. MUST be set to **true** if the operation is being performed on a named object. Otherwise, MUST be set to **false**.

FieldId: The identifier of the **PivotTable field** on which the operation is being performed. MUST be present and MUST be equal to one of the following values (except when used in the **GetPivotMenu** or **TogglePivotDrill** operation, which specify different behavior):

- The value of the **IdString** element of one of the **PivotField** (section [2.2.4.99](#)) elements that have **IsHierarchy** set to **false** and that are nested inside the **PivotFields** element of the **pivotMenu** (section [2.2.4.101](#)) element that was retrieved from the protocol server in a previous call to **GetPivotMenu** (section [3.1.4.19](#)) on the same **PivotTable area**.
- The value of the **PageFieldID** attribute of the **CT_Cell** element, as specified in [\[MS-EXSPXML3\]](#) section 2.3.40.

DataFieldId: The identifier of the **PivotTable data field**. MUST NOT be present, except when used in the following operations, which specify different behavior:

- **ApplyPivotFilter**

- **ApplyPivotTop10Filter**

MemberPropertyId: The identifier of the **member property**. MUST NOT be present, except when used in the **ApplyPivotFilter** operation, which specifies different behavior.

FilterValue1: The first **PivotTable filter parameter**. MUST NOT be present, except when used in **ApplyPivotFilter**, which specifies different behavior.

FilterValue2: The second PivotTable filter parameter. MUST NOT be present, except when used in **ApplyPivotFilter**, which specifies different behavior.

FilterType: The type of filter used in the operation. MUST have the value of "Invalid", except when used in the following operations, which specify different behavior:

- **ApplyPivotFilter**
- **ApplyPivotTop10Filter**

ParentId: The identifier of the **PivotTable member** on which the operation is being performed. MUST be ignored on receipt by the protocol server, except when used in the following operations, which specify different behavior:

- **ConnectAndGetPivotFilterItemList**
- **GetPivotFilterItemList**

Column: The **column (2)** of the PivotTable area location if **AnchorType** indicates that this operation is being performed on a PivotTable. MUST be the zero-based column (2) number of a worksheet **cell** of the PivotTable that has the **HasDropDown** attribute of the **CT_Cell** element (as specified in [MS-EXSPXML3] section 2.3.40) set to **true**, except when used in the **TogglePivotDrill** operation, which specifies different behavior.

Row: The **row (2)** of the PivotTable area location if **AnchorType** indicates that this operation is being performed on a PivotTable. MUST be the zero-based row (2) number of a worksheet cell of the PivotTable that has the **HasDropDown** attribute of the **CT_Cell** element (as specified in [MS-EXSPXML3] section 2.3.40) set to **true**, except when used in **TogglePivotDrill**, which specifies a different behavior.

Items: The list of PivotTable members applied in a PivotTable **manual filter**. MUST NOT be present, except when used in the **ApplyPivotSort** operation, which specifies different behavior.

SortByValue: A value that specifies whether the operation is a sort-by-value operation. MUST be **false** except when used in **ApplyPivotSort**, which specifies different behavior.

DataFieldIndex: The index of a PivotTable data field. MUST be ignored on receipt except when used in **ApplyPivotSort**, which specifies different behavior.

HierarchyIndex: The index of the **hierarchy** of the PivotTable if **AnchorType** indicates that this operation is being performed on a PivotTable. This index is zero-based. MUST be ignored on receipt by the protocol server, except when used in the **BixDrill** operation, which specifies different behavior.

LevelIndex: The index of the level of a hierarchy of the PivotTable if **AnchorType** indicates that this operation is being performed on a PivotTable. This index is zero-based. MUST be ignored on receipt by the protocol server, except when used in **BixDrill**, which specifies different behavior.

NavDrillDown: A value that specifies whether the operation is a navigation drill-down mode for a double-click drill-down operation.

ChartIndex: The index of the chart of the worksheet if **AnchorType** indicates that this operation is being performed on a PivotChart.

ChartElementValue1: The index of the category or series. If the operation is being performed on a data point of a PivotChart, this attribute specifies the category index.

ChartElementValue2: The index of the series if the operation is being performed on a data point of a PivotChart.

WholeDays: A value that specifies whether using whole days is enabled. If the value is **true**, date comparisons are based only on the date stamp, and the time stamp is ignored. If the value is **false**, date comparisons are based on both the date stamp and the time stamp. This element specifies PivotTable advanced filter criteria, and the value MUST be **false** if the **FilterType** element does not indicate a filter operation on a PivotTable date field.

2.2.4.29 PresenceUserId

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PresenceUserId** complex type contains identifying information about **end user presence** for a single participant in the **session (2)**.

```
<xs:complexType name="PresenceUserId" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UserName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsApiUser" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

UserName: The **user display name** of the participant. MUST be present.

IsApiUser: MUST be **true** if the value of **ProtocolClientId** element (section [2.2.4.20](#)) in the **parameter** (section [3.1.4.30.2.1](#)) was "ms-soap" when **OpenWorkbook** was called against the protocol server for the specific participant.

2.2.4.30 PresenceUserInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PresenceUserInfo** complex type contains information about **end user presence** for a single participant in the **session (2)**.

```
<xs:complexType name="PresenceUserInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="User" type="tns:PresenceUserId"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UserColor" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NumberOfTimesInSession" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

User: The **PresenceUserId** as specified in section [2.2.4.29](#). MUST be present.

UserColor: MUST be present and equal to "#000000".

NumberOfTimesInSession: The number of times the user is participating in the session (2) at the same time.

2.2.4.31 RangeValuesA1

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **RangeValuesA1** type is used to transfer the values of the **cells** specified by **RangeName**.

```
<xs:complexType name="RangeValuesA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfAnyType"/>
  </xs:sequence>
</xs:complexType>
```

RangeName: The name of the **range**. This field MUST follow the **RangeReference** (section [2.2.5.25](#)) specification. MUST be present.

SheetName: The name of the **sheet (2)** where the cells are located. MUST be present. The length of the string MUST NOT be more than 31 characters.

Values: The values of the sheet (2) cells. MUST be present. Each element inside the **Values** element MUST be of type **ArrayOfAnyType** and is a **row (2)** of sheet (2) cells on the protocol server. The number of rows (2) returned MUST be equal to the number of rows (2) requested in the **rangeName** element. Each element inside each of the **ArrayOfAnyType** type nested inside **Values** MUST be a single **workbook** sheet (2) cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of **columns (2)** requested in the **rangeName** element.

2.2.4.32 RequestLimits

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies a limit on a protocol server operation.

```
<xs:complexType name="RequestLimits" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="CellCount" nillable="true" type="xs:long"/>
  </xs:sequence>
</xs:complexType>
```

CellCount: The maximum number of **cells** allowed to be returned in the response message, as specified in section [2.2.4.44](#).

2.2.4.33 ServerHealthInformation

Namespace: http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server

Used to return information about the health of the protocol server.

```
<xs:complexType name="ServerHealthInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="HealthScore" type="xs:float"/>
    <xs:element minOccurs="0" name="StateFlags" type="tns:ServerStateFlags"/>
    <xs:element minOccurs="0" name="ThrottlingInformation" nillable="true"
type="tns:ServerThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
```

HealthScore: An indication of the health of the protocol server. Smaller values indicate a healthier, more available system. Higher values indicate a less healthy system. The value MUST be greater than or equal to 0. MUST be present.

StateFlags: The state of the protocol server. MUST be present. MUST contain 0 or more values from **ServerStateFlags** (section [2.2.5.32](#)).

ThrottlingInformation: MUST NOT be used.

2.2.4.34 ServerHealthInformation

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Used to return information about the health of the protocol server.

```
<xs:complexType name="ServerHealthInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StateFlags" type="tns2:ServerStateFlags"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HealthScore" type="xs:float"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ThrottlingInformation"
type="tns2:ServerThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
```

StateFlags: The state of the protocol server. MUST be present. MUST contain 0 or more values from **ServerStateFlags** (section [2.2.5.31](#)).

HealthScore: An indication of the health of the protocol server. Smaller values indicate a healthier, more available system. Higher values indicate a less healthy system. MUST be greater than or equal to 0.

ThrottlingInformation: MUST NOT be used.

2.2.4.35 SheetRange

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies a **range** on a **worksheet** in a **workbook**.

```
<xs:complexType name="SheetRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

SheetName: The name of the worksheet. Length MUST NOT be longer than 31 characters.

FirstRow: The **zero-based index** of the first **row (2)** of the described range. MUST be greater than or equal to 0 and less than or equal to 1048575.

LastRow: The zero-based index of the last row (2) of the range. MUST be greater than or equal to **FirstRow**. MUST be less than or equal to 1,048,575.

FirstColumn: The zero-based index of the first **column (2)** of the range. MUST be greater than or equal to 0 and less than or equal to 16,383.

LastColumn: The zero-based index of the last column (2) of the range. MUST be greater than or equal to **FirstColumn**. MUST be less than or equal to 16,383.

2.2.4.36 SlicerFontType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Font specification for a **slicer** visual component.

```
<xs:complexType name="SlicerFontType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Strikethrough" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Underline" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Italic" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Bold" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FontSize" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FontColor" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Strikethrough: MUST be set to **true** if the characters are crossed out by horizontal line. Otherwise, MUST be set to false.

Underline: MUST be one of the values described in the following table.

Value	Meaning
0	Equivalent to the [ISO/IEC29500-1:2012] ST_UnderlineValues none enumeration value.
1	Equivalent to the [ISO/IEC29500-1:2012] ST_UnderlineValues single enumeration value.

Italic: **Font face decoration.**

Bold: **Font face weight.** This attribute MUST be set to **true** when the font face weight is greater than 600.

FontSize: Specifies the font size in **points**. MUST be greater than 0.

FontColor: **Font face color.** The value MUST be a **LongRGBA** as specified in [\[MS-XLSB\]](#) section 2.5.89.

FontName: Font name. MUST be present. MUST NOT be empty.

2.2.4.37 SlicerFormatElement

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

A **slicer** formatting specification.

```
<xs:complexType name="SlicerFormatElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
```

```

<xs:element minOccurs="1" maxOccurs="1" name="GradientStop1" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="GradientStop0" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="GradientType" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="HasGradient" type="xs:boolean"/>
<xs:element minOccurs="0" maxOccurs="1" name="SlicerFontType"
type="tns2:SlicerFontType"/>
<xs:element minOccurs="0" maxOccurs="1" name="BorderFormat" type="tns2:BorderFormat"/>
<xs:element minOccurs="1" maxOccurs="1" name="FillColor" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="Ident" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="HorizontalAlignment" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="VerticalAlignment" type="xs:int"/>
</xs:sequence>
</xs:complexType>

```

GradientStop1: Specifies the second **color stop** in the gradient. MUST be present if **HasGradient** is true. Value MUST be a **LongRGBA** as specified in [\[MS-XLSB\]](#) section 2.5.89. If **HasGradient** is false this value MUST be ignored.

GradientStop0: Specifies the first color stop in the gradient. MUST be present if **HasGradient** is true. Value MUST be a **LongRGBA** as specified in [\[MS-XLSB\]](#) section 2.5.89. If **HasGradient** is false this value MUST be ignored.

GradientType: Specifies the orientation of the gradient. MUST be one of the values specified in the following table.

Value	Meaning
0	Displays a horizontal gradient
1	Displays a vertical gradient

HasGradient: When set to **true**, specifies that a **gradient fill** is to be applied to the slicer visual component. Otherwise, specifies **fill color** is to be applied to the slicer visual component.

SlicerFontType: Font specification for the slicer visual components.

BorderFormat: Specifies the formatting to apply to the border of the slicer visual components.

FillColor: Specifies the fill color. If **HasGradient** is **true**, this value MUST be ignored. The value MUST be a **LongRGBA**, as specified in [\[MS-XLSB\]](#) section 2.5.89.

Ident: Specifies **horizontal indent** used for rendering slicer contents in **points**. MUST be greater than or equal to 0.

HorizontalAlignment: MUST be one of the values specified in the following table.

Value	Name	Meaning
0	Automatic	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment general enumeration value.
1	Center	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment center enumeration value.
2	Left	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment left enumeration value.
3	Right	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment right enumeration value.

Value	Name	Meaning
4	Fill	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment fill enumeration value.
5	Justify	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment justify enumeration value.
6	CenterAcrossSelection	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment centerContinuous enumeration value.
7	Distributed	Equivalent to the [ISO/IEC29500-1:2012] ST_HorizontalAlignment distributed enumeration value.
8	JustifyDistributed	Combination of Justify and Distributed enumeration values.

VerticalAlignment: MUST be one of the values specified in the following table.

Value	Name	Meaning
0	Automatic	Equivalent to the [ISO/IEC29500-1:2012] ST_VerticalAlignment bottom enumeration value.
1	Top	Equivalent to the [ISO/IEC29500-1:2012] ST_VerticalAlignment top enumeration value.
2	Bottom	Equivalent to the [ISO/IEC29500-1:2012] ST_VerticalAlignment bottom enumeration value.
3	Center	Equivalent to the [ISO/IEC29500-1:2012] ST_VerticalAlignment center enumeration value.

2.2.4.38 SlicerFormatElementList

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains an **ArrayOfSlicerFormatElement** element (section [2.2.4.9](#)).

```
<xs:complexType name="SlicerFormatElementList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SlicerFormatElements"
      type="tns:ArrayOfSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
```

SlicerFormatElements: An array of **SlicerFormatElement** elements (section [2.2.4.37](#)).

2.2.4.39 SlicerItem

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the visual representation for a **slicer item**.

```
<xs:complexType name="SlicerItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
  <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
  <xs:element minOccurs="1" maxOccurs="1" name="Hidden" type="xs:boolean"/>
  <xs:element minOccurs="1" maxOccurs="1" name="NoData" type="xs:boolean"/>
</xs:sequence>
</xs:complexType>

```

DisplayName: **Caption** of the slicer item.

UniqueName: Unique name of the slicer item.

Hidden: If the slicer item is not **selected**, the value MUST be **true**. MUST be **false** otherwise.

NoData: MUST be **true** if there is no data for the slicer item. MUST be **false** otherwise.

2.2.4.40 SlicerItemList

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Contains an **ArrayOfSlicerItem** element (section [2.2.4.10](#)).

```

<xs:complexType name="SlicerItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SlicerItems"
type="tns2:ArrayOfSlicerItem"/>
  </xs:sequence>
</xs:complexType>

```

SlicerItems: An array of **SlicerItem** elements (section [2.2.4.39](#)).

2.2.4.41 SlicerOptions

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A container for common information related to a **slicer**.

```

<xs:complexType name="SlicerOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerCacheId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerViewId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerExternalSourceIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerItemsOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerItemsCount" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerClearItems" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsNov2" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerViewableHeightNov2" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SlicerName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Options" type="tns2:SlicerOptionsBits"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectedRanges"
type="tns2:ArrayOfSlicerItemRange"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UnselectedRanges"
type="tns2:ArrayOfSlicerItemRange"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectedNames" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UnselectedNames"
type="tns2:ArrayOfString"/>
  </xs:sequence>

```

</xs:complexType>

SlicerCacheId: An identifier that the protocol server uses in combination with **SlicerViewId** to identify a slicer. MUST be equal to the value of the **SlicerCacheId** attribute of the **CT_Slicer** element, as specified in [MS-EXSPXML3] section 2.3.36.

SlicerViewId: An identifier that the protocol server uses in combination with **SlicerCacheId** to identify a slicer. MUST be equal to the value of the **SlicerViewId** attribute of the **CT_Slicer** element, as specified in [MS-EXSPXML3] section 2.3.36.

SlicerExternalSourceIndex: The index of the **connected data**. MUST be equal to the value of the **ExternalSourceIndex** attribute of the **CT_Slicer** element, as specified in [MS-EXSPXML3] section 2.3.36.

SlicerItemsOffset: An index to the **slicer item** to be retrieved. MUST be greater than or equal to -1. MUST be less than the total number of slicer items.

SlicerItemsCount: The number of slicer items to fetch. MUST be greater than or equal to -1. The sum of **SlicerItemsCount** and **SlicerItemsOffset** MUST be less than the total number of slicer items.

SlicerClearItems: MUST be **true** if previously **selected** items will be unselected. MUST be **false** otherwise.

SlicerVersion: Current version of the slicer on the protocol client. MUST be equal to the value of the **Version** attribute of the **CT_Slicer** element, as specified in [MS-EXSPXML3] section 2.3.36.

IsNov2: A value that specifies whether the operation is performed on a named object. MUST be set to **true** if the operation is being performed on a named object. Otherwise, MUST be set to **false**.

SlicerViewableHeightNov2: Specifies the height of the slicer in pixels. MUST be ignored by the protocol server when **IsNov2** is **false**. MUST be equal to or greater than 0.

SlicerName: Name to identify a slicer.

Options: Additional options for the operation to be performed on the slicer.

SelectedRanges: slicer items to be selected.

UnselectedRanges: slicer items to be unselected.

SelectedNames: MUST not be used.

UnselectedNames: MUST not be used.

2.2.4.42 SlicerView

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies **slicer** attributes such as display properties specific to the slicer and attributes describing the **slicer items**.

```
<xs:complexType name="SlicerView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RequiresUpdate" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasEffectiveSelection" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemsToScrollBar" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

```

<xs:element minOccurs="1" maxOccurs="1" name="CellDistance" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="CellMargin" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="Offset" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="Margin" type="xs:unsignedInt"/>
<xs:element minOccurs="1" maxOccurs="1" name="ItemWidth" type="xs:unsignedInt"/>
<xs:element minOccurs="1" maxOccurs="1" name="ItemHeight" type="xs:unsignedInt"/>
<xs:element minOccurs="1" maxOccurs="1" name="CaptionHeight" type="xs:unsignedInt"/>
<xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="ColCount" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="RowCount" type="xs:int"/>
<xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
<xs:element minOccurs="1" maxOccurs="1" name="ScrollbarVisible" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="CaptionVisible" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="OlapSourced" type="xs:boolean"/>
</xs:sequence>
</xs:complexType>

```

Version: Specifies the version of the slicer only if the protocol client requests a specific version of that slicer. MUST be -1 in all other cases.

RequiresUpdate: MUST be **true** if the slicer items are out of date. MUST be **false** otherwise.

HasEffectiveSelection: MUST be **true** if the slicer has effective selection. MUST be **false** otherwise.

ItemsToScrollBar: Distance in **pixels** from the slicer items to the vertical scrollbar. MUST be equal to or greater than 0.

CellDistance: Distance in pixels between slicer items. MUST be equal to or greater than 0.

CellMargin: Horizontal margin for slicer items in pixels. MUST be equal to or greater than 0.

ItemCount: Number of known slicer items in the slicer. MUST be equal to or greater than 0.

Offset: Index of the first visible slicer item. MUST be equal to or greater than 0.

Margin: External margin for the slicer in pixels. MUST be equal to or greater than 0.

ItemWidth: Width in pixels of each slicer item. MUST be equal to or greater than 0.

ItemHeight: Height in pixels for each slicer item. MUST be equal to or greater than 0.

CaptionHeight: Height in pixels for the **slicer header**. MUST be equal to or greater than 0.

Width: Slicer width in pixels. MUST be equal to or greater than 0.

Height: Slicer height in pixels. MUST be equal to or greater than 0.

ColCount: Number of slicer item **columns (2)**. If **ItemCount** is greater than 0, then **ColCount** MUST be greater than 0. **ColCount** MUST be ignored if **ItemCount** is 0.

RowCount: Number of **visible** slicer item **rows (2)**. If **ItemCount** is greater than 0, then **RowCount** MUST be greater than 0. **RowCount** MUST be ignored if **ItemCount** is 0.

Name: The name of the slicer.

Caption: The **caption** of the slicer.

ScrollbarVisible: MUST be **true** if the scrollbar is not visible. MUST be **false** otherwise.

CaptionVisible: MUST be **true** if the caption is not visible. MUST be **false** otherwise.

OlapSourced: MUST be **true** if the data source for the slicer is **Online Analytical Processing (OLAP)**. MUST be **false** otherwise.

2.2.4.43 TypeExporter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

MUST NOT be used.

```
<xs:complexType name="TypeExporter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="CellError" type="tns2:CellError"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellCompoundValue"
type="tns2:CellCompoundValue"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookGenerationOptions"
type="tns2:WorkbookGenerationOptions"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestChartPngRequest"
type="tns2:RestChartPngRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestInteractiveReportsListRequest"
type="tns2:RestInteractiveReportsListRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestInteractiveReportsListResult"
type="tns2:RestInteractiveReportsListResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestInteractiveReportsStoreRequest"
type="tns2:RestInteractiveReportsStoreRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestInteractiveReportsStoreResult"
type="tns2:RestInteractiveReportsStoreResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangePngRequest"
type="tns2:RestRangePngRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPngResult" type="tns2:RestPngResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestChartPngResult"
type="tns2:RestChartPngResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPublishedObjectsRequest"
type="tns2:RestPublishedObjectsRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPublishedObjectsResult"
type="tns2:RestPublishedObjectsResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestSlicersListRequest"
type="tns2:RestSlicersListRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestSlicersListResult"
type="tns2:RestSlicersListResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestSlicerItemsListRequest"
type="tns2:RestSlicerItemsListRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestSlicerItemsListResult"
type="tns2:RestSlicerItemsListResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestApplySlicerSelectionRequest"
type="tns2:RestApplySlicerSelectionRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestObjectStateRequest"
type="tns2:RestObjectStateRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestObjectStateResult"
type="tns2:RestObjectStateResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestApplyTimelineSelectionRequest"
type="tns2:RestApplyTimelineSelectionRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestTimelineInfoRequest"
type="tns2:RestTimelineInfoRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestTimelineInfoResult"
type="tns2:RestTimelineInfoResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestWorkbookRequest"
type="tns2:RestWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestWorkbookResult"
type="tns2:RestWorkbookResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeValuesRequest"
type="tns2:RestRangeValuesRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeValuesResult"
type="tns2:RestRangeValuesResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeXmlRequest"
type="tns2:RestRangeXmlRequest"/>
  </xs:sequence>
</xs:complexType>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeXmlResult"
type="tns2:RestRangeXmlResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestODataRequest"
type="tns2:RestODataRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestODataResult"
type="tns2:RestODataResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestOpenWorkbookRequest"
type="tns2:RestOpenWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestCloseWorkbookRequest"
type="tns2:RestCloseWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestOpenWorkbookResult"
type="tns2:RestOpenWorkbookResult"/>
  </xs:sequence>
</xs:complexType>

```

CellError: MUST NOT be used.

CellCompoundValue: MUST NOT be used.

WorkbookGenerationOptions: MUST NOT be used.

RestChartPngRequest: MUST NOT be used.

RestInteractiveReportsListRequest: MUST NOT be used.

RestInteractiveReportsListResult: MUST NOT be used.

RestInteractiveReportsStoreRequest: MUST NOT be used.

RestInteractiveReportsStoreResult: MUST NOT be used.

RestRangePngRequest: MUST NOT be used.

RestPngResult: MUST NOT be used.

RestChartPngResult: MUST NOT be used.

RestPublishedObjectsRequest: MUST NOT be used.

RestPublishedObjectsResult: MUST NOT be used.

RestSlicersListRequest: MUST NOT be used.

RestSlicersListResult: MUST NOT be used.

RestSlicerItemsListRequest: MUST NOT be used.

RestSlicerItemsListResult: MUST NOT be used.

RestApplySlicerSelectionRequest: MUST NOT be used.

RestObjectStateRequest: MUST NOT be used.

RestObjectStateResult: MUST NOT be used.

RestApplyTimelineSelectionRequest: MUST NOT be used.

RestTimelineInfoRequest: MUST NOT be used.

RestTimelineInfoResult: MUST NOT be used.

RestWorkbookRequest: MUST NOT be used.

RestWorkbookResult: MUST NOT be used.

RestRangeValuesRequest: MUST NOT be used.

RestRangeValuesResult: MUST NOT be used.

RestRangeXmlRequest: MUST NOT be used.

RestRangeXmlResult: MUST NOT be used.

RestODataRequest: MUST NOT be used.

RestODataResult: MUST NOT be used.

RestOpenWorkbookRequest: MUST NOT be used.

RestCloseWorkbookRequest: MUST NOT be used.

RestOpenWorkbookResult: MUST NOT be used.

2.2.4.44 VisibleSheetRange

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **VisibleSheetRange** complex type is used to specify the **Workbook** ([\[MS-EXSPXML3\]](#) section 2.1.1) to be returned in the response message. The **baseline range**, in the context of this type and the operation that uses it, is the raw **range** initially found on the **workbook** before it is modified to only include **visible worksheet cells**. If the **ObjectName** element is present and not empty, and if the associated session is not an **edit session**, and if **DisallowAutoNOV** is false, the following apply:

- If the **ExcelRange** element is present and not empty:
 - The **sheet (2)** of the **baseline range** is determined in the following manner:
 - If a sheet (2) was specified by **ExcelRange**, that is the sheet (2) which will be used.
 - Otherwise, the protocol server will locate a **published item** by matching **ObjectName** to the name of the published item.
 - If a match is found, the sheet (2) which contains the matching published item MUST be used.
 - Otherwise, the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#). The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.
 - The protocol server will locate a **published range** which exactly matches **ExcelRange** on the **baseline range's** sheet.
 - If a match is found, the published range is the **baseline range**.
 - Otherwise, the protocol server MUST locate a published item on the **baseline range's** sheet (2), which exactly matches **ExcelRange**.
 - If a match was found, the published item is the **baseline range**.

- Otherwise, the protocol server MUST return an **ExcelServerMessage** as specified in section 2.2.4.24. The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.
- If **ExcelRange** is not present or is empty, the protocol server will locate **ObjectName** in all the published items that belong to the workbook by matching **ObjectName** to the name of the published item.
 - If a match was found, the **baseline range** MUST be the published item's range.
 - Otherwise, the protocol server MUST return an **ExcelServerMessage** as specified in the section 2.2.4.24. The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.
- The protocol server MUST NOT use any range outside of the **baseline range** to retrieve data from.

If **ObjectName** is not present or is empty, and the workbook contains **published items**, and if the associated session is not an edit session, and if DisallowAutoNOV is false:

- If **ExcelRange** is present and not empty:
 - The sheet (2) of the **baseline range** MUST be determined in the following manner:
 - If a sheet (2) was specified by **ExcelRange**, that is the sheet (2) which MUST be used.
 - Otherwise, the sheet (2) which contains the first published item MUST be used.
 - The protocol server will locate a published range which exactly matches **ExcelRange** on the **baseline range**'s sheet (2).
 - If a match is found, the published range is the **baseline range**.
 - Otherwise, the protocol server will locate a published item on the **baseline range**'s sheet (2), which contains **ExcelRange** in its entirety.
 - If a match was found, the published item is the **baseline range**.
 - Otherwise, the protocol server MUST return an **ExcelServerMessage** as specified in the section 2.2.4.24. The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.
- If **ExcelRange** is not present or is empty, the **baseline range** MUST be the range of the first published item.
- The protocol server MUST NOT use any range outside of the **baseline range** to retrieve data from.

If **ObjectName** is not present or is empty and the workbook does not contain any published items, or if the associated session is an edit session, or if DisallowAutoNOV is true:

- If **SheetName** is not present or empty, the **baseline range** MUST be the **default sheet**. Otherwise, **SheetName** MUST be the sheet (2) of the **baseline range**.

- If **FirstRow** is -1, the **default row** MUST be the first **row (2)** of the **baseline range**. Otherwise, **FirstRow** MUST be the first row (2) of the **baseline range**.
- If **FirstColumn** is -1, the **default column** MUST be the first column of the **baseline range**. Otherwise, **FirstColumn** MUST be the first column of the **baseline range**.
- First row (2) of **baseline range+VisibleRowsRequested** MUST be the last row (2) of the **baseline range**.
- First column of **baseline range+VisibleColumnsRequested** MUST be the last column of the **baseline range**.
- **FirstColumn** MUST be -1 if **FirstRow** is -1.
- **FirstRow** MUST be -1 if **FirstColumn** is -1.

The product of **VisibleRowsRequested** and **VisibleColumnsRequested** MUST be less than or equal to 1,000,000.

The first row (2) of the retrieved range MUST be one of the following:

- The first visible row (2) at or after first row (2) of **baseline range+VisibleFirstRowOffset**, if **VisibleFirstRowOffset** is greater than or equal to 0.
- The first visible row (2) at or before first row (2) of **baseline range+VisibleFirstRowOffset**, if **VisibleFirstRowOffset** is less than 0.
 - If **baseline range+VisibleFirstRowOffset** is less than 0, the protocol server MUST return an **ExcelServerMessage** as specified in the section 2.2.4.24. The **Id** element of the **ExcelServerMessage** MUST be **SpecifiedRangeNotFound**.
- If there are less than **VisibleRowsRequested** visible rows (2) between that first visible row (2) and the last visible row (2) of the **baseline range**, the first row (2) will be the first visible row (2) such that there are **VisibleRowsRequested** rows (2) between it and the last visible row (2) of **baseline range**.
- Greater than or equal to 0, and less than or equal to 1,048,575

The number of visible rows (2) in the retrieved range MUST be equal to **VisibleRowsRequested**, unless there are not enough visible rows (2) in the **baseline range** to retrieve, in which case all the remaining visible rows (2) in the **baseline range** MUST be retrieved.

The first column of the retrieved range MUST be:

- The first visible column at or after first column of **baseline range+VisibleFirstColumnOffset**, if **VisibleFirstColumnOffset** is greater than or equal to 0.
- The first visible column at or before first column of **baseline range+VisibleFirstColumnOffset**, if **VisibleFirstColumnOffset** is less than 0.
 - If **baseline range+VisibleFirstColumnOffset** is less than 0, the protocol server MUST return an **ExcelServerMessage** as specified in the section 2.2.4.24. The **Id** element of the **ExcelServerMessage** MUST be **SpecifiedRangeNotFound**.

- If there are less than **VisibleColumnsRequested** visible columns between that first visible column and the last visible column of the **baseline range**, the first column will be the first visible column such that there are **VisibleColumnsRequested** columns between it and the last visible column of **baseline range**.
- Greater than or equal to 0 and less than or equal to 16,383.

The number of visible columns in the retrieved range MUST be equal to **VisibleColumnsRequested** unless there are not enough visible columns in the **baseline range** to retrieve, in which case all the remaining visible columns in the **baseline range** MUST be retrieved.

If the retrieved range is encompassed by a published chart, and either a) **ObjectName** is present and not empty, or b) **ObjectName** is not present or is empty, and the workbook contains published items, then the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) will contain the **CT_Images** element ([MS-EXSPXML3] section 2.3.34) with a single **CT_Image** element ([MS-EXSPXML3] section 2.3.33). The **type** attribute for the **CT_Image** element ([MS-EXSPXML3] section 2.3.33) MUST be **chart**, as specified in [MS-EXSPXML3] section 2.3.33.

```
<xs:complexType name="VisibleSheetRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ObjectName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcelRange" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleRowsRequested" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleColumnsRequested" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleFirstRowOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleFirstColumnOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalculateVisibleOffsetFromOrigin"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NeedAllBorderValues" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ChartsOnly" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisallowAutoNOV" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FallbackOnInvalidSheet" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ReturnAllRelatedSlicers"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RenderingOptions"
type="tns2:GridRenderingOptions"/>
    <xs:element minOccurs="1" maxOccurs="1" name="BootstrapDataOnly" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="TrimEmptyCells" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

SheetName: The name of the sheet (2) to retrieve the range from. MUST NOT be longer than 31 characters.

ObjectName: The name of the published item to retrieve the range from. If the value is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage**, as specified in section 2.2.4.24. The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.

ExcelRange: A **RangeReference** to the range to retrieve. MUST follow the [RangeReference](#) specification, with the following exceptions: The protocol server MUST support the **R1C1 notation**. If the value is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section 2.2.4.24, with the value of the **Id** element of the **ExcelServerMessage** set to **EcsInvalidNamedObject**.

FirstRow: The **zero-based index** of the first row (2). MUST be greater than or equal to -1 and less than or equal to 1,048,575.

VisibleRowsRequested: The number of visible rows (2) to retrieve in the range. MUST be greater than 0 and less than or equal to 1,048,575.

FirstColumn: The zero-based index of the first column. MUST be greater than or equal to -1 and less than or equal to 16,383.

VisibleColumnsRequested: The number of visible columns to retrieve in the range. MUST be greater than 0 and less than or equal to 16,383.

VisibleFirstRowOffset: The visible row (2) offset from **FirstRow** of the range to retrieve. MUST be greater than or equal to -1,048,575 and less than or equal to 1,048,575.

VisibleFirstColumnOffset: The visible column offset from **FirstColumn** of the range to retrieve. MUST be greater than or equal to -16,383 and less than or equal to 16,383.

CalculateVisibleOffsetFromOrigin: Specifies whether the protocol server will return information about the offsets for the first visible column and visible row (2), from the first column and row (2) of the **baseline range**. If true, then the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) will contain the **CurrentFirstRowVisibleOffset** and **CurrentFirstColumnVisibleOffset** attributes in the **CT_Table** element ([MS-EXSPXML3] section 2.3.35).

NeedAllBorderValues: Specifies whether the protocol server will return information about all of the borders. MUST be present. If **true**, the protocol server returns information about all borders. If **false**, the protocol server returns information about the bottom and right borders, as specified in the **ST_enmBorderPosition** enumeration in [MS-EXSPXML3] section 2.4.28.

ChartsOnly: Specifies whether the protocol server will return information about only charts. MUST be present. If **true**, the protocol server returns only information pertaining to charts. If **false**, the protocol server returns information pertaining to charts and worksheet cells.

DisallowAutoNOV: Specifies the behavior to use when determining the **baseline range** as described previously.

FallBackOnInvalidSheet: Specifies whether the protocol server retrieves the range from the default sheet (2) if the sheet (2) specified by **SheetName** does not exist.

ReturnAllRelatedSlicers: Specifies whether the protocol server returns all the slicers related to **ObjectName**.

If true, and **ObjectName** is present and not empty:

- and the published item specified by **ObjectName** is a **PivotTable**, the protocol server MUST return all slicers whose data source is the same as the data source of that PivotTable.
- and the published item specified by **ObjectName** is a **table**, the protocol server MUST return all slicers whose data source is a column in that table.
- and the published item specified by **ObjectName** is a chart, the protocol server MUST return all slicers whose data source is the same as the data source of that chart.

In all other cases, the protocol server MUST return only the slicers whose range intersects with the **baseline range**.

RenderingOptions: A **GridRenderingOptions** element as specified in section [2.2.5.19](#). Specifies options that the protocol servers MUST use when generating the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) as follows:

- If **GridRenderingOptions.HideGridlines** is specified, then the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) MUST NOT contain the default gridlines for the range.
- If **GridRenderingOptions.HidRowAndColumnHeaders** is specified, then the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) MUST NOT contain row and column headers for the range.

BootstrapDataOnly: Specifies the behavior of the protocol server with respect to information about **interactive report** in the retrieved range as follows:

- If the retrieved range intersects with an interactive report:
 - If **BootstrapDataOnly**, is true, then the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) MUST NOT contain the **InteractiveReport** element of type **CT_InteractiveReport** ([MS-EXSPXML3] section 2.3.59).
 - If **BootstrapDataOnly**, is false, then the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) MUST contain the **InteractiveReport** element of type **CT_InteractiveReport** ([MS-EXSPXML3] section 2.3.59).
- Otherwise, if the retrieved range does not interact with an interactive report, **BootstrapDataOnly** MUST be ignored by the protocol server.

TrimEmptyCells: Specifies whether the protocol server will exclude information from the retrieved range about the following:

- Any **columns (2)** between the last visible column (2) which contains a non-empty cell (not inclusive) and the last visible column (inclusive);
- Any rows (2) between the last visible row (2) which contains a non-empty cell (not inclusive) and the last visible row (2) (inclusive);

2.2.4.45 WorkOnBehalf

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

MUST NOT be used.

```
<xs:complexType name="WorkOnBehalf" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UserSid" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UserToken" type="xs:base64Binary"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UserTokenTtl" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

UserSid: MUST NOT be used.

UserToken: MUST NOT be used.

UserTokenTtl: MUST NOT be used.

2.2.4.46 ArrayOfArrayOfString

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfArrayOfString** complex type is an array of **ArrayOfString** elements

```
<xs:complexType name="ArrayOfArrayOfString" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ArrayOfString" nillable="true"
type="tns2:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>
```

ArrayOfString: Array of string elements.

2.2.4.47 **ArrayOfPivotFieldListItem**

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfPivotFieldListItem** type is an array of **PivotFieldListItem** elements (section [2.2.4.53](#)).

```
<xs:complexType name="ArrayOfPivotFieldListItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PivotFieldListItem" nillable="true"
type="tns2:PivotFieldListItem"/>
  </xs:sequence>
</xs:complexType>
```

PivotFieldListItem: A **PivotFieldListItem** element as specified in section [2.2.4.53](#).

2.2.4.48 **ArrayOfWorksheetChangeInfo**

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

MUST NOT be used.

```
<xs:complexType name="ArrayOfWorksheetChangeInfo"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="WorksheetChangeInfo"
nillable="true" type="tns2:WorksheetChangeInfo"/>
  </xs:sequence>
</xs:complexType>
```

WorksheetChangeInfo: MUST NOT be used.

2.2.4.49 **ArrayOfWorksheetData**

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **WorksheetData** items.

```
<xs:complexType name="ArrayOfWorksheetData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="WorksheetData" nillable="true"
type="tns2:WorksheetData"/>
  </xs:sequence>
</xs:complexType>
```

WorksheetData: A **WorksheetData** item as specified in section [2.2.4.74](#).

2.2.4.50 **CultureCommandParameter**

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CultureCommandParameter** is used to specify **UI culture**, **data culture** and **host data language** related information when creating a new session.

```
<xs:complexType name="CultureCommandParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UICultureName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataCultureName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SharePointDataCultureName"
type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

UICultureName: A language tag as specified in [RFC1766] section 2. Specifies the UI culture. MUST be present. MUST NOT be empty. MUST NOT be longer than 32768 characters. If the language represented by **UICultureName** is unsupported on the protocol server, the protocol server MAY [fall back](#) to some other supported language.

DataCultureName: A language tag as specified in [RFC1766] section 2. Specifies the data culture. MUST be present. MUST NOT be empty. MUST NOT be longer than 32768 characters. The protocol server uses **SharePointDataCultureName** as a **fallback data culture** if **DataCultureName** is not supported.

SharePointDataCultureName: A language tag as specified in [RFC1766], section 2. Specifies the host data language. MUST be present. MUST NOT be longer than 32768 characters.

2.2.4.51 OpenWorkbookInParameters

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Input parameters for **OpenWorkbook** (section [3.1.4.30](#)).

```
<xs:complexType name="OpenWorkbookInParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Url" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Canary" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SubscriberId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns2:OpenWorkbookFlags"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CultureCommandParameter"
type="tns2:CultureCommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DocumentProperties"
type="xs:base64Binary"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WacUserSessionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreviousSessionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UserId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UserFriendlyName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TimeZoneSerialization" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UserScenarioRestrictions"
type="tns2:ScenarioRestrictions"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ThrottlingScenario"
type="tns2:ResourceThrottlingScenario"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DenylistOverrides" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ExcelFeatures"
type="tns2:ExcelServerFeature"/>
  </xs:sequence>
</xs:complexType>
```

Url: If **flags** does not contain the **NewWorkbook** value (section [2.2.5.23](#)), the location of the **workbook file**. Otherwise, the **trusted location** of the **new workbook session**. MUST be present. If the specified value is not a **Uniform Resource Identifier (URI)**, as specified in [RFC2396](#), or a **Universal Naming Convention (UNC)**, the protocol server MUST return an **ExcelServerMessage**

as specified in section [2.2.4.24](#), with the value of the **Id** element of the **ExcelServerMessage** set to one of the following:

- "FileOpenNotFound", if flags does not contain the value "NewWorkbook".
- "NewWorkbookInvalidLocation", if flags contains the value "NewWorkbook".

The protocol server ignores the number sign (#) and fragment, as specified in [\[RFC3986\]](#).

Canary: MUST NOT be used.

SubscriberId: The **site identifier**. MUST be equal to the value of **RequestSiteId** passed in parameter.

Flags: Control flags, as specified in section [2.2.5.23](#).

CultureCommandParameter: **UI culture**, **data culture** and **host data language** related information. MUST be present.

DocumentProperties: MUST NOT be used.

WacUserSessionId: MUST NOT be used.

PreviousSessionId: If present, MUST be a **session identifier** as returned in the **workbookId** as specified in **OpenWorkbookResponse** (section [3.1.4.30.2.2](#)). MUST NOT be present for any operations other than **OpenWorkbook**. MUST NOT be present for **OpenWorkbook** when a **workbookId** is present in **CommandParameter** (section [2.2.4.20](#)) in the request message of the same operation.

UserId: MUST NOT be used.

UserFriendlyName: The user **display name**. MUST be present.

TimeZoneSerialization: The time zone of the session. MUST be present. MUST be exactly 73 characters long. MUST have the following layout, which is specified using ABNF, as specified in [\[RFC2234\]](#) and described in the following table.

TimeZone	=	Bias "#" StandardDate "#" StandardBias "#" DaylightDate "#" DaylightBias
Bias	=	"+"\"-\" 4DIGIT
StandardDate	=	Date %d84 Time
StandardBias	=	"+"\"-\" 4DIGIT
DaylightDate	=	Date %d84 Time
DaylightBias	=	"+"\"-\" 4DIGIT
Date	=	Year "-" Month "-" DayOfWeek "-" Day
Time	=	Hour ":" Minute ":" Second ":" Millisecond
Year	=	4DIGIT
Month	=	2DIGIT ; 01-12
DayOfWeek	=	2DIGIT ; 00-06 (Sunday-Saturday)
Day	=	2DIGIT ; 01-31

TimeZone	=	Bias "#" StandardDate "#" StandardBias "#" DaylightDate "#" DaylightBias
Hour	=	2DIGIT ; 00-23
Minute	=	2DIGIT ; 00-59
Second	=	2DIGIT ; 00-59
Millisecond	=	4DIGIT

The following restrictions MUST apply on the **TimeZoneSerialization**:

- **Bias** MUST be the **time zone bias**.
- **StandardDate** MUST be the **time zone standard date**.
- **StandardBias** MUST be the **time zone standard bias**.
- **DaylightDate** MUST be the **time zone daylight date**.
- **DaylightBias** MUST be the **time zone daylight bias**.
- The following restrictions are specified in [\[RFC3339\]](#):
 - **Month** MUST be date-month.
 - **Day** MUST be date-day.
 - **Hour** MUST be time-hour.
 - **Minute** MUST time-minute.
 - **Second** MUST be time-second.
- **DayOfWeek** MUST have one of the values described in the following table.

Value	Meaning
00	Sunday
01	Monday
02	Tuesday
03	Wednesday
04	Thursday
05	Friday
06	Saturday

UserScenarioRestrictions: If the value of **ProtocolClientId** element in the **parameter** as defined in section 2.2.4.20 is set to "ms-soap", the protocol client MUST set the value to **LegacyWebServices**. Otherwise, MUST NOT be used.

ThrottlingScenario: MUST NOT be used.

DenylistOverrides: MUST NOT be used.

ExcelFeatures: Contains features (section [2.2.5.10](#)) to be enabled in the workbook on the protocol server.

2.2.4.52 OpenWorkbookOutParameters

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Output parameters for **OpenWorkbook** (section [3.1.4.30](#)) are as follows.

```
<xs:complexType name="OpenWorkbookOutParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientWorkbookUri" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookFileName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CloseUri" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookFileVersionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="EditUrl" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ExcelFeatures"
type="tns2:ExcelServerFeature"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DataModelSizeOnDisk" type="xs:long"/>
  </xs:sequence>
</xs:complexType>
```

ClientWorkbookUri: If the value of the **outFlags** element of **OpenWorkbookResponse** (section [3.1.4.30.2.2](#)) contains the value **HasOpenItemPermission** and the value of the **flags** element of **inParameters** of **OpenWorkbook** (section [3.1.4.30.2.1](#)) does not contain "NewWorkbook", MUST contain a valid **URI** as specified in [\[RFC2396\]](#). The protocol server sets the **absolute path** to the **workbook file** that was opened. Otherwise, MUST be ignored by the protocol client.

WorkbookFileName: If the value of the **flags** element **inParameters** of **OpenWorkbook** does not contain "NewWorkbook", MUST contain the **file** name of the workbook file; otherwise, MUST NOT be present.

CloseUri: MUST be empty if the workbook file is not contained in a **document library**; otherwise MUST contain a valid URI, as specified in [\[RFC2396\]](#), of the document library containing the workbook file.

WorkbookFileVersionId: An opaque version identifier of the opened workbook file.

EditUrl: A URI to a web page that provides an editing experience for the workbook file. Can be null.

ExcelFeatures: Contains features (section [2.2.5.10](#)) that are enabled in the workbook on the protocol server.

DataModelSizeOnDisk: Represents the data model size inside the workbook file in case there is an embedded data model. If no embedded data model exists, this value MUST be 0.

2.2.4.53 PivotFieldListItem

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFieldListItem** complex type is used to specify a **PivotTable field**, visual state information for the PivotTable field, and **child** PivotTable fields.

```
<xs:complexType name="PivotFieldListItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Children"
type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowSeparator" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSet" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowFilterArrow" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CanDrag" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsCollapsible" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowCheckBox" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsCollapsed" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsChecked" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UserRank" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterImage" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Image" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="InternalMargin" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="TypeTag" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PivotTableIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PivotCacheIndex" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ToolTip" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Children: A list of all the child PivotTable fields as specified in the **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)) complex type. **MUST** be present.

ShowSeparator: **MUST** be set to **true** if the PivotTable field is to be followed by a separator line; otherwise, **MUST** be **false**. A separator line delineates a grouping of related PivotTable fields.

IsSet: **MUST** be set to **true** if the **PivotFieldListItem** is an **OLAP** set; otherwise, **MUST** be **false**.

ShowFilterArrow: **MUST** be set to **true** if the PivotTable field can be used as a **filter**; otherwise, **MUST** be **false**.

CanDrag: **MUST** be set to **true** if the PivotTable field can be dragged between **PivotTable** or **PivotChart** field list drop zones; otherwise, **MUST** be **false**.

IsCollapsible: **MUST** be set to **true** if the PivotTable field can be represented in a collapsed state; otherwise, **MUST** be **false**. A collapsed state shows no child PivotTable fields.

ShowCheckBox: **MUST** be set to **true** if the PivotTable field can be represented in a checked state; otherwise, **MUST** be **false**. A checked state determines if the PivotTable field is used in the **query**.

IsCollapsed: **MUST** be set to **true** if the PivotTable field is represented in a collapsed state; otherwise, **MUST** be **false**. A collapsed state shows no child PivotTable fields.

IsChecked: **MUST** be set to **true** if the PivotTable field is represented in a checked state; otherwise, **MUST** be **false**. A checked state determines if the PivotTable field is used in the query.

UserRank: The PivotTable field user rank. **MUST** be one of the values specified in the following table.

Value	Meaning
0	Named set
1	Attribute hierarchy

Value	Meaning
2	User hierarchy
3	Generic

FilterImage: The PivotTable field filter image as specified by the **Image** element in the **PivotFieldListItem** (section [2.2.4.53](#)) complex type. MUST be present.

Image: The PivotTable field image. MUST be one of the values specified in the following table.

Value	Meaning
0	Invalid icon
1	Folder closed icon
2	Fields closed icon
3	Dimension icon
4	Measure icon
5	Key performance indicator (KPI) icon
6	Sets closed icon
7	Multidimensional expression (MDX) function icon
8	Info icon
9	Filter icon

InternalMargin: The **horizontal indent** for the PivotTable field. The value is zero-based, where the root node is 0, the child of the root is 1, the child of the child is 2, and so on. MUST be equal to or greater than 0.

TypeTag: The PivotTable field type. MUST be one of the values specified in the following table.

Value	Meaning
0	None
3	Measure
5	Hierarchy
7	Level
11	Dimension
13	Named set
17	Native
19	Measure group
23	Display folder

Value	Meaning
29	KPI root
31	KPI
37	KPI measure
39	Cube identity
41	Member folder
43	Member
47	Member properties folder
53	Member properties
59	MDX function folder
61	MDX function

PivotTableIndex: A unique identifier for the protocol server. MUST be greater than or equal to 0. MUST be unique across all the query-related PivotTable fields in the PivotTable or PivotChart.

PivotCacheIndex: A unique identifier for the protocol server. MUST be greater than or equal to 0. MUST be unique across all the PivotTable fields in the PivotTable or PivotChart.

ToolTip: The tooltip for the PivotTable field. MUST be present. MAY be empty.

UniqueName: The unique name of the PivotTable field. MUST be present. MAY be empty.

Name: The PivotTable field name. MUST be present. MUST NOT be empty.

2.2.4.54 RestChartPngRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

When passed as the **request** element of the **ProcessRestRequest** input (section [3.1.4.56.2.1](#)), it specifies the chart to retrieve and information about its image.

```
<xs:complexType name="RestChartPngRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ChartName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RenderingOptions"
          type="tns2:ImageRenderingOptions"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ChartName: The name of the chart to retrieve, as used by the **GetChart** operation (section [3.1.4.14](#)).

Width: The maximum allowed width, in **pixels**, of the chart image. Either the height of the chart image, in pixels, MUST be equal to the value of the **Height** element, or the width of the chart element, in pixels, MUST be equal to the value of the **Width** element.

Height: The maximum allowed height, in pixels, of the chart image. Either the height of the chart image, in pixels, MUST be equal to the value of the **Height** element, or the width of the chart element, in pixels, MUST be equal to the value of the **Width** element.

RenderingOptions: Specifies options that affect the style of the returned image. See section [2.2.5.21](#). MUST be present.

2.2.4.55 RestChartPngResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestChartPngRequest** (section [2.2.4.54](#)) is passed as the input.

```
<xs:complexType name="RestChartPngResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestPngResult"/>
  </xs:complexContent>
</xs:complexType>
```

2.2.4.56 RestODataRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.56.2.1](#)), indicates retrieving an **OData** response, as specified in [\[MS-ODATA\]](#).

```
<xs:complexType name="RestODataRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="RequestHeaders"
type="tns2:ArrayOfArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseHeaders"
type="tns2:ArrayOfArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ServicePathUri" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Uri" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RequestBody" type="xs:base64Binary"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HttpMethod" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

RequestHeaders: Any HTTP request headers associated with this request. MUST be present. For each element in the **ArrayOfArrayOfString**, the **ArrayOfString** field MUST contain exactly two elements. The first element specifies the name of the HTTP header, and the second element specifies the value.

ResponseHeaders: Any HTTP response headers associated with this request. MUST be present. For each element in the **ArrayOfArrayOfString**, the **ArrayOfString** field MUST contain exactly two elements. The first element specifies the name of the HTTP header, and the second element specifies the value.

ServicePathUri: The URI of the OData service document associated with this request. MUST be present. If the URI does not follow the specification in [MS-ODATA] section [2.2.3](#), the protocol server MUST return a **SOAP fault**, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<5>](#) be one of the values specified in section [2.2.2.1](#).

Uri: The URI associated with this request. MUST be present. If the URI does not follow the specification in [MS-ODATA] section [2.2.3](#), the protocol server MUST return a SOAP fault, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<6>](#) be one of the values specified in section [2.2.2.1](#).

RequestBody: The HTTP request body associated with this request. MUST be present. If the value does not follow the specification in [MS-ODATA] section [2.2.6](#), the protocol server MUST return a SOAP fault, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<7>](#) be one of the values specified in section [2.2.2.1](#).

HttpMethod: The HTTP method associated with this request. MUST be present. MUST be set to one of the values as specified in [MS-ODATA] section [2.2.4](#)

2.2.4.57 RestODataResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestODataRequest** (section [2.2.4.56](#)) is passed as the input.

```
<xs:complexType name="RestODataResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ResponseStatusCode" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseHeaders"
type="tns2:ArrayOfArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseBody" type="xs:base64Binary"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ResponseStatusCode: The HTTP status code to use as part of the **OData** response, as specified in [\[MS-ODATA\]](#) section [3.2.8](#). MUST be present.

ResponseHeaders: The HTTP response headers to use as part of the OData response. MUST be present. For each element in the **ArrayOfArrayOfString**, the **ArrayOfString** field MUST contain exactly two elements. The first element specifies the name of the HTTP header, and the second element specifies the value.

ResponseBody: The HTTP response body to use as part of the OData response. MUST be present. The value MUST follow the specification in [MS-ODATA] section [2.2.6](#)

2.2.4.58 RestPngResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestRangePngRequest** (section [2.2.4.61](#)) is passed as the input and it is the base type for **RestChartPngResult** (section [2.2.4.55](#)).

```

<xs:complexType name="RestPngResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ImageFormatType" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ImageData" type="xs:base64Binary"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

ImageFormatType: The image format type that is present in the **ImageData** field. MUST be the string "x-png".

ImageData: The image of the requested content. MUST be present. MUST be in the format specified in [\[RFC2083\]](#).

2.2.4.59 RestPublishedObjectsRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.56.2.1](#)), indicates retrieving a list of published objects.

```

<xs:complexType name="RestPublishedObjectsRequest"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Options"
type="tns2:GetPublishedObjectsOptions"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IncludeSheets" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Options: The **GetPublishedObjectsOptions** that will be passed as the **options** field of the **GetPublishedObjects** input (section [3.1.4.20.2.1](#)).

IncludeSheets: Specifies in the request whether to include **sheets (1)** in the workbook. MUST be **true**.

2.2.4.60 RestPublishedObjectsResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestPublishedObjectsRequest** (section [2.2.4.59](#)) is passed as the input.

```

<xs:complexType name="RestPublishedObjectsResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="PublishedObjects"
type="tns2:ArrayOfPublishedObjectName"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="PublishedSheets"
type="tns2:ArrayOfSheetName"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

PublishedObjects: An array of **PublishedObjectName** elements, as specified in section [3.1.4.20.3.1](#). MUST be present.

PublishedSheets: An array of **SheetName** elements as specified in section [2.2.4.115](#). MUST be present only if **IncludeSheets** attribute of the **RestPublishedObjectsRequest** element as specified in 2.2.4.59 is **true**.

2.2.4.61 RestRangePngRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.56.2.1](#)), indicates retrieving an image representing a **range**.

```

<xs:complexType name="RestRangePngRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Nov" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="CropX" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="CropY" type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

RangeName: The name of the range to retrieve. MUST not be empty.

Nov: Specifies whether the operation is performed on a named object. MUST be set to **true** if the operation is being performed on a named object. Otherwise, MUST be set to **false**.

Width: When scaling, indicates the maximum width in **pixels** the image needs to be scaled to. If the value is less than or equal to zero, the protocol server ignores it. Because the returned image keeps aspect ratio of the original image and it is possible to indicate the maximum height of the image, the actual width of the returned image MAY be smaller than requested. Only scale down is supported.

Height: When scaling, Indicates the maximum height in pixels the image needs to be scaled to. If the value is less than or equal to zero, the protocol server ignores it. Because the returned image keeps aspect ratio of the original image and it is possible to indicate the maximum width of the image, the actual height of the returned image MAY be smaller than requested. Only scaled down is supported.

CropX: The width in pixels used to limit the number of columns of the range of the returned image. If the value is less than or equal to zero, the protocol server ignores it. The cumulative pixel width of all visible columns in the requested range will be compared with **CropX**. If the cumulative width of a column is equal or exceeds **CropX**, then that column will be last one rendered into the returned image.

CropY: The height in pixels used to limit the number of rows of the range of the returned image. If the value is less than or equal to zero, the protocol server ignores it. The cumulative pixel height of all visible **rows** in the requested range will be compared with **CropY**. If the cumulative height of a row is equal or exceeds **CropY**, then that row will be last one rendered into the returned image.

2.2.4.62 RestRangeValuesRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.56.2.1](#)), indicates retrieving the **sheet (2) cell** values of a **range**.

```
<xs:complexType name="RestRangeValuesRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType" nillable="true"
type="tns2:NamedObjectType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Name: MUST be specified. If **NamedObjectType** is specified, then this field is interpreted as the name of a **published item**. Otherwise, this field MUST follow the **RangeReference** (section [2.2.5.25](#)) specification, with the following exceptions:

- The protocol server MUST support the **R1C1 notation**.
- If the value is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#), with the value of the **Id** element of the **ExcelServerMessage** set to **EcsInvalidNamedObject**.

NamedObjectType: If specified, this field indicates the type of named object represented by **Name**.

2.2.4.63 RestRangeValuesResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestRangeValuesRequest** (section [2.2.4.62](#)) is passed as the input.

```
<xs:complexType name="RestRangeValuesResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns2:ArrayOfAnyType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Values: The values of the **sheet (2) cells**. MUST be present. Each element inside the **Values** element MUST be of type **anyType** and is a **row (2)** of sheet (2) cells on the protocol server. The number of rows (2) returned MUST be equal to the number of rows (2) requested in the **Name** element of the **RestRangeValuesRequest** (section 2.2.4.62). Each element inside each of the

ArrayOfAnyType type nested inside **Values** MUST be a single **workbook** sheet (2) cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of **columns (2)** requested in the **Name** element of the **RestRangeValuesRequest** (section 2.2.4.62).

2.2.4.64 RestRangeXmlRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

When passed as the **request** parameter of the **ProcessRestRequest** input (section 3.1.4.56.2.1), indicates retrieving a representation of a **range** as specified in [MS-EXSPXML3].

```
<xs:complexType name="RestRangeXmlRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectView" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsPrintRequest" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DisallowAutoNov" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ObjectName" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

StateId: MUST be -1.

RangeName: MUST be specified. If it is not the name of a **published item** this field MUST follow the RangeReference (section 2.2.5.25) specification, with the following exceptions:

- The protocol server MUST support the **R1C1 notation**.
- If the value is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section 2.2.4.24, with the value of the **Id** element of the **ExcelServerMessage** set to **EcsInvalidNamedObject**.

NamedObjectView: Specifies whether to interpret **RangeName** as a published item. If **true**, **RangeName** MUST be interpreted as a published item. Otherwise, **RangeName** MUST NOT be interpreted as a published item.

IsPrintRequest: Specifies whether the information about the retrieved range in the **RestRangeXmlResult** (section 2.2.4.65) will be used for printing purposes. MUST be **true** if the information will be used for printing purposes by the protocol client. Otherwise, MUST be false.

DisallowAutoNov: Specifies the behavior to use when determining the baseline range (as described in section 2.2.4.44) during the **GetRange** operation associated with the **RestRangeXmlRequest** (see section 3.1.4.56).

ObjectName: MUST NOT be used.

2.2.4.65 RestRangeXmlResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

This is the type of the **result** field of **ProcessRestRequestResponse** (section 3.1.4.56.2.2) when a **RestRangeXmlRequest** (section 2.2.4.64) is passed as the input.

```

<xs:complexType name="RestRangeXmlResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CommandResult"
type="tns2:CommandResult"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsChromeRtl" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

CommandResult: The **result** field of the **GetRangeResponse** (section [3.1.4.21.2.2](#)).

IsChromeRtl: Set to true if the UI culture of the **session (2)** associated with the **ProcessRestRequest** operation (section [3.1.4.56](#)) defaults to right-to-left text ordering.

2.2.4.66 RestWorkbookRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.56.2.1](#)), indicates retrieving the **workbook file**.

```

<xs:complexType name="RestWorkbookRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest"/>
  </xs:complexContent>
</xs:complexType>

```

2.2.4.67 RestWorkbookResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestWorkbookRequest** (section [2.2.4.66](#)) is passed as the input.

```

<xs:complexType name="RestWorkbookResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="WorkbookResult"
type="tns2:GetWorkbookResult"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

WorkbookResult: The **GetWorkbookResult** (section [3.1.4.29.3.1](#)) which is the result of the **GetWorkbook** operation (section [3.1.4.29](#)).

2.2.4.68 SheetCell

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the coordinates of a **cell** in a sheet (2).

```
<xs:complexType name="SheetCell" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Row" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

SheetName: The name of the **sheet (2)** where the cells are located. MUST be present. The length of the string MUST NOT be more than 31 characters.

Row: The zero-based **row (2)** index of the cell's coordinates.

Column: The zero-based **column (2)** index of the cell's coordinates.

2.2.4.69 WorkbookMetadata

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

This is a container that encapsulates information about features in the **workbook**.

```
<xs:complexType name="WorkbookMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Sheets" type="tns2:ArrayOfWorksheetData"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetChanges"
type="tns2:ArrayOfWorksheetChangeInfo"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HidePivotFieldList" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ServerEventMetadataList"
type="tns2:ArrayOfServerEventMetadata"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WebExtensions"
type="tns2:ArrayOfWebExtensionMetadata"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasSurveys" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SurveyTitle" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Sheets: Contains an **ArrayOfWorksheetData** (section [2.2.4.49](#)) elements which is metadata for each **sheet (1)** in the workbook.

SheetChanges: Ignored by the protocol client.

HidePivotFieldList: Specifies whether the **PivotTable field list** is hidden. If the PivotTable field list is hidden, MUST be set to **true**. Otherwise, MUST be **false**.

ServerEventMetadataList: Contains an **ArrayOfServerEventMetadata** (section [2.2.4.78](#)) elements which is a list of **ServerEventMetadata** items where their version, as specified the **StateVersion** element of **ServerEventMetadata**, is greater than **ServerEventVersion** element value in **WorkbookMetadataState** (section [2.2.4.72](#)) sent the request.

WebExtensions: Contains an **ArrayOfWebExtensionMetadata** (section [2.2.4.79](#)) elements which is a list of **WebExtensionMetadata** items one for each **Office Web Extension** in the workbook.

HasSurveys: MUST be set to **true** if the workbook contains any surveys. Otherwise, MUST be **false**.

SurveyTitle: If **HasSurveys** is set to **true**, MUST be the title of a survey in the workbook. If **HasSurveys** is set to **false**, MUST NOT be used.

2.2.4.70 WorkbookMetadataParameter

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Container for **workbook** metadata.

```
<xs:complexType name="WorkbookMetadataParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataState"
      type="tns2:WorkbookMetadataState"/>
  </xs:sequence>
</xs:complexType>
```

WorkbookMetadataState: The workbook metadata state as specified in section [2.2.4.72](#).

2.2.4.71 WorkbookMetadataResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains information about the state of features in the **workbook**.

```
<xs:complexType name="WorkbookMetadataResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataState"
      type="tns2:WorkbookMetadataState"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Metadata" type="tns2:WorkbookMetadata"/>
  </xs:sequence>
</xs:complexType>
```

WorkbookMetadataState: MUST be present.

Metadata: MUST be present if the current operation is:

- **ApplyPivotFieldManagerHiddenState** (section [3.1.4.48](#))
- **DdaAddBinding** (section [3.1.4.66](#))
- **DdaReleaseBinding** (section [3.1.4.72](#))

2.2.4.72 WorkbookMetadataState

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

State of an associated **WorkbookMetadata** as specified in section [2.2.4.69](#).

```
<xs:complexType name="WorkbookMetadataState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="MetadataVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ServerEventVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

MetadataVersion: The version of the **WorkbookMetadata** item.

ServerEventVersion: The version of the **ServerEventMetadata** information of the **ServerEventMetadataList** element of a **WorkbookMetadata** item.

2.2.4.73 WorksheetChangeInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

MUST NOT be used.

```
<xs:complexType name="WorksheetChangeInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StateVersion" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="NewName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

StateVersion: MUST NOT be used.

Name: MUST NOT be used.

NewName: MUST NOT be used.

Type: MUST NOT be used.

2.2.4.74 WorksheetData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Contains metadata for any **sheet (1)** in the **workbook**.

```
<xs:complexType name="WorksheetData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TabColor" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns2:SheetFlags"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SheetType" type="tns2:SheetType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Visibility" type="tns2:SheetVisibility"/>
  </xs:sequence>
</xs:complexType>
```

Name: The name of the sheet (1).

TabColor: The color of the **sheet tab** for the sheet (1). If not present, the **default sheet tab color** MUST be used.

Flags: Specifies the options for the sheet (1).

SheetType: Indicates the type of the sheet (1).

Visibility: Indicates the visibility of the sheet (1).

2.2.4.75 RestOpenWorkbookRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

When passed as the **request** parameter of the **ProcessRestRequest** (section [3.1.4.56.2.1](#)) input, indicates that the protocol server opens the **workbook** specified in section [3.1.4.56](#).

```
<xs:complexType name="RestOpenWorkbookRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest"/>
  </xs:complexContent>
</xs:complexType>
```

2.2.4.76 RestOpenWorkbookResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestOpenWorkbookRequest** (section [2.2.4.75](#)) is passed as the input.

```
<xs:complexType name="RestOpenWorkbookResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="SessionId" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

SessionId: The **session identifier** as described in section [3.1.4.56](#).

2.2.4.77 ArrayOfBindingMetadata

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Unordered list of **BindingMetadata** (section [2.2.4.80](#)).

```
<xs:complexType name="ArrayOfBindingMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="BindingMetadata" nillable="true"
      type="tns2:BindingMetadata"/>
  </xs:sequence>
</xs:complexType>
```

BindingMetadata: A **BindingMetadata** item.

2.2.4.78 ArrayOfServerEventMetadata

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An unordered list of **ServerEventMetadata** (section [2.2.4.83](#)) items.

```

<xs:complexType name="ArrayOfServerEventMetadata"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ServerEventMetadata"
nillable="true" type="tns2:ServerEventMetadata"/>
  </xs:sequence>
</xs:complexType>

```

ServerEventMetadata: A **ServerEventMetadata** item.

2.2.4.79 ArrayOfWebExtensionMetadata

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An unordered list of **WebExtensionMetadata** (section [2.2.4.84](#)) items.

```

<xs:complexType name="ArrayOfWebExtensionMetadata"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="WebExtensionMetadata"
nillable="true" type="tns2:WebExtensionMetadata"/>
  </xs:sequence>
</xs:complexType>

```

WebExtensionMetadata: A **WebExtensionMetadata** item.

2.2.4.80 BindingMetadata

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Information about a single Office Web Extension binding that Excel uses to implement features related to bindings.

```

<xs:complexType name="BindingMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="BindingType" type="tns2:DdaBindingType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Reference" type="tns2:BindingReference"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasHeaders" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasTotals" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsValidRef" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

Name: The Office Web Extension defined name for a binding.

BindingType: Indicates the type of this binding.

Version: An integer that is incremented for a change in the size or location of this binding.

Reference: Describes the **worksheet** range that this binding represents.

HasHeaders: Specifies whether the binding includes a **table** header. MUST be **true** if the binding includes a table header and **false** otherwise.

HasTotals: Specifies whether the binding includes a table totals row. MUST be **true** if the binding includes a table totals row and **false** otherwise.

IsValidRef: MUST be **true** if the worksheet range specified by **Reference** is a valid **sheet (2)** location and **false** otherwise.

2.2.4.81 BindingReference

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Describes a simple worksheet range, intended for BindingMetadata to describe the range to which a binding refers.

```
<xs:complexType name="BindingReference" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

SheetName: A string that specifies the sheet which contains the binding.

FirstRow: An integer that specifies starting row of the binding.

FirstColumn: An integer that specifies starting column of the binding.

LastRow: An integer that specifies ending row of the binding.

LastColumn: An integer that specifies the ending column of the binding.

2.2.4.82 DdaSettings

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

List of settings for an instance of an Office Web Extension.

```
<xs:complexType name="DdaSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Settings"
type="tns2:ArrayOfArrayOfString"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Settings: List of strings in key/value pairs that are the Office Web Extension settings.

Version: An integer that is incremented for any change in these settings.

2.2.4.83 ServerEventMetadata

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An event of a particular type that occurred during server processing.

```
<xs:complexType name="ServerEventMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StateVersion" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ServerEventXml" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

StateVersion: The server event version. Incremented by the protocol server when a server event is generated.

ServerEventXml: XML data associated with a server event see **CT_ServerEvent** ([\[MS-EXSPXML3\]](#) section 2.3.43).

2.2.4.84 WebExtensionMetadata

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Information associated with an **Office Web Extension**.

```
<xs:complexType name="WebExtensionMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WebExtensionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BindingData"
type="tns2:ArrayOfBindingMetadata"/>
  </xs:sequence>
</xs:complexType>
```

WebExtensionId: Unique value for every instance of an Office Web Extension. MUST be present.

BindingData: An unordered list of **BindingMetadata** items, as specified in **ArrayOfBindingMetadata** (section [2.2.4.77](#)), that represent all bindings associated with an Office Web Extension.

2.2.4.85 ArrayOfClientUdfCall

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A collection of **ClientUdfCall** elements.

```
<xs:complexType name="ArrayOfClientUdfCall" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfCall" nillable="true"
type="tns2:ClientUdfCall"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfCall: A **ClientUdfCall** element as specified in section [2.2.4.87](#).

2.2.4.86 ArrayOfClientUdfDefinition

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A collection of **ClientUdfDefinition** elements.

```
<xs:complexType name="ArrayOfClientUdfDefinition"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfDefinition"
nillable="true" type="tns2:ClientUdfDefinition"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfDefinition: A **ClientUdfDefinition** element as specified in section [2.2.4.89](#).

2.2.4.87 ClientUdfCall

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Represents the information needed for a single client-side **user-defined function (UDF)** result protocol server requires from the protocol client.

```
<xs:complexType name="ClientUdfCall" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Id" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UdfName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns2:ArrayOfAnyType"/>
  </xs:sequence>
</xs:complexType>
```

Id: MUST be present. An opaque string used by the protocol server to identify the client side UDF call when the protocol client sends the results to the protocol server as described in section [3.1.4.34.3.4](#).

UdfName: The name of the client side UDF for which the protocol server requires a result.

Parameters: The parameters of the client side UDF for which the protocol server requires a result.

2.2.4.88 ClientUdfCallInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Contains a list of **ClientUdfCall** elements that the protocol server requires from the protocol client to complete a workbook calculation.

```
<xs:complexType name="ClientUdfCallInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Calls" type="tns2:ArrayOfClientUdfCall"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Calls: A collection of **ClientUdfCall** elements as described in section [2.2.4.87](#).

CalcVersion: Represents a sequential counter maintained by the protocol server. The protocol client sends this number back to the protocol server together with the results of the client side UDF as described in section [3.1.4.34.3.2](#).

2.2.4.89 ClientUdfDefinition

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Represents a client side UDF that the protocol client can calculate for the server.

```
<xs:complexType name="ClientUdfDefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UdfName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsVolatile" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

UdfName: MUST be present. The name of the client side UDF that the client protocol knows how to calculate. MUST be unique across the list of client side UDFs sent to the protocol server as part of ClientUdfListInfo as described in section [2.2.4.90](#).

IsVolatile: Specifies whether or not the client side UDF is volatile.

2.2.4.90 ClientUdfListInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains a list of **ClientUdfDefinition** elements.

```
<xs:complexType name="ClientUdfListInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfs"
      type="tns2:ArrayOfClientUdfDefinition"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfs: A list of **ClientUdfDefinition** elements, as described in section [2.2.4.89](#).

2.2.4.91 ArrayOfDataConnectionInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An array of **DataConnectionInfo** elements as specified in section [2.2.4.92](#).

```
<xs:complexType name="ArrayOfDataConnectionInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="DataConnectionInfo" nillable="true"
      type="tns2:DataConnectionInfo"/>
  </xs:sequence>
</xs:complexType>
```

DataConnectionInfo: A **DataConnectionInfo** element, as specified in section [2.2.4.92](#).

2.2.4.92 DataConnectionInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies information about a **data connection (2)**.

```
<xs:complexType name="DataConnectionInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="IsReady" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="StreamingFailed" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SourceIndex" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ConnectionName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RefreshTimestamp" type="xs:dateTime"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecurityToken" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SlidesIds" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsEmbedded" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ConnectionString" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

IsReady: The connection ready state.

StreamingFailed: MUST be false.

SourceIndex: The data source index.

ConnectionName: The name of the data connection (2).

RefreshTimestamp: The **timestamp** of the **connected data refresh**.

SecurityToken: MUST NOT be used.

SlidesIds: The ID of slide in the **interactive report** that uses the connection.

DataSourceName: A unique identifier in interactive report that is associated with this connection.

IsEmbedded: MUST be true if the data connection (2) is to a data model. MUST be false otherwise.

ConnectionString: The connection string in the format specified in [\[MS-OLEDBSTR\]](#).

2.2.4.93 OperationStates

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Indicates the current enabled state of undo and redo operations.

```
<xs:complexType name="OperationStates" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Undo" type="tns2:UndoRedoEnabledState"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Redo" type="tns2:UndoRedoEnabledState"/>
  </xs:sequence>
</xs:complexType>
```

Undo: Indicates the current enabled state of the undo operation.

Redo: Indicates the current enabled state of the redo operation.

2.2.4.94 ArrayOfPivotField

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfPivotField** type contains a list of **PivotField** elements (section [2.2.4.99](#)).

```
<xs:complexType name="ArrayOfPivotField" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PivotField" nillable="true"
type="tns2:PivotField"/>
  </xs:sequence>
</xs:complexType>
```

PivotField: A **PivotField** element that is a **PivotTable** field.

2.2.4.95 ArrayOfPivotFilterParameter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfPivotFilterParameter** type contains a list of **PivotFilterParameter** elements (section [2.2.4.100](#)).

```
<xs:complexType name="ArrayOfPivotFilterParameter"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PivotFilterParameter"
nillable="true" type="tns2:PivotFilterParameter"/>
  </xs:sequence>
</xs:complexType>
```

PivotFilterParameter: A **PivotFilterParameter** in the list.

2.2.4.96 ArrayOfSlicerInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfSlicerInfo** type contains a list of **SlicerInfo** elements (section [2.2.4.104](#)).

```
<xs:complexType name="ArrayOfSlicerInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="SlicerInfo" nillable="true"
type="tns2:SlicerInfo"/>
  </xs:sequence>
</xs:complexType>
```

SlicerInfo: Information about a slicer.

2.2.4.97 BindingData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Contains cell data and headers depending on the coerce type specified in this structure.

```
<xs:complexType name="BindingData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="CoerceType" type="tns2:DdaCoerceType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Data" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Headers" type="tns2:ArrayOfAnyType"/>
  </xs:sequence>
</xs:complexType>
```

```

    </xs:sequence>
</xs:complexType>

```

CoerceType: A **DdaCoerceType** (section [2.2.5.7](#)) value that indicates the type of data contained in this structure.

Data: Contains worksheet cell data of the data source.

Headers: If CoerceType is a table and the data source has headers then this SHOULD contain worksheet cell data for the headers, otherwise this SHOULD be null.

2.2.4.98 DataConnectionsInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies information about **data connections (2)** in the workbook.

```

<xs:complexType name="DataConnectionsInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSources" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataConnections"
type="tns2:ArrayOfDataConnectionInfo"/>
  </xs:sequence>
</xs:complexType>

```

DataSources: An XML string that specifies information about the sources for the data connections (2).

DataConnections: An array of DataConnectionInfo elements as specified in section [2.2.4.91](#).

2.2.4.99 PivotField

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotField** type contains information about a **PivotTable** field.

```

<xs:complexType name="PivotField" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberProperties"
type="tns2:ArrayOfPivotField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotFilterParameters"
type="tns2:ArrayOfPivotFilterParameter"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsWholeDays" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsEnabledWholeDays" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortByValueIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsNonnumericCaptionFilteringEnabled"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsDateFilteringEnabled" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsCaptionFilteringEnabled"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsFilteringEnabled" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsDateField" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsDataField" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterParameter"
type="tns2:Top10FilterParameter"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInRowArea" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInPageFilterArea"
type="xs:boolean"/>
  </xs:sequence>

```

```

<xs:element minOccurs="1" maxOccurs="1" name="IsSortedByValue" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="IsSortedDescending" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="IsSortedAscending" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="HasCustomFilter" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="HasManualFilter" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="HasTop10Filter" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="IsLevel" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="IsHierarchy" type="xs:boolean"/>
<xs:element minOccurs="0" maxOccurs="1" name="IdString" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="DisplayString" type="xs:string"/>
</xs:sequence>
</xs:complexType>

```

MemberProperties: The list of member properties for this **PivotTable** field. MUST be present. If **IsDataField** is true, **MemberProperties** MUST contain zero PivotField elements. If **IsHierarchy** is true, **MemberProperties** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **MemberProperties** MUST contain zero PivotField elements. Otherwise, **MemberProperties** MUST contain the list of all member properties associated with this **PivotTable** field.

PivotFilterParameters: The PivotTable **custom filters** applied to this PivotTable field. MUST be present. MUST have zero **PivotFilterParameter** elements if **HasCustomFilter** is false. MUST have one PivotFilterParameter elements if HasCustomFilter is true.

IsWholeDays: Specifies a PivotTable advanced filter criteria and MUST be false if the **FilterType** element does not indicate a filter operation on a PivotTable date field. If true, date comparisons MUST be based on the date only and the time MUST be ignored. If false, date comparisons MUST be based on both the date and the time.

IsEnabledWholeDays: Specifies whether date comparisons based on date only, ignoring time, are allowed. If date comparisons based on date only are allowed, MUST be true. Otherwise MUST be false. MUST be false for non-date fields when **IsDateField** is false.

SortByValueIndex: Specifies the index of a **PivotTable data field** contained in the **PivotDataItems** element which the **PivotTable field** is sorted by. If **IsSortedByValue** is false, **SortByValueIndex** MUST be ignored on receipt by the protocol client.

IsNonnumericCaptionFilteringEnabled: Specifies whether certain types of text PivotTable custom label filtering are allowed on this PivotTable field. If **IsDataField** is true, **IsNonnumericCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is true, **IsNonnumericCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsNonnumericCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsNonnumericCaptionFilteringEnabled** MUST be set to true if the following values for **FilterType** are allowed when calling **ApplyPivotFilter** (section 3.1.4.2) for this **PivotTable** field, and to false if they are not one of the following:

- CaptionBeginsWith
- CaptionDoesNotBeginWith
- CaptionEndsWith
- CaptionDoesNotEndWith
- CaptionContains
- CaptionDoesNotContain

IsDateFilteringEnabled: Specifies whether PivotTable **custom label filters** are allowed for dates on this **PivotTable** field. If **IsDataField** is true, **IsDateFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is true, **IsDateFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsDateFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsDateFilteringEnabled** MUST be set to **true** if the following values for **FilterType** are allowed when calling **ApplyPivotFilter** for this **PivotTable** field, and to **false** if they are not one of the following:

- DateEquals
- DateOlderThan
- DateNewerThan
- DateBetween
- DateTomorrow
- DateToday
- DateYesterday
- DateNextWeek
- DateThisWeek
- DateLastWeek
- DateNextMonth
- DateThisMonth
- DateLastMonth
- DateNextQuarter
- DateThisQuarter
- DateLastQuarter
- DateNextYear
- DateThisYear
- DateLastYear
- DateYearToDate
- DateAllDatesInPeriodQuarter1
- DateAllDatesInPeriodQuarter2
- DateAllDatesInPeriodQuarter3
- DateAllDatesInPeriodQuarter4
- DateAllDatesInPeriodJanuary
- DateAllDatesInPeriodFebruary
- DateAllDatesInPeriodMarch
- DateAllDatesInPeriodApril

- DateAllDatesInPeriodMay
- DateAllDatesInPeriodJune
- DateAllDatesInPeriodJuly
- DateAllDatesInPeriodAugust
- DateAllDatesInPeriodSeptember
- DateAllDatesInPeriodOctober
- DateAllDatesInPeriodNovember
- DateAllDatesInPeriodDecember
- DateNotEqual
- DateOlderOrEqual
- DateNewerOrEqual
- DateNotBetween

IsCaptionFilteringEnabled: Specifies whether PivotTable custom label filters are allowed for this **PivotTable** field. If **IsDataField** is **true**, **IsCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsCaptionFilteringEnabled** MUST be set to **true** if values of **PivotFilterType** that support PivotTable custom label filtering, as specified in **PivotFilterType** (section [2.2.5.24](#)), are allowed when calling **ApplyPivotFilter** for this **PivotTable** field, and to **false** if it is not allowed.

IsFilteringEnabled: Specifies whether PivotTable custom filters are allowed for this **PivotTable** field. If **IsDataField** is **true**, **IsFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsFilteringEnabled** MUST be set to **true** if calls to **ApplyPivotFilter** are allowed for this PivotTable field, and it MUST be set to **false** otherwise.

IsDateField: Specifies whether this PivotTable field is a date. If **IsDataField** is **true**, **IsDateField** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsDateField** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsDateField** MUST be ignored on receipt by the protocol client. Otherwise, **IsDateField** MUST be set to **true** if the PivotTable field is a date PivotTable field, and to **false** otherwise.

IsDataField: Specifies whether this PivotTable field is a PivotTable data field. If this **PivotField** element is nested inside the **PivotDataFields** element of the **PivotMenu** (section [2.2.4.101](#)), **IsDataField** MUST be set to **true**. If this **PivotField** element is nested inside a **MemberProperties** element, **IsDataField** MUST be set to **false**. If this element is nested inside the **PivotFields** element of the **PivotMenu**, **IsDataField** MUST be set to **false**.

FilterParameter: The **top N filter** or **bottom N filter** for this PivotTable field. If **IsDataField** is **true**, **FilterParameter** MUST NOT be present. If **IsHierarchy** is **true**, **FilterParameter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **FilterParameter** MUST NOT be present. Otherwise, **FilterParameter** MUST NOT be present if **HasTop10Filter** is **false** and it MUST be present according to the specification in **Top10FilterParameter** (section [2.2.4.105](#)) if **HasTop10Filter** is **true**.

IsFieldInRowArea: Specifies whether this PivotTable field is in the rows area of the PivotTable. If this **PivotField** element is not nested inside the **PivotFields** element of the **PivotMenu** (section 2.2.4.101), **IsFieldInRowArea** MUST be set to **false**.

IsFieldInPageFilterArea: Specifies whether this PivotTable field is in the **PivotTable page field** of the PivotTable. If this **PivotField** element is not nested inside the **PivotFields** element of the **PivotMenu** (section 2.2.4.101), **IsFieldInPageFilterArea** MUST be set to **false**.

IsSortedByValue: Specifies whether this **PivotTable** field is sorted by value. If **IsDataField** is **false**, **IsSortedByValue** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsSortedByValue** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsSortedByValue** MUST be ignored on receipt by the protocol client. Otherwise, **IsSortedByValue** MUST be set to **true** if the PivotTable field is sorted by value, and it MUST be set to **false** if the PivotTable field is sorted by name or is not sorted.

IsSortedDescending: Specifies whether this PivotTable field is sorted in **descending order**. If **IsHierarchy** is **true**, **IsSortedDescending** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsSortedDescending** MUST be ignored on receipt by the protocol client. Otherwise, **IsSortedDescending** MUST be set to **true** if the PivotTable field is sorted in descending order, and it MUST be set to **false** if the **PivotTable** field is sorted in ascending order or is not sorted.

IsSortedAscending: Specifies whether this PivotTable field is sorted in **ascending order**. If **IsHierarchy** is **true**, **IsSortedAscending** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsSortedAscending** MUST be ignored on receipt by the protocol client. Otherwise, **IsSortedAscending** MUST be set to **true** if the PivotTable field is sorted in ascending order, and it MUST be set to **false** if the **PivotTable** field is sorted in descending order or is not sorted.

HasCustomFilter: Specifies whether there is a PivotTable custom filter applied to this **PivotTable** field. If **HasManualFilter** is **true** or **HasTop10Filter** is **true**, **HasCustomFilter** MUST be set to **false**. If **IsDataField** is **true**, **HasCustomFilter** MUST be **false**. If **IsHierarchy** is **true**, **HasCustomFilter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **HasCustomFilter** MUST be ignored on receipt by the protocol client. Otherwise, **HasCustomFilter** MUST be set to **true** if there is a PivotTable custom filter applied to this **PivotTable** field and it MUST be set to **false** if there is no PivotTable custom filter applied to this **PivotTable** field.

HasManualFilter: Specifies whether there is a PivotTable **manual filter** applied to this PivotTable field. If **HasCustomFilter** is **true** or **HasTop10Filter** is **true**, **HasManualFilter** MUST be set to **false**. If **IsDataField** is **true**, **HasManualFilter** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **HasManualFilter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **HasManualFilter** MUST be ignored on receipt by the protocol client. Otherwise, **HasManualFilter** MUST be set to **true** if there is a PivotTable manual filter applied to this **PivotTable** field, and it MUST be set to **false** if there is no PivotTable manual filter applied to this **PivotTable** field.

HasTop10Filter: Specifies whether there is a top N filter or a bottom N filter applied to this PivotTable field. If **HasCustomFilter** is **true** or **HasManualFilter** is **true**, **HasTop10Filter** MUST be set to **false**. If **IsDataField** is **true**, **HasTop10Filter** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **HasTop10Filter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **HasTop10Filter** MUST be ignored on receipt by the protocol client. Otherwise, **HasTop10Filter** MUST be set to **true** if the PivotTable field has a top N filter or a bottom N filter set. MUST be set to **false** if the **PivotTable** field does not have a top N filter nor a bottom N filter set.

IsLevel: Specifies whether this PivotTable field is a **level** PivotTable field. If this **PivotField** element is NOT nested inside a **MemberProperties** element, **IsLevel** MUST be set to **false**. Otherwise,

IsLevel MUST be set to **true** if the PivotTable field is a level **PivotTable** field, and it MUST be set to **false** otherwise.

IsHierarchy: Specifies whether this PivotTable field is a **hierarchy** PivotTable field. If **IsDataField** is **true**, **IsHierarchy** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsHierarchy** MUST be set to **false**. Otherwise, **IsHierarchy** MUST be set to **true** if the PivotTable field is a hierarchy **PivotTable** field, and it MUST be set to **false** otherwise.

IdString: An identifier for the PivotTable field. MUST be present. MUST NOT be empty. If **IsDataField** is true, **IdString** MUST have a unique value among all the **IdString** elements of all the **PivotField** elements of the **PivotDataFields** element of the **PivotMenu**. If this **PivotField** element is nested inside a **MemberProperties** element, **IdString** MUST have a unique value across all the **IdString** elements of all the **PivotField** elements of all the **MemberProperties** elements of all the **PivotField** elements of the **PivotFields** element. Otherwise, **IdString** MUST have a unique value among all the **IdString** elements of all the **PivotField** elements of the **PivotFields** element of the **PivotMenu** that have the same value in the **IsHierarchy** field as this element.

DisplayString: The **PivotTable** field **caption**. MUST be present.

2.2.4.100 PivotFilterParameter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFilterParameter** type specifies a **PivotTable custom filter** applied to a **PivotTable** field.

```
<xs:complexType name="PivotFilterParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterString2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterString1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberPropertyId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns2:PivotFilterType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue2" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue1" type="xs:double"/>
  </xs:sequence>
</xs:complexType>
```

FilterString2: The second PivotTable **filter** parameter, if the filter type supports two PivotTable filter parameters and is used with a PivotTable **custom label filter**. MUST be present. MUST be empty and MUST be ignored on receipt by the protocol client when **FilterType** supports zero or one parameters, as specified in section 2.2.5.24. MUST be empty and MUST be ignored on receipt by the protocol client when **FilterType** is used for PivotTable custom value filter as specified in **PivotFilterType** (section 2.2.5.24). Otherwise, it MUST contain the value of the second PivotTable filter parameter.

FilterString1: The first PivotTable filter parameter, if the filter type supports one or two PivotTable filter parameters and is used with a PivotTable custom label filter. MUST be present. MUST be empty and MUST be ignored on receipt by the protocol client when **FilterType** supports zero parameters, as specified in **PivotFilterType**. MUST be empty and MUST be ignored on receipt by the protocol client when **FilterType** is used for PivotTable custom value filter as specified in **PivotFilterType**. Otherwise, it MUST contain the value of the first PivotTable filter parameter.

MemberPropertyId: The identifier of the **member property** used with a PivotTable custom label filter on a member property. MUST be present. MUST be empty when **FilterType** is used for PivotTable custom value filter as specified in **PivotFilterType**. MUST be empty when **FilterType** is used for PivotTable custom label filter, as specified in **PivotFilterType**, but not on a member property. When **FilterType** is used with PivotTable custom label filter, as specified in **PivotFilterType** on a member property, **MemberPropertyId** MUST be equal to the **IdString** element of one of the

PivotField elements of one of the **MemberProperties** elements one of the **PivotField** elements of the **PivotFields** element of the **PivotMenu** (section [2.2.4.101](#)).

DataFieldId: The identifier of the PivotTable data field used with a PivotTable **custom value filter**. MUST be present. MUST be empty when **FilterType** is not used with PivotTable custom value filter as specified in **PivotFilterType**. When **FilterType** is used for PivotTable custom value filter, as specified in **PivotFilterType**, **DataFieldId** MUST be equal to the **IdString** element of one of the **PivotField** elements of the **PivotDataFields** element of the **PivotMenu**.

FilterType: The type of the filter applied as specified in **PivotFilterType**. MUST be used with PivotTable custom label filter or with PivotTable custom value filter as specified in **PivotFilterType**.

FilterValue2: The second PivotTable filter parameter, if the filter type supports two PivotTable filter parameters and is used for PivotTable custom value filter. MUST be ignored on receipt by the protocol client when **FilterType** supports zero or one parameters as specified in **PivotFilterType**. MUST be ignored on receipt by the protocol client when **FilterType** is used with PivotTable custom label filter as specified in **PivotFilterType**. Otherwise, it MUST contain the value of the second PivotTable filter parameter.

FilterValue1: The first PivotTable filter parameter, if the filter type supports one or two PivotTable filter parameters and is used for PivotTable custom value filter. MUST be ignored on receipt by the protocol client when **FilterType** supports zero parameters, as specified in **PivotFilterType**. MUST be ignored on receipt by the protocol client when **FilterType** is used with PivotTable custom label filter as specified in **PivotFilterType**. Otherwise, it MUST contain the value of the first PivotTable filter parameter.

2.2.4.101 PivotMenu

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotMenu** type contains information about a **PivotTable area** that is returned by the protocol server.

```
<xs:complexType name="PivotMenu" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Top10MaxItems" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="AdvancedFiltering" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsPageFilter" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotDataItems"
type="tns2:ArrayOfPivotField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotDataFields"
type="tns2:ArrayOfPivotField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotFields"
type="tns2:ArrayOfPivotField"/>
  </xs:sequence>
</xs:complexType>
```

Top10MaxItems: The maximum value to be used when applying a **top N filter** or a **bottom N filter** as specified in section [3.1.4.6](#).

AdvancedFiltering: Specifies whether the protocol server implementation supports **PivotTable custom filters** for the current PivotTable. MUST be set to **true** if the protocol server implementation supports PivotTable custom filters for the PivotTable that contains the current PivotTable area, and MUST be set to **false** otherwise.

IsPageFilter: Specifies whether the PivotTable area is a **PivotTable page field filter**. MUST be true if the PivotTable area is a PivotTable page field filter. MUST be false if the PivotTable area is not a PivotTable page field filter.

PivotDataItems: The list of **PivotTable data fields** of the PivotTable, as specified in **ArrayOfPivotField** (section [2.2.4.94](#)). MUST be present. MUST contain the list of all the PivotTable data fields of the PivotTable that contains the PivotTable area, in the same order as they appear in the PivotTable.

PivotDataFields: If the **data source** for the PivotTable is **OLAP** then MUST contain all **OLAP measures**. Otherwise, MUST contain the list of all the PivotTable data fields of the PivotTable that contains the PivotTable area, as specified in **ArrayOfPivotField**, in the same order as they appear in the PivotTable. MUST be present.

PivotFields: The list of **PivotTable fields** of the PivotTable area, as specified in **ArrayOfPivotField**. MUST be present. MUST contain the list of all the PivotTable fields in the PivotTable area as follows:

- The first **PivotField** element in the **ArrayOfPivotField** MUST be the first **hierarchy** PivotTable field.
- The **PivotField** elements following a **PivotField** element in the **ArrayOfPivotField** that is a hierarchy PivotTable field MUST be all the PivotTable fields that belong to that hierarchy PivotTable field, ordered from the highest **level** PivotTable field to the lowest level PivotTable field.
- The **PivotField** element following a **PivotField** element in the **ArrayOfPivotField** that is the lowest level PivotTable field that belongs to a hierarchy PivotTable field that is not the last hierarchy PivotTable field of the PivotTable area MUST be the next hierarchy PivotTable fields of the PivotTable area.

2.2.4.102 RestSlicersListRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestSlicersListRequest** type specifies the conditions for a list of **slicers** or timelines to be returned by the protocol server.

```
<xs:complexType name="RestSlicersListRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Options"
          type="tns2:SlicerOptionsBits"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Options: Indicates whether the protocol server needs to return a list of slicers or timelines. MUST be one of the following values: **GetItemSlicers** or **GetTimeSlicers**.

2.2.4.103 RestSlicersListResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestSlicersListResult** type specifies the list of **slicers** returned by the protocol server.

```
<xs:complexType name="RestSlicersListResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="SlicersList"
type="tns2:ArrayOfSlicerInfo"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

SlicersList: An array of **SlicerInfo** as specified in section [2.2.4.104](#). MUST be present.

2.2.4.104 SlicerInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Information about a slicer.

```

<xs:complexType name="SlicerInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UpdatesAllowed" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ConnectedPublishedObjects"
type="tns2:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>

```

Name: A unique identifier for the slicer.

Caption: Display **caption** of the **slicer**.

UpdatesAllowed: Indicates whether the slicer can be updated. If **false**, then subsequent updates to the slicer will not be allowed by the protocol server. If **true**, the protocol server will allow updating the slicer.

ConnectedPublishedObjects: An array of unique identifiers of objects that will be changed if the state of the slicer is changed.

2.2.4.105 Top10FilterParameter

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **Top10FilterParameter** type contains information about the **top N filter** or **bottom N filter** that is applied to a **PivotTable** field.

```

<xs:complexType name="Top10FilterParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns2:Top10FilterType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsTopFilter" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

DataFieldId: The unique identifier of the **PivotTable data field** to which the top N filter or bottom N filter is applied. MUST be equal to the **IdString** element of one of the **PivotField** elements in the **PivotDataFields** element of the **PivotMenu**.

FilterType: The kind of the top N filter or bottom N filter as specified in section [2.2.5.41](#).

FilterValue: The value of the **PivotTable filter parameter**. If **FilterType** is **Count**, MUST be greater than or equal to 1 and less than or equal to 2147483647. If **FilterType** is **Percent**, MUST be greater than or equal to 0 and less than or equal to 100. If **FilterType** is **Sum**, MUST be greater than or equal to 0.

IsTopFilter: Specifies whether this is a top N filter or a bottom N filter. MUST be **true** if a top N filter is applied. MUST be **false** if a bottom N filter is applied.

2.2.4.106 ArrayOfSheetName

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **SheetName** elements.

```
<xs:complexType name="ArrayOfSheetName" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="SheetName" nillable="true"
type="tns2:SheetName"/>
  </xs:sequence>
</xs:complexType>
```

SheetName: The **SheetName** as specified in section [2.2.4.115](#).

2.2.4.107 ArrayOfSlicerItemRange

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **SlicerItemRange** as defined in section [2.2.4.116](#).

```
<xs:complexType name="ArrayOfSlicerItemRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="SlicerItemRange" nillable="true"
type="tns2:SlicerItemRange"/>
  </xs:sequence>
</xs:complexType>
```

SlicerItemRange: A contiguous range of slicer items.

2.2.4.108 RestApplySlicerSelectionRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Contains information about the operation to update a slicer.

```
<xs:complexType name="RestApplySlicerSelectionRequest"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="SelectionMode"
type="tns2:RestSlicerSelectionMode"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Selected" type="tns2:ArrayOfString"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```



```

        <xs:element minOccurs="0" maxOccurs="1" name="Unselected" type="tns2:ArrayOfString"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

SelectionMode: Specifies the slicer update that is to be performed by the protocol server.

Name: The name to identify the slicer.

Selected: A list of unique names of slicer items to be selected. MUST be ignored by the protocol server if **SelectionMode** is ClearFilter.

Unselected: A list of unique names of slicer items to be unselected. MUST be ignored by the protocol server if **SelectionMode** is either SelectedOnly or ClearFilter.

2.2.4.109 RestApplyTimelineSelectionRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains information about the operation to update a timeline.

```

<xs:complexType name="RestApplyTimelineSelectionRequest"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel"
type="tns2:RestTimelineLevel"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SelectionBeginDate"
type="tns2:DateTimeRecord"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SelectionEndDate"
type="tns2:DateTimeRecord"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UpdateDisplayLevel" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UpdateSelection" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

DisplayLevel: Specifies the granularity of the timeline. If **UpdateDisplayLevel** is false, MUST be ignored by the protocol server.

Name: The name to identify the timeline.

SelectionBeginDate: Indicates the start date of the time period for the timeline to select. If set to 0, indicates to the protocol server that the existing start date for the timeline selection MUST not be changed.

If **UpdateSelection** is false, MUST be ignored by the protocol server.

SelectionEndDate: Indicates the end date of the time period for the timeline to select. If set to 0, indicates to the protocol server that the existing end date for the timeline selection MUST not be changed.

If **UpdateSelection** is false, MUST be ignored by the protocol server.

UpdateDisplayLevel: Indicates whether the protocol server needs to update the granularity of the timeline.

UpdateSelection: Indicates whether the protocol server needs to update the selected time period of the timeline.

2.2.4.110 RestCloseWorkbookRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Indicates a request to the protocol server to close the **session (2)** identified by **SessionId** field of the **RestRequest** type (section [3.1.4.56.3.1](#)).

```
<xs:complexType name="RestCloseWorkbookRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest"/>
  </xs:complexContent>
</xs:complexType>
```

2.2.4.111 RestSlicerItemsListRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the parameters for the list of items in a slicer.

```
<xs:complexType name="RestSlicerItemsListRequest"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ItemOffset" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Name: The name to identify the slicer.

ItemOffset: The index of the first slicer item. If the value is non-negative, indicates the index of the first slicer item. If **ItemOffset** is set to -1, the starting index MUST be treated as 0.

ItemCount: If the value is non-negative, indicates the maximum number of slicer items to be retrieved. The actual number of slicer items retrieved by the protocol server MUST be the lesser value of **ItemCount** and the number of items in the slicer starting from the slicer item specified by **ItemOffset**.

If the value is -1, the actual number of slicer items retrieved by the protocol server MUST be the number of items in the slicer starting from the slicer item specified by **ItemOffset**.

2.2.4.112 RestSlicerItemsListResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies information about a list of slicer items.

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.56.2.2](#)) when a **RestSlicerItemsListResult** is passed as the input.

```
<xs:complexType name="RestSlicerItemsListResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Revision" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="TotalItemCount" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HasEffectiveSelection"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Items" type="tns2:ArrayOfSlicerItem"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Revision: The revision number of the slicer. MUST not be negative.

TotalItemCount: Total number of items in the slicer. MUST not be negative.

HasEffectiveSelection: Indicates whether current slicer has at least one slicer item in an unselected state.

Items: Array of **SlicerItem** objects representing the retrieved slicer items as specified in section [2.2.4.10](#).

2.2.4.113 RestTimelineInfoRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Identifies a timeline.

```
<xs:complexType name="RestTimelineInfoRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Name: The name to identify the timeline.

2.2.4.114 RestTimelineInfoResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies information about a timeline.

```
<xs:complexType name="RestTimelineInfoResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="MinDate" type="tns2:DateTimeRecord"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="MaxDate" type="tns2:DateTimeRecord"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SelectionBeginDate"
type="tns2:DateTimeRecord"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SelectionEndDate"
type="tns2:DateTimeRecord"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel"
type="tns2:RestTimelineLevel"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SelectionState"
type="tns2:RestTimelineSelectionState"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayLabel" type="xs:string"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

MinDate: Indicates the start date of the time period that the timeline is defined on.

MaxDate: Indicates the end date of the time period that the timeline is defined on.

SelectionBeginDate: Indicates the start date of the selected period of time in the timeline.

SelectionEndDate: Indicates the end date of the selected period of time in the timeline.

DisplayLevel: Indicates the granularity level used to select period of time in the timeline.

SelectionState: Indicates the mode used to define the selected period of time in the timeline.

DisplayLabel: Display caption used to describe the selected period of time in the timeline.

2.2.4.115 SheetName

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the **name**, **type** and **visible** condition of a **sheet (1)**.

```

<xs:complexType name="SheetName" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns2:SheetType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Visibility" type="tns2:SheetVisibility"/>
  </xs:sequence>
</xs:complexType>

```

Name: The name of the sheet (1). MUST be present.

Type: The type of the sheet (1) as specified in section [2.2.5.36](#).

Visibility: The visible condition of a sheet (1) as specified in section [2.2.5.37](#).

2.2.4.116 SlicerItemRange

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Represents a contiguous range of slicer items.

```

<xs:complexType name="SlicerItemRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Start" type="xs:int"/>

```

```
<xs:element minOccurs="1" maxOccurs="1" name="End" type="xs:int"/>
</xs:sequence>
</xs:complexType>
```

Start: Non-negative number representing the index of the first slicer item.

End: Non-negative number representing the index of the last slicer item.

2.2.4.117 **ArrayOfInteractiveReportsItem**

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ArrayOfInteractiveReportsItem** type specifies an array of **InteractiveReportsItem** elements.

```
<xs:complexType name="ArrayOfInteractiveReportsItem"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="InteractiveReportsItem"
nillable="true" type="tns2:InteractiveReportsItem"/>
  </xs:sequence>
</xs:complexType>
```

InteractiveReportsItem: An **InteractiveReportsItem** element as defined in section [2.2.4.121](#).

2.2.4.118 **ArrayOfScenarioThrottlingInformation**

Namespace: http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server

MUST NOT be used.

```
<xs:complexType name="ArrayOfScenarioThrottlingInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ScenarioThrottlingInformation"
nillable="true" type="tns:ScenarioThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
```

ScenarioThrottlingInformation: MUST NOT be used.

2.2.4.119 **ArrayOfScenarioThrottlingInformation**

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

MUST NOT be used.

```
<xs:complexType name="ArrayOfScenarioThrottlingInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ScenarioThrottlingInformation"
nillable="true" type="tns2:ScenarioThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
```

ScenarioThrottlingInformation: MUST NOT be used.

2.2.4.120 ArrayOfstring

Namespace: http://schemas.microsoft.com/2003/10/Serialization/Arrays

The **ArrayOfstring** type specifies an array of string elements.

```
<xs:complexType name="ArrayOfstring" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="string" nillable="true"
type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

string: A string value.

2.2.4.121 InteractiveReportsItem

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **InteractiveReportsItem** type specifies an **interactive report** item.

```
<xs:complexType name="InteractiveReportsItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SlideId" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Name: The name to identify an interactive report.

SlideId: The ID of slide in an interactive report that uses the connection.

2.2.4.122 RestInteractiveReportsListRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **RestInteractiveReportsListRequest** type specifies the parameters for a list of **interactive reports** to be returned by the protocol server.

```
<xs:complexType name="RestInteractiveReportsListRequest"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest"/>
  </xs:complexContent>
</xs:complexType>
```

2.2.4.123 RestInteractiveReportsListResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **RestInteractiveReportsListResult** type specifies a list of **interactive reports** returned by the protocol server.

```
<xs:complexType name="RestInteractiveReportsListResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="InteractiveReportsList"
type="tns2:ArrayOfInteractiveReportsItem"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

InteractiveReportsList: A list of interactive reports.

2.2.4.124 RestInteractiveReportsStoreRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestInteractiveReportsStoreRequest** type specifies the parameters for an **interactive report** store to be returned by the protocol server.

```
<xs:complexType name="RestInteractiveReportsStoreRequest"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ConnectionsOnly" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ConnectionsOnly: Indicates whether the protocol server needs to return full information about the interactive report. MUST be one of the following values:

- If the protocol client specifies the **connectionsOnly** as true, the protocol server MUST only return information regarding the **data connections (2)** used by the interactive report in the workbook.
- If the protocol client specifies the **connectionOnly** as false, the protocol server MUST return all available information regarding the interactive report contained in the workbook.

2.2.4.125 RestInteractiveReportsStoreResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestInteractiveReportsStoreResult** type specifies the information about the **interactive report** returned by protocol server.

```
<xs:complexType name="RestInteractiveReportsStoreResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="InteractiveReportInfo"
type="tns2:InteractiveReportInfo"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

InteractiveReportInfo: Information about the interactive report contained in the workbook.

2.2.4.126 ScenarioThrottlingInformation

Namespace: <http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server>

MUST NOT be used.

```

<xs:complexType name="ScenarioThrottlingInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="CpuUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="MemoryUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="Scenario" nillable="true" type="xs:string"/>
    <xs:element xmlns:q1="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
minOccurs="0" name="SubscriberList" nillable="true" type="q1:ArrayOfstring"/>
  </xs:sequence>
</xs:complexType>

```

CpuUsage: MUST NOT be used.

MemoryUsage: MUST NOT be used.

Scenario: MUST NOT be used.

SubscriberList: MUST NOT be used.

2.2.4.127 ScenarioThrottlingInformation

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

MUST NOT be used.

```

<xs:complexType name="ScenarioThrottlingInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Scenario" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MemoryUsage" type="xs:long"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CpuUsage" type="xs:long"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SubscriberList" type="tns2:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>

```

Scenario: MUST NOT be used.

MemoryUsage: MUST NOT be used.

CpuUsage: MUST NOT be used.

SubscriberList: MUST NOT be used.

2.2.4.128 ServerThrottlingInformation

Namespace: http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server

MUST NOT be used.

```
<xs:complexType name="ServerThrottlingInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="CpuUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="MemoryUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="ScenarioThrottlingInformationList" nillable="true"
type="tns:ArrayOfScenarioThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
```

CpuUsage: MUST NOT be used.

MemoryUsage: MUST NOT be used.

ScenarioThrottlingInformationList: MUST NOT be used.

2.2.4.129 ServerThrottlingInformation

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

MUST NOT be used.

```
<xs:complexType name="ServerThrottlingInformation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="MemoryUsage" type="xs:long"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CpuUsage" type="xs:long"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScenarioThrottlingInformationList"
type="tns2:ArrayOfScenarioThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
```

MemoryUsage: MUST NOT be used.

CpuUsage: MUST NOT be used.

ScenarioThrottlingInformationList: MUST NOT be used.

2.2.4.130 ArrayOfObjectStateResultColumn

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ArrayOfObjectStateResultColumn** type specifies an array of **ObjectStateResultColumn** elements.

```
<xs:complexType name="ArrayOfObjectStateResultColumn"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ObjectStateResultColumn"
nillable="true" type="tns2:ObjectStateResultColumn"/>
  </xs:sequence>
```

```
</xs:complexType>
```

ObjectStateResultColumn: An **ObjectStateResultColumn** element as defined in section [2.2.4.132](#).

2.2.4.131 ObjectStateResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ObjectStateResult** type specifies information about an object state returned by protocol server.

```
<xs:complexType name="ObjectStateResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="IsAscending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSortable" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ColumnId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortBy" type="tns2:SortByType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayNames" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UniqueNames" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MeasureName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TableColumns"
type="tns2:ArrayOfObjectStateResultColumn"/>
  </xs:sequence>
</xs:complexType>
```

IsAscending: A boolean value to identify ascending order. MUST be **true** if the values are in ascending order, and **false** otherwise.

IsSortable: A boolean value to identify column sortability. MUST be **true** if the column can be sorted, and **false** otherwise.

ColumnId: The 0-based integer to identify a column.

SortBy: The types of sort operation.

DisplayNames: An array of column display names.

UniqueNames: An array of unique column names.

MeasureName: The name to identify an **OLAP measure**.

TableColumns: An **ArrayOfObjectStateResultColumn** element as defined in section [2.2.4.130](#).

2.2.4.132 ObjectStateResultColumn

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ObjectStateResultColumn** type specifies column information about object state return by the protocol server.

```
<xs:complexType name="ObjectStateResultColumn" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Hidden" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SingleItem" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LevelId" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="IdList" type="tns2:ArrayOfInt"/>
  </xs:sequence>
</xs:complexType>
```

```

    <xs:element minOccurs="1" maxOccurs="1" name="ColumnId" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

DisplayName: The display name of a column.

UniqueName: The unique name to identify a column.

Hidden: A boolean value to determine column visibility. MUST be **true** if the column is hidden, and **false** otherwise.

SingleItem: A boolean value to identify whether it is a single item. MUST be **true** if the column is a single item, and **false** otherwise

LevelId: The ID of hierarchy level.

IdList: An array of integers.

ColumnId: The 0-based integer to identify a column.

2.2.4.133 RestObjectStateGetRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestObjectStateGetRequest** type specifies the parameters for the object state to be returned by the protocol server.

```

<xs:complexType name="RestObjectStateGetRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="IsGetAll" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsGetRowSortState" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsGetColumns" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

IsGetAll: A boolean value to identify whether to get all rows and columns.

IsGetRowSortState: A boolean value to identify whether to get sort state on rows. If **true**, the protocol server MUST return the sort state on rows. If **false**, the protocol client MUST ignore the sort state returned by the server.

IsGetColumns: A boolean value to identify whether to get columns.

If **IsGetAll** is set to **true**:

- **IsGetColumns** MUST be ignored by the protocol server.

If **IsGetAll** is **false**:

- If **IsGetColumns** is **true**, the protocol server MUST return all columns.
- If **IsGetColumns** is **false**, the protocol server MUST NOT return any columns.

2.2.4.134 RestObjectStateRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestObjectStateRequest** type specifies the parameters for a rest object state to be returned by protocol server.

```
<xs:complexType name="RestObjectStateRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ObjType" type="tns2:NamedObjectType"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SetRowSortRequest"
type="tns2:RestObjectStateSetRowSortRequest"/>
        <xs:element minOccurs="0" maxOccurs="1" name="GetRequest"
type="tns2:RestObjectStateGetRequest"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Name: A string value to identify a rest object state.

ObjType: The type of object state.

SetRowSortRequest: A request to sort on rows.

GetRequest: A request for rest object state.

2.2.4.135 RestObjectStateResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestObjectStateResult** type specifies information about state operation options of a rest object.

```
<xs:complexType name="RestObjectStateResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ObjectStateResult"
type="tns2:ObjectStateResult"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ObjectStateResult: An **ObjectStateResult** element as defined in section [2.2.4.131](#).

2.2.4.136 RestObjectStateSetRowSortRequest

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RestObjectStateSetRowSortRequest** type specifies parameters for a rest object row sort state to be returned by the protocol server.

```
<xs:complexType name="RestObjectStateSetRowSortRequest"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="IsAscending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortBy" type="tns2:StateSortBy"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ColumnID" type="xs:int"/>
  </xs:sequence>
```

```
</xs:sequence>
</xs:complexType>
```

IsAscending: A boolean value to identify ascending order.

SortBy: The type of sort operation.

ColumnID: A zero-based integer to identify a column.

2.2.5 Simple Types

The following table summarizes the set of common **XML schema** simple type definitions defined by this specification. XML schema simple type definitions that are specific to a particular operation are described with the operation.

Simple type	Description
AutoFilterCriteriaType	Specifies how data is to be filtered by the protocol server when using the AutoFilterOptions complex type (section 2.2.4.14).
AutoFilterDateNodeType	Specifies how AutoFilter dates data is filtered by the protocol server when using the AutoFilterDateNodeInfo (section 2.2.4.13).
AutoFilterOperationType	Used to instruct the protocol server which comparison method to use when filtering worksheets or tables . All data that is being filtered is compared to the Value element in the AutoFilterCriteria complex type (section 2.2.4.12).
AutoFilterRelationOperator	Specifies the relationship between an AutoFilterCriteria element (section 2.2.4.12) contained in an ArrayOfAutoFilterCriteria (section 2.2.4.2) and the one that potentially follows it.
CommandParameterFlags	Specifies various options to modify the behavior of operations.
DdaBindingType	Type of Office Web Extension binding.
DdaCoerceType	Describes the data format of a result from a Document Data Access method.
DdaFilterType	Specifies which type of cells the Document Data Access is applied to.
DdaValueType	The type of cell data used in the operation.
ExcelServerFeature	Represents a collection of features that is implemented by the protocol server or client.
ExcelServerMessageAppearance	Specifies the control buttons associated with an alert that the protocol server returns to the protocol client. The list MUST contain either only the value OK or the both the values Yes and No .
ExcelServerMessageAppearance	Specifies a list of enumeration values corresponding to either control buttons or a Message Bar notification , which is associated with an alert that the protocol server returns to the protocol client. The list MUST contain one of the following: <ul style="list-style-type: none"> ▪ OK ▪ Notification ▪ Both Yes and No

Simple type	Description
	<ul style="list-style-type: none"> Both Notification and OK
ExcelServerMessageId	The ExcelServerMessageId type is an enumeration of alerts returned from the protocol server.
ExcelServerMessageId	The ExcelServerMessageId type is an enumeration of values, each of which corresponds to a particular alert that is passed between the protocol client and the protocol server.
ExcelServerMessageSeverity	Specifies the severity of the alert that the protocol server returns to the protocol client.
ExcelServerMessageSeverity	Specifies the severity of the alert that the protocol server returns to the protocol client.
ExcelServerMessageType	Specifies type of the alert that the protocol server returns to the protocol client.
ExcelServerMessageType	Specifies the type of the alert that the protocol server returns to the protocol client.
GridRenderingOptions	Specifies options to use when rendering a Workbook ([MS-EXSPXML3] section 2.1.1).
guid	Specifies a GUID value, as specified in [RFC4122] .
ImageRenderingOptions	Specifies the options to use when rendering an image or chart.
NamedObjectType	Specifies the type of a published item .
OpenWorkbookFlags	Control flags for OpenWorkbook .
PivotFilterType	<p>The PivotFilterType is an enumeration of types of PivotTable filters that can be applied on a PivotTable field. The following types of PivotTable filters are supported:</p> <ul style="list-style-type: none"> Top N filter or bottom N filter PivotTable custom label filter PivotTable custom value filter
RangeReference	A string that is used by the protocol server to identify a range on a worksheet in a workbook , in operations specified by this protocol. MUST NOT be longer than 32,768 characters. MAY <8> use any format to identify the range.
ResourceThrottlingScenario	MUST NOT be used.
RestSlicerSelectionMode	Indicates the behavior to follow when updating the state of the slicer selection.
RestTimelineLevel	Indicates the granularity of the time period in a timeline.
RestTimelineSelectionState	Indicates the selection mode for filtering a timeline.
ScenarioRestrictions	Indicates the scenarios which apply to the current request.
ServerStateFlags	Specifies the state of the protocol server.

Simple type	Description
ServerStateFlags	An enumeration specifying the state of the protocol server.
SessionIdentifier	<p>The SessionIdentifier string is used to uniquely identify a session (2) on the protocol server, and to contain information about the session (2).</p> <p>The SessionIdentifier MUST have the following layout. (Numeric values in parts 1, 3, 5, 6, 8, 10, and 12 MUST follow the s:integer type representation.)</p> <ul style="list-style-type: none"> ▪ Part 1: MUST be the value 1, followed by a period (.). ▪ Part 2: MUST be "E" if the identified session (2) is an edit session. MUST be "G" if the identified session (2) is a new workbook session created by GenerateWorkbookFromHtml (section 3.1.4.50). Otherwise, MUST be "V". ▪ Part 3: The number of characters in part 4, followed by a period (.). ▪ Part 4: A unique string. MUST be greater than or equal to 20 and less than or equal to 32,647 characters long. ▪ Part 5: The sum of number of characters in parts 6-9, followed by a period (.). ▪ Part 6: The number of characters in part 7, followed by a period (.). ▪ Part 7: The UI culture of the session (2). A language tag, as specified in [RFC1766], Section 2. ▪ Part 8: The number of characters in part 9, followed by a period (.). ▪ Part 9: The data culture of the session (2). A language tag, as specified in [RFC1766], Section 2. ▪ Part 10: The number of characters in part 11, followed by a period (.). ▪ Part 11: MUST be equal to the value of RequestSiteId passed in parameter, in the OpenWorkbook operation. ▪ Part 12: The number of characters in part 13, followed by a period (.). ▪ Part 13: If the identified session (2) is a new workbook session created by GenerateWorkbookFromHtml, MUST be the trusted location of the new workbook session. Else if the identified session (2) is any other new workbook session, then MUST be "U". <p>Otherwise, if the identified session (2) is not an edit session, MUST be "N". If the identified session (2) is an edit session, MUST be a unique string. The protocol server uses this string to uniquely identify a participant in the session.</p>
SharedPivotMenuAnchorType	Type information about a PivotTable or PivotTable anchor.
SheetFlags	Describes options for a sheet (1) .
SheetType	Indicates the type of a sheet (1).
SheetVisibility	Indicates the visibility state of a sheet (2).
SlicerOptionsBits	Specifies options for operations on slicers.
SortByType	Indicates the type of a sort operation.

Simple type	Description
StateSortBy	Indicates the state of a sort operation.
Top10FilterType	The Top10FilterType type is an enumeration that specifies the type of top N filter or bottom N filter that is applied to a PivotTable field.
UndoRedoEnabledState	Indicates the current enabled state of undo and redo operations.
WorkbookType	The WorkbookType simple type is an enumeration that is used to specify the form of the requested workbook.

2.2.5.1 AutoFilterCriteriaType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies how data is to be filtered by the protocol server when using the **AutoFilterOptions** complex type (section [2.2.4.14](#)).

Each enumeration value falls under one of three categories shown in the following table. The category that MUST be used is determined by the **CT_item** element, as specified in [\[MS-EXSPXML3\]](#) section 2.3.18.

Category	Meaning
Agnostic	Enumeration values falling under the Agnostic category can always be passed to the protocol server.
Numeric	Enumeration values falling under the Numeric category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML3] section 2.3.18, either missing or containing the string "Number".
Calendar	Enumeration values falling under the Calendar category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML3] section 2.3.18, containing the string "Date".

```
<xs:simpleType name="AutoFilterCriteriaType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Nil"/>
    <xs:enumeration value="AboveAverage"/>
    <xs:enumeration value="BelowAverage"/>
    <xs:enumeration value="Tomorrow"/>
    <xs:enumeration value="Today"/>
    <xs:enumeration value="Yesterday"/>
    <xs:enumeration value="NextWeek"/>
    <xs:enumeration value="ThisWeek"/>
    <xs:enumeration value="LastWeek"/>
    <xs:enumeration value="NextMonth"/>
    <xs:enumeration value="ThisMonth"/>
    <xs:enumeration value="LastMonth"/>
    <xs:enumeration value="NextQuarter"/>
    <xs:enumeration value="ThisQuarter"/>
    <xs:enumeration value="LastQuarter"/>
    <xs:enumeration value="NextYear"/>
    <xs:enumeration value="ThisYear"/>
    <xs:enumeration value="LastYear"/>
    <xs:enumeration value="YearToDate"/>
    <xs:enumeration value="Q1"/>
  </xs:restriction>
</xs:simpleType>
```



```

<xs:enumeration value="Q2"/>
<xs:enumeration value="Q3"/>
<xs:enumeration value="Q4"/>
<xs:enumeration value="M1"/>
<xs:enumeration value="M2"/>
<xs:enumeration value="M3"/>
<xs:enumeration value="M4"/>
<xs:enumeration value="M5"/>
<xs:enumeration value="M6"/>
<xs:enumeration value="M7"/>
<xs:enumeration value="M8"/>
<xs:enumeration value="M9"/>
<xs:enumeration value="M10"/>
<xs:enumeration value="M11"/>
<xs:enumeration value="M12"/>
<xs:enumeration value="LastCount"/>
</xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **AutoFilterCriteriaType** simple type.

Value	Meaning
Nil	MUST be used when the Criteria element of the AutoFilterOptions is present. Otherwise, MUST NOT be present. Category: Agnostic.
AboveAverage	Filters all numeric values that are greater than the average of the numeric values being filtered. Category: Numeric.
BelowAverage	Filters all numeric values that are less than the average of the numeric values being filtered. Category: Numeric.
Tomorrow	Filters all date values that are set to tomorrow's date. Category: Calendar.
Today	Filters all date values that are set to today's date. Category: Calendar.
Yesterday	Filters all date values that are set to yesterday's date. Category: Calendar.
NextWeek	Filters all date values that fall within next week. Category: Calendar.
ThisWeek	Filters all date values that fall within this week. Category: Calendar.
LastWeek	Filters all date values that fall within last week. Category: Calendar.
NextMonth	Filters all date values that fall within next month. Category: Calendar.
ThisMonth	Filters all date values that fall within this month. Category: Calendar.
LastMonth	Filters all date values that fall within last month. Category: Calendar.
NextQuarter	Filters all date values that fall within the next quarter. Category: Calendar.
ThisQuarter	Filters all date values that fall within this quarter. Category: Calendar.
LastQuarter	Filters all date values that fall within the last quarter. Category: Calendar.
NextYear	Filters all date values that fall within next year. Category: Calendar.
ThisYear	Filters all date values that fall within this year. Category: Calendar.
LastYear	Filters all date values that fall within the last year. Category: Calendar.
YearToDate	Filters all date values that occurred between the beginning of the year and up to and including the current date. Category: Calendar.

Value	Meaning
Q1	Filters all date values that fall within the first quarter of a year. Category: Calendar.
Q2	Filters all date values that fall the second quarter of a year. Category: Calendar.
Q3	Filters all date values that fall within the third quarter of a year. Category: Calendar.
Q4	Filters all date values that fall within the fourth quarter of a year. Category: Calendar.
M1	Filters all date values that fall within the first month of a year. Category: Calendar.
M2	Filters all date values that fall within the second month of a year. Category: Calendar.
M3	Filters all date values that fall within the third month of a year. Category: Calendar.
M4	Filters all date values that fall within the fourth month of a year. Category: Calendar.
M5	Filters all date values that fall within the fifth month of a year. Category: Calendar.
M6	Filters all date values that fall within the sixth month of a year. Category: Calendar.
M7	Filters all date values that fall within the seventh month of a year. Category: Calendar.
M8	Filters all date values that fall within the eighth month of a year. Category: Calendar.
M9	Filters all date values that fall within the ninth month of a year. Category: Calendar.
M10	Filters all date values that fall within the tenth month of a year. Category: Calendar.
M11	Filters all date values that fall within the eleventh month of a year. Category: Calendar.
M12	Filters all date values that fall within the twelfth month of a year. Category: Calendar.
LastCount	MUST NOT be used.

2.2.5.2 AutoFilterDateNodeType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies how **AutoFilter** dates data is filtered by the protocol server when using the **AutoFilterDateNodeInfo** (section [2.2.4.13](#)).

```
<xs:simpleType name="AutoFilterDateNodeType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Nil"/>
    <xs:enumeration value="Year"/>
    <xs:enumeration value="Month"/>
    <xs:enumeration value="Day"/>
    <xs:enumeration value="Hour"/>
    <xs:enumeration value="Minute"/>
    <xs:enumeration value="Second"/>
    <xs:enumeration value="Max"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AutoFilterDateNodeType** simple type.

Value	Meaning
Nil	Specifies that the value in AutoFilterDateNodeInfo is excluded from the filtered values of the AutoFilter .
Year	Specifies that the Year element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Month	Specifies that the Month element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Day	Specifies that the Day element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Hour	Specifies that the Hour element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Minute	Specifies that the Minute element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Second	Specifies that the Second element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Max	MUST NOT be used.

2.2.5.3 AutoFilterOperationType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Used to instruct the protocol server which comparison method to use when filtering **worksheets** or **tables**. All data that is being filtered is compared to the **Value** element in the **AutoFilterCriteria** complex type (section [2.2.4.12](#)).

```
<xs:simpleType name="AutoFilterOperationType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="EQ"/>
    <xs:enumeration value="NEQ"/>
    <xs:enumeration value="GT"/>
    <xs:enumeration value="GTEQ"/>
    <xs:enumeration value="LT"/>
    <xs:enumeration value="LTEQ"/>
    <xs:enumeration value="LastCount"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AutoFilterOperationType** simple type.

Value	Meaning
EQ	Filter all data that is equal to the value.
NEQ	Filter all data that is not equal to the value.
GT	Filter all data that is greater than the value.
GTEQ	Filter all data that is either greater than or equal to the value.
LT	Filter all data that is less than the value.

Value	Meaning
LTEQ	Filter all data that is less than or equal to the value.
LastCount	MUST NOT be used.

2.2.5.4 AutoFilterRelationOperator

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the relationship between an **AutoFilterCriteria** element (section [2.2.4.12](#)) contained in an **ArrayOfAutoFilterCriteria** (section [2.2.4.2](#)) and the one that potentially follows it.

```
<xs:simpleType name="AutoFilterRelationOperator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Nil"/>
    <xs:enumeration value="And"/>
    <xs:enumeration value="Or"/>
    <xs:enumeration value="LastCount"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AutoFilterRelationOperator** simple type.

Value	Meaning
Nil	See the Relation element in the AutoFilterCriteria section.
And	See the Relation element in the AutoFilterCriteria section. The protocol server will satisfy the conditions specified both in the AutoFilterCriteria that contains this value and in the one coming after it in the ArrayOfAutoFilterCriteria .
Or	See the Relation element in the AutoFilterCriteria section. The protocol server will satisfy the conditions specified in the AutoFilterCriteria that contains this value or in the one coming after it in the ArrayOfAutoFilterCriteria .
LastCount	MUST NOT be used.

2.2.5.5 CommandParameterFlags

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies various options to modify the behavior of operations.

```
<xs:simpleType name="CommandParameterFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ForceOneTimeRecalc"/>
        <xs:enumeration value="SuppressOneTimeRecalc"/>
        <xs:enumeration value="LogCpuTime"/>
        <xs:enumeration value="IsObjectModel"/>
        <xs:enumeration value="WantServerEvents"/>
        <xs:enumeration value="CanRegenerate"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

    <xs:enumeration value="DoesNotCreatePrivateWorkbook"/>
    <xs:enumeration value="ConfirmationChoiceTrue"/>
  </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **CommandParameterFlags** simple type.

Value	Meaning
ForceOneTimeRecalc	If the current operation is a state changing operation the protocol server will calculate the workbook before returning the response.
SuppressOneTimeRecalc	The protocol server will not calculate the workbook before returning the response for the current operation.
LogCpuTime	MUST be ignored by the protocol server.
IsObjectModel	The protocol server allows editing of the workbook if the user has permissions to edit the workbook.
WantServerEvents	Specifies whether the protocol client receives information about server events that occurred during the processing of the command from the protocol server. If set, the protocol client MUST receive information about server events if they occurred during processing. If not set, the protocol client MUST NOT receive information about server events.
CanRegenerate	Specifies that if the current session (2) is created from GenerateWorkbookFromHtml and it times out that the protocol server MUST set the Id value of the ExcelServerMessage returned to the protocol client to either GeneratedWorkbookSessionTimeoutRecoverable or GeneratedWorkbookSessionTimeoutRegenerate . If not set, then if the current session (2) is created from GenerateWorkbookFromHtml and it times out, the protocol server MUST set the Id value of the ExcelServerMessage returned to the protocol client to either GeneratedWorkbookSessionTimeoutRecoverable or GeneratedWorkbookSessionTimeoutNonRecoverable . If the current session (2) is not created from GenerateWorkbookFromHtml , the protocol client MUST NOT set this value.
DoesNotCreatePrivateWorkbook	MUST NOT be used.
ConfirmationChoiceTrue	The external data refresh confirmation choice is true. See Confirmation .

2.2.5.6 DdaBindingType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Type of Office Web Extension binding.

```

<xs:simpleType name="DdaBindingType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Unknown"/>
    <xs:enumeration value="None"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="Text"/>
    <xs:enumeration value="Matrix"/>
  </xs:restriction>

```

</xs:simpleType>

The following table specifies the allowable values for the **DdaBindingType** simple type.

Value	Meaning
Unknown	Represents a valid but unknown binding type.
None	Represents an uninitialized or invalid binding type.
Table	Represents an Excel table object.
Text	Represents a single cell's value.
Matrix	Represents a range in a worksheet.

2.2.5.7 DdaCoerceType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Describes the data format of a result from a Document Data Access method.

```
<xs:simpleType name="DdaCoerceType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="Text"/>
    <xs:enumeration value="Matrix"/>
    <xs:enumeration value="Html"/>
    <xs:enumeration value="Ooxml"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **DdaCoerceType** simple type.

Value	Meaning
None	Represents an uninitialized or invalid coerce type.
Table	Result in the format of a table with a header row and cell data.
Text	Result in the format of a single string of text.
Matrix	Result in the format of cell data matrix.
Html	MUST NOT be used.
Ooxml	MUST NOT be used.

2.2.5.8 DdaFilterType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies which type of cells the Document Data Access is applied to.

```
<xs:simpleType name="DdaFilterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="None"/>  
    <xs:enumeration value="All"/>  
    <xs:enumeration value="OnlyVisible"/>  
  </xs:restriction>  
</xs:simpleType>
```

The following table specifies the allowable values for the **DdaFilterType** simple type.

Value	Meaning
None	Represents an uninitialized or invalid filter type.
All	All cells included in the operation.
OnlyVisible	Hidden cells are omitted from the operation.

2.2.5.9 DdaValueType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The type of cell data used in the operation.

```
<xs:simpleType name="DdaValueType" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="None"/>  
    <xs:enumeration value="Formatted"/>  
    <xs:enumeration value="Unformatted"/>  
  </xs:restriction>  
</xs:simpleType>
```

The following table specifies the allowable values for the **DdaValueType** simple type.

Value	Meaning
None	Represents an uninitialized or invalid filter type.
Formatted	Use the formatted value and string type of a cell.
Unformatted	Use the unformatted value and type of a cell.

2.2.5.10 ExcelServerFeature

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Represents a collection of features that is implemented by the protocol server or client.

```
<xs:simpleType name="ExcelServerFeature" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:list>
```

```

<xs:simpleType>
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="GetImageAllowSize"/>
    <xs:enumeration value="RestApi"/>
    <xs:enumeration value="ExternalData"/>
    <xs:enumeration value="LoadBIFF8"/>
    <xs:enumeration value="Editing"/>
    <xs:enumeration value="CancelableOperations"/>
    <xs:enumeration value="JSOM"/>
    <xs:enumeration value="API"/>
    <xs:enumeration value="ResourceThrottling"/>
    <xs:enumeration value="CancelableRefresh"/>
    <xs:enumeration value="NeedsSignOutChecking"/>
    <xs:enumeration value="Evaluation"/>
    <xs:enumeration value="WebPart"/>
    <xs:enumeration value="DataCenterUpgrade"/>
    <xs:enumeration value="ViewingComments"/>
    <xs:enumeration value="WorkbookConversion"/>
    <xs:enumeration value="ShowBrandingInApp"/>
    <xs:enumeration value="AdControl"/>
    <xs:enumeration value="OfficeTrialOffer"/>
    <xs:enumeration value="OfficeForMacTrial"/>
    <xs:enumeration value="UnsupportedBrowserBusinessBar"/>
    <xs:enumeration value="EditByDefault"/>
    <xs:enumeration value="AlwaysShowDownloadToExcel"/>
    <xs:enumeration value="ShowEmbedBrandingUI"/>
    <xs:enumeration value="CrossDocumentMessengerDisabled"/>
    <xs:enumeration value="UnattendedAccount"/>
    <xs:enumeration value="ExcelEverywhere"/>
    <xs:enumeration value="NormalizeUrl"/>
    <xs:enumeration value="StatusBar"/>
    <xs:enumeration value="BIExplore"/>
    <xs:enumeration value="O15PivotInteractions"/>
    <xs:enumeration value="InteractiveReport"/>
    <xs:enumeration value="RoamingAppsAreEnabled"/>
    <xs:enumeration value="OdcFiles"/>
    <xs:enumeration value="WorkbookAsDataSource"/>
    <xs:enumeration value="WindowsDelegation"/>
    <xs:enumeration value="CurrentUserId"/>
    <xs:enumeration value="DataModel"/>
    <xs:enumeration value="DataModelRefresh"/>
    <xs:enumeration value="ResourceThrottlingScenario"/>
    <xs:enumeration value="ShowAgaveTaskPanelsWebPartProperty"/>
    <xs:enumeration value="DownloadSnapshot"/>
    <xs:enumeration value="CloudBISupport"/>
    <xs:enumeration value="InteractiveReportRoundtrip"/>
  </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **ExcelServerFeature** simple type.

Value	Meaning
None	Represents an empty set.
GetImageAllowSize	MUST always be set.
RestApi	MUST always be set.
ExternalData	MUST always be set.
LoadBIFF8	MUST NOT be used.

Value	Meaning
Editing	Set if the protocol server and client both support editing workbooks.
CancelableOperations	Set if the protocol server and client both support operations that can be cancelled.
JSOM	MUST always be set.
API	MUST always be set.
ResourceThrottling	MUST NOT be used.
CancelableRefresh	Set if the protocol server and client both support data refresh operations that can be cancelled.
NeedsSignOutChecking	MUST NOT be used.
Evaluation	MUST always be set.
WebPart	MUST always be set.
DataCenterUpgrade	MUST NOT be used.
ViewingComments	MUST always be set.
WorkbookConversion	Set if the protocol server supports converting workbooks from the Excel binary file format.
ShowBrandingInApp	MUST NOT be used.
AdControl	MUST NOT be used.
OfficeTrialOffer	MUST NOT be used.
OfficeForMacTrial	MUST NOT be used.
UnsupportedBrowserBusinessBar	MUST NOT be used.
EditByDefault	MUST NOT be used.
AlwaysShowDownloadToExcel	MUST always be set.
ShowEmbedBrandingUI	MUST NOT be used.
CrossDocumentMessengerDisabled	MUST NOT be used.
UnattendedAccount	MUST always be set.
ExcelEverywhere	MUST NOT be used.
NormalizeUrl	MUST always be set.
StatusBar	MUST always be set.
BIExplore	MUST always be set.
O15PivotInteractions	MUST always be set.
InteractiveReport	MUST always be set.
RoamingAppsAreEnabled	MUST NOT be used.
OdcFiles	MUST always be set.

Value	Meaning
WorkbookAsDataSource	MUST always be set.
WindowsDelegation	MUST always be set.
CurrentUserId	MUST always be set.
DataModel	MUST always be set.
DataModelRefresh	MUST always be set.
ResourceThrottlingScenario	Must NOT be used.
ShowAgaveTaskPanelsWebPartProperty	MUST always be set.
DownloadSnapshot	MUST always be set.
CloudBISupport	MUST NOT be used.
InteractiveReportRoundtrip	MUST always be set.

2.2.5.11 ExcelServerMessageAppearance

Namespace: <http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server>

Specifies the **control buttons** associated with an **alert** that the protocol server returns to the protocol client. The list MUST contain either only the value **OK** or the both the values **Yes** and **No**.

```
<xs:simpleType name="ExcelServerMessageAppearance"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="OK"/>
        <xs:enumeration value="Cancel"/>
        <xs:enumeration value="Yes"/>
        <xs:enumeration value="No"/>
        <xs:enumeration value="Notification"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServerMessageAppearance** simple type.

Value	Meaning
None	MUST NOT be used.
OK	An OK control button.
Cancel	MUST NOT be used.
Yes	A Yes control button.
No	A No control button.

Value	Meaning
Notification	MUST NOT be used.

2.2.5.12 ExcelServerMessageAppearance

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies a list of enumeration values corresponding to either **control buttons** or a **Message Bar notification**, which is associated with an **alert** that the protocol server returns to the protocol client. The list MUST contain one of the following:

- **OK**
- **Notification**
- Both **Yes** and **No**
- Both **Notification** and **OK**

```
<xs:simpleType name="ExcelServerMessageAppearance"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="OK"/>
        <xs:enumeration value="Cancel"/>
        <xs:enumeration value="Yes"/>
        <xs:enumeration value="No"/>
        <xs:enumeration value="Notification"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServerMessageAppearance** simple type.

Value	Meaning
None	MUST NOT be used.
OK	An OK control button.
Cancel	MUST NOT be used.
Yes	A Yes control button.
No	A No control button.
Notification	A Message Bar notification.

2.2.5.13 ExcelServerMessageId

Namespace: http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server

The **ExcelServerMessageId** type is an enumeration of **alerts** returned from the protocol server.

```
<xs:simpleType name="ExcelServerMessageId" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Blank"/>
    <xs:enumeration value="InternalError"/>
    <xs:enumeration value="NotMemberOfRole"/>
    <xs:enumeration value="EncryptionTooLow"/>
    <xs:enumeration value="ConfirmDataRefresh"/>
    <xs:enumeration value="ExternalDataRefreshFailed"/>
    <xs:enumeration value="ExternalDataRefreshFailedReal"/>
    <xs:enumeration value="ExternalDataRefreshFailedReadOrViewOnly"/>
    <xs:enumeration value="NoAccessToOdcReadOrViewOnly"/>
    <xs:enumeration value="ErrorConnectingToDataSourceReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPasswordReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPassword"/>
    <xs:enumeration value="ExternalDataNotAllowedOnTL"/>
    <xs:enumeration value="InvalidUriorLocalConnectionPath"/>
    <xs:enumeration value="DclNotTrusted"/>
    <xs:enumeration value="OdcFileDoesNotExist"/>
    <xs:enumeration value="OdcNotSupported"/>
    <xs:enumeration value="ErrorAccessingSsoFromEcs"/>
    <xs:enumeration value="SsoError"/>
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    <xs:enumeration value="DataSetAxisTooBig"/>
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    <xs:enumeration value="DdlGrpNotSup"/>
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    <xs:enumeration value="PivotSourceNotAvailable"/>
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    <xs:enumeration value="EditModeCannotAcquireLockUnknownUser"/>
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</xs:simpleType>
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<xs:enumeration value="EditModeWorkbookCheckedOutToLocalDrafts"/>
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```

```

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<xs:enumeration value="Mewa_CriticalParameterMissing"/>
<xs:enumeration value="Mewa_GridViewRenderingFailed"/>
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<xs:enumeration value="CannotMergeCellsInTable"/>
<xs:enumeration value="MergeCellsLoseData"/>
<xs:enumeration value="CollabConflictError"/>

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<xs:enumeration value="OdfUnsupportedEncryption"/>
<xs:enumeration value="OdfUnreadableContentGeneric"/>
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<xs:enumeration value="XLSPreBiff8Failure"/>
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```



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<xs:enumeration value="JsomBrowserUdfsCanceled"/>
<xs:enumeration value="JsomBrowserUdfsRecalcFailed"/>
<xs:enumeration value="AccessTokenExpiringWarning"/>
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<xs:enumeration value="CloneWorkbookAllSheetsInteractiveReports"/>
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</xs:simpleType>

```

The following table specifies the allowable values for the **ExcelServerMessageId** simple type.

Value	Meaning
Blank	MUST NOT be used.
InternalError	An unexpected error occurred in the protocol server.
NotMemberOfRole	The user does not have permissions to complete the operation.
EncryptionTooLow	The protocol server is configured to accept only HTTPS connection, and the protocol client has tried to connect with a non-HTTPS connection.
ConfirmDataRefresh	A connected data refresh confirmation is requested by the protocol client before connected data refresh on a workbook .
ExternalDataRefreshFailed	Connected data refresh failed.
ExternalDataRefreshFailedReal	Connected data refresh failed.
ExternalDataRefreshFailedReadOnly	Connected data refresh failed.
NoAccessToOdcReadOnly	Connected data refresh failed.
ErrorConnectingToDataSourceReadOnly	Connected data refresh failed.
InvalidUserNameOrPasswordReadOnly	Connected data refresh failed.
InvalidUserNameOrPassword	Connected data refresh failed.
ExternalDataNotAllowedOnTL	Connected data refresh failed.
InvalidUriLocalConnectionPath	Connected data refresh failed.
DclNotTrusted	Connected data refresh failed.
OdcFileDoesNotExist	Connected data refresh failed.
OdcNotSupported	Connected data refresh failed.
ErrorAccessingSsoFromEcs	Connected data refresh failed.
SsoError	Connected data refresh failed.
ErrorConnectingToDataSource	Connected data refresh failed.
UnattendedAccountNotConfigured	Connected data refresh failed.
IncorrectAuthUsed	Connected data refresh failed.

Value	Meaning
ExternalDataRefreshFailed_Details	Connected data refresh failed.
GenericModelFailure	The operation on the workbook data model failed.
ModelStreamingFailure	The workbook data model could not be loaded.
NoStreamingServers	A server to load the workbook data model could not be found.
LegacyModelError	Connected data refresh failed because the version of the workbook data model is not supported by the protocol server.
ConnectionChangeOutOfSync	Connected data refresh failed because the command text of the data connection in the workbook is different than the command text of the data connection in the workbook data model.
PivotNoOverlapAllowed	A PivotTable grew to the point where it would overlap another PivotTable.
PivotOverlapList	A PivotTable grew to the point where it would overlap a list .
PivotCubeNotUnique	An OLAP query found more than one cube of the same name.
NoDataItemsOlap	An OLAP query found nothing to display.
OlapSchemaFail	An OLAP query was unable to fetch the schema of the cube.
InvalidPivot	A PivotTable is not valid.
OlapNoMoreDetail	A PivotTable has reached the lowest level of detail.
DrillActionInvalid	A PivotTable member cannot be expanded any further.
DriverNotOlap	The database does not support OLAP.
CubeMissing	The OLAP query was unable to locate the cube in the database.
SkipLine	Not all data received from the OLAP query could be displayed.
CDimMismatch	The OLAP data provider returned an unexpected number of dimensions .
DataSetAxisTooBig	The row (2) or column (2) area of the PivotTable is too large.
CubeIntegrityError	There was a problem with the structure of the OLAP cube.
PivotNotExpandedtoProtectCellContents	The PivotTable would have filled worksheet cells that already contain values so the operation was canceled.
PivotTruncatedSheetEdge	The PivotTable was truncated by a worksheet edge.
DdlGrpNotSup	The PivotTable operation is not supported by the OLAP data provider.
PivotFormulasCollided	Some calculated PivotTable members were removed from

Value	Meaning
	the PivotTable because new PivotTable members of the same name appeared during refresh.
NoRetItems	The query of the PivotTable page field did not return any items.
OlapConnectVisualModeProvider	The PivotTable operation is not supported by the OLAP data provider.
PivotNoSourceData	The PivotTable was saved without the underlying data.
PivotFilteringError	The PivotTable could not be filtered.
PivotTableIncorrectDateFormat	The date used to filter the PivotTable is not valid.
PivotTableEndingLargerThanStarting	The pair of starting and ending values used to filter the PivotTable is not valid.
PivotTableIncorrectNumberFormat	A non-numeric value was used to filter the PivotTable, when a numeric value was required.
MergedCellOverlap	The PivotTable could not grow over part of a merged cell .
PivotSourceNotAvailable	The PivotTable could not be refreshed because its source is missing.
UnexpectedPivotError	The PivotTable has encountered an unexpected error.
EditModeCannotAcquireLockUnknownReason	An attempt to acquire or refresh a lock on a file failed.
EditModeCannotAcquireLock	An attempt to acquire or refresh a lock on a file failed because the file is already locked .
EditModeCannotAcquireLockUnknownUser	An attempt to acquire or refresh a lock on a file failed because the file is locked by an unknown user.
EditModeWorkbookCheckedOutRequired	An attempt to acquire or refresh a lock on a file failed because the file is not checked out .
EditModeWorkbookCheckedOutToLocalDrafts	An attempt to acquire or refresh a lock on a file failed because the file is checked out to a local drafts folder.
SiteTooBusy	MUST NOT be used.
SiteCollectionMemoryQuotaExceeded	MUST NOT be used.
SessionMemoryQuotaExceeded	MUST NOT be used.
SiteCollectionChartQuotaExceeded	MUST NOT be used.
RequestLimitsExceeded	Too many cells requested.
SavingUnsupportedInViewMode	An attempt was made to save a workbook from a view session .
SavingWorkbookNoWorkbookName	An attempt was made to save a workbook from a new workbook session .
FileSaveGeneric	The save operation failed.
SavingWorkbookInvalidPermissions	The user does not have permissions to save to the specified location.

Value	Meaning
SavingWorkbookLockedOrCheckedOut	An attempt to save a workbook failed because the file is locked or checked out.
SavingWorkbookNotCheckedOut	An attempt to save a workbook failed because the file is not checked out.
SavingWorkbookAccessDenied	An attempt to save a workbook failed because the user does not have permission to overwrite an existing file.
SavingWorkbookInvalidFileType	MUST NOT be used.
SavingWorkbookFileNameExists	An attempt to save a workbook failed because the file already exists and the option to overwrite existing files was not specified.
HostedSavingWorkbookFileNameExists	MUST NOT be used.
HostedSavingWorkbookInvalidFileName	MUST NOT be used.
SavingWorkbookNotTrustedLocation	An attempt to save a workbook failed because of the security settings on the protocol server.
SavingWorkbookInvalidLocation	An attempt to save a workbook failed because the specified file location is not valid.
SavingWorkbookInvalidFileName	An attempt to save a workbook failed because the specified file name is not valid.
SavingWorkbookTrustedLocationSettingWarning	An attempt to save a workbook failed because of the security settings on the protocol server.
SavingWorkbookAlmostTooLarge	MUST NOT be used.
SavingWorkbookTooLarge	MUST NOT be used.
NewWorkbookInvalidLocation	An attempt to create a new workbook failed because the specified location is not valid.
FileOpenSecuritySettings	Cannot open workbook because of security settings.
FileOpenNotFound	The specified workbook file does not exist.
FileOpenAccessDenied	The user does not have access to the workbook file.
FileCorrupt	The workbook file is in a format not recognized by the protocol server.
OpenWorkbookTooLarge	The protocol server failed to create a session (2) for a workbook because it is too large.
OpenWorkbookTooLargeNoUrl	The protocol server failed to create a session (2) for a workbook because it is too large.
OpenWorkbookLocationNotTrusted	The protocol server failed to create a session (2) for a workbook because of the security settings on the protocol server.
OpenWorkbookAccessDenied	The protocol server failed to create a session (2) for a workbook because the user does not have sufficient permissions.
WorkbookNotSupported	The protocol server failed to create a session (2) for this workbook because it has unsupported content.

Value	Meaning
WorkbookNotSupportedViewRight	The protocol server failed to create a session (2) for this workbook because it has unsupported content and the user does not have Open Item permission .
UnsupportedFeatureViewWarning	MUST NOT be used.
UnsupportedFeatureSaveCopyWarning	MUST NOT be used.
UnsupportedFeatureDownloadWarning	MUST NOT be used.
ExternalWorkbookLinksDisabled	MUST NOT be used.
WorkbookLockedRead	An attempt to open a workbook failed because a file lock prevents it from being read.
EditModeCannotEditNonSharePointWorkbook	An attempt to open an edit session failed because the file is not in a document library .
EditModeAccessDenied	An attempt to open a workbook in an edit session failed because the user does not have sufficient permissions to edit the workbook file .
GenericFileOpenError	An unspecified error occurred when opening the workbook file.
IRMedWorkbook	An attempt to open a workbook failed because the workbook is in an Information Rights Management (IRM) document library.
ParameterInvalid	An attempt to open a workbook failed because the workbook contains one or more workbook parameters that are not valid.
ParameterLimitExceeded	An attempt to open a workbook failed because the workbook contains too many workbook parameters.
WorkbookInternalLimit	The workbook cannot be loaded by the protocol server because of the file size limitation.
OldFormatConversionFailed	MUST NOT be used.
EditModeWorkbookExternalData	An attempt to open a workbook as an edit session failed because it contains connected data or user-defined functions (UDFs) , and the workbook file has not been checked out.
FormulaEditingNotEnabled	The operation failed because it tried to set a formula into a workbook parameter.
DimensionMismatch	An attempt to set a range failed because the dimensions (2) of the specified array of cells do not match the specified range.
SetRangeFailure	The operation failed to set a value into a cell.
ObjectTypeNotSupported	The operation failed because it tried to update a cell with an object of an unsupported type.
ParameterDoesNotExist	The specified workbook parameter does not exist.
FormulaParseFailed	The specified formula could not be parsed.
SetParameterFailure	An unspecified error occurred when attempting to set a

Value	Meaning
	workbook parameter.
CannotEditPivotTable	The operation failed because it tried to set a cell in a PivotTable.
InsDelCellsNonblankCells	The operation failed because it would require shifting non-blank cells off the sheet (2) .
InsDelCellsArrayFmla	The operation failed because it tried to change part of an array formula .
InsDelCellsPivotTable	The operation failed because it tried to change part of a PivotTable.
InsDelCellsTable	The operation failed because it tried to change part of a table .
InsDelCellsMergedCells	The operation failed because it tried to change part of a merged cell.
InsDelCellsDatatable	The operation failed because it tried to change part of a data table .
InsDelCellsRowsForWholeColumn	The operation failed because it tried to insert or delete a whole row (2), but the specified range is a whole column (2).
InsDelCellsColumnsForWholeRow	The operation failed because it tried to insert or delete a whole column (2), but the specified range is a whole row (2).
InsertChartPivotTable	The specified chart data table overlaps a PivotTable.
SuggestChartNoNumericData	MUST NOT be used.
SuggestChartFailed	MUST NOT be used.
PivotChartInteractivityMissingWarning	The operation failed because the chart based on a PivotTable is not interactive.
EditChartTitleTooLong	MUST NOT be used.
EditChartTitleStartsWithEquals	MUST NOT be used.
EditChartDataTooLong	MUST NOT be used.
EditChartDataInvalidReference	The string does not correspond to a valid range of cells.
EditChartDataOverlapsPivotTable	The specified chart data table overlaps a PivotTable.
ChartOperationNotSupported	The operation is not valid for the specified chart.
EditChartDataPivotChart	The chart data table cannot be changed for chart based on a PivotTable.
ChangeChartTypePivotScatter	A chart based on a PivotTable cannot be changed to a scatter chart .
ChartTooManyDataSeries	The chart data table specified exceeds the allowed limits.
InvalidSheetName	The operation failed because the specified sheet (1) name does not exist.

Value	Meaning
RangeParseError	The operation failed because the specified range is not valid.
SpecifiedRangeNotFound	The operation failed because the specified range was not found.
RangeDefinitionError	The operation failed because the specified range is not a valid sheet (2) location.
DiscontiguousRangeNotSupported	The operation failed because a non-contiguous range was specified.
RangeRequestAreaExceeded	The requested range was too large.
SheetRangeMismatch	The sheet (1) provided as the sheet (1) argument is not the same as the sheet (1) specified in the range argument.
ImageGenFailed	The protocol server failed to create an image.
ApiInvalidArgument	MUST NOT be used.
ApiInvalidCoordinate	MUST NOT be used.
ConfirmationUnsupported	MUST NOT be used.
ApiInvalidDimensionReturned	MUST NOT be used.
ApiMissingSiteContext	MUST NOT be used.
Ewr_IllegalPageSize	MUST NOT be used.
Ewr_WorkbookNotSpecified	MUST NOT be used.
Ewr_LoadProgress	MUST NOT be used.
Ewr_FileCorrupt	MUST NOT be used.
Ewr_WorkbookNotSupported	MUST NOT be used.
Ewr_GenericFileOpenError	MUST NOT be used.
Ewr_InvalidParameterGeneric	MUST NOT be used.
Ewr_InvalidParameterMandatoryMissing	MUST NOT be used.
Ewr_InvalidParameterUnexpectedFormat	MUST NOT be used.
Ewr_InvalidParameterOutOfRange	MUST NOT be used.
Ewr_InvalidParameterOperationNotAllowed	MUST NOT be used.
Ewr_ParameterInvalid	MUST NOT be used.
Ewr_ParameterLimitExceeded	MUST NOT be used.
Ewr_ParameterDoesNotExist	MUST NOT be used.
Ewr_SetParameterFailure	MUST NOT be used.
Ewr_SetParameterFailureOnOpen	MUST NOT be used.
Ewr_ParameterReadFromDocPropsError	MUST NOT be used.

Value	Meaning
Ewr_FormulaEditingNotEnabled	MUST NOT be used.
Ewr_InvalidVisibleItem	MUST NOT be used.
Ewr_EditSaveAsOverCurrentWorkbook	MUST NOT be used.
Ewr_RequestTimedOut	MUST NOT be used.
Ewr_ServerCommunicationError	MUST NOT be used.
Ewr_ServerAuthenticationError	MUST NOT be used.
Ewr_Top10InvalidValue	MUST NOT be used.
Ewr_Top10InvalidValue_Float	MUST NOT be used.
DocumentIsIrmProtected	MUST NOT be used.
Mewa_PageStateInitFailed	MUST NOT be used.
Mewa_CriticalParameterMissing	MUST NOT be used.
Mewa_GridViewRenderingFailed	MUST NOT be used.
Mewa_FeatureNotActive	MUST NOT be used.
OperationNotSupportedInViewOnly	The operation failed because it is not supported in a view session.
OperationOnInvalidState	An attempt was made to open a session (2) that already has a workbook assigned.
InvalidOrTimedOutSession	The operation failed because the session (2) is not valid or timed out.
InvalidOrTimedOutSessionRecoverable	The operation failed because the session (2) is not valid or timed out.
InvalidOrTimedOutSessionPageRefresh	The operation failed because the session (2) is not valid or timed out.
ScratchPadChangesLost	A view session that is not in view-only mode timed out while the user was attempting to convert it to an edit session.
MaxSessionsPerUserExceeded	The user has exceeded the maximum allowed session (2) count by the protocol server.
OperationCanceled	The user canceled a request that was being processed by a session (2).
MaxRequestDurationExceeded	The request failed because it took too long to process.
NoOccurrencesFound	The protocol server could not match the sought string to any worksheet cell relevant to the search.
EcsInvalidNamedObject	A named object was requested that is not valid.
NoPublishedItems	The workbook does not have any published items .
RetryError	The protocol server is low on system resources .
StopOpenOnRefreshFailure	An attempt to open a workbook failed because connected

Value	Meaning
	data refresh failed.
ProductExpired	The protocol server returns this error when the application license key is not valid.
SortActionInvalid	Sorting an AutoFilter failed because it contains merged cells that are not all the same size.
SortActionNotSupportedWithPivot	Sorting an AutoFilter failed because it contains a PivotTable.
CircularReferencesFound	MUST NOT be used.
SessionNotFound	MUST NOT be used.
NewWorkbookSessionTimeout	A new workbook session has timed out.
NewWorkbookSessionTimeoutRecoverable	A new workbook session has timed out.
GeneratedWorkbookSessionTimeoutRegenerate	A new workbook session created by GenerateWorkbookFromHtml has timed out.
GeneratedWorkbookSessionTimeoutNonRecoverable	A new workbook session created by GenerateWorkbookFromHtml has timed out.
GeneratedWorkbookSessionTimeoutRecoverable	A new workbook session created by GenerateWorkbookFromHtml has timed out.
EditXLSFile	MUST NOT be used.
UnsupportedFeatureEditWarning	Edit session is not supported for this workbook.
EditModeSessionExists	The view session could not be saved because the workbook is open in an edit session.
NewerWorkbookExists	The view session could not be saved because the workbook has been modified since the session (2) was opened.
ExternalDataOfficeLive	MUST NOT be used.
PowerPivotOfficeLive	MUST NOT be used.
LostAuthentication	MUST NOT be used.
ListEntryNotFound_1	MUST NOT be used.
ListEntryNotFound_2	MUST NOT be used.
ListEntryAlreadyExists_1	MUST NOT be used.
ListEntryAlreadyExists_2	MUST NOT be used.
InvalidArgumentValue	MUST NOT be used.
MissingArgumentName	MUST NOT be used.
InvalidArgumentName	MUST NOT be used.
ArgumentBadInRemove	MUST NOT be used.
ManagementUIListEntryAlreadyExists	MUST NOT be used.

Value	Meaning
ManagementUIListEntryNotFound	MUST NOT be used.
ManagementUIInternalError	MUST NOT be used.
UnsupportedUICulture	The UI culture is not supported by the protocol server.
UnsupportedDataCulture	The data culture is not supported by the protocol server.
SpecifiedItemNotFound	An attempt to set a range of cells in a workbook failed because the user does not have Open Item permission.
EcsSnapshotAccessDenied	The protocol server cannot return the workbook or a snapshot , because the user does not have Open Item permission.
SaveFailed	A save operation failed.
WrongEcs	An attempt was made to access an edit session that is owned by another instance of a protocol server in the farm .
PasteDataLimitHit	The string exceeds the maximum permitted length.
UndoStackEmpty	MUST NOT be used.
RedoStackEmpty	MUST NOT be used.
UndoStackCleared	MUST NOT be used.
UndoCollabFail	MUST NOT be used.
RedoCollabFail	MUST NOT be used.
HyperlinkLocationRequired	MUST NOT be used.
CollabLocaleMismatch	The user joined an edit session whose data culture does not match the user's data culture.
RestoredLocale	The data culture of an edit session has been restored to the user's data culture.
InvalidEditSession	The edit session is not valid.
InvalidEditSessionPageRefresh	The edit session is not valid.
InvalidEditSessionId	MUST NOT be used.
UnableToLoadEditSession	Unable to load an edit session.
SavingWorkbookFailed	Failed to save workbook.
RefreshLockFailed	An attempt to refresh a lock on a workbook file failed.
InvalidChartName	An invalid chart name was specified.
RetryOutOfSync	The PivotTable operation failed.
OperationFailed	A workbook operation failed.
OpenInExcelActiveXError	MUST NOT be used.
OpenInExcelCollaborationError	MUST NOT be used.

Value	Meaning
ProcessingUserChangesFileDownloadIgnored	MUST NOT be used.
PhoneticDataLossWarning	MUST NOT be used.
NoViewingLicenseError	MUST NOT be used.
NoEditingLicenseError	MUST NOT be used.
BIFeatureNotAvailable	MUST NOT be used.
BIFeatureNotAvailableOnOpen	MUST NOT be used.
NoUnsupportedFeatureCopyAndEdit	MUST NOT be used.
CrossEnvironmentEditNotSupported	MUST NOT be used.
RestBiff8Unsupported	MUST NOT be used.
ExtendedBIFeatureNotAvailable	MUST NOT be used.
ExtendedBIROOFailed	MUST NOT be used.
TransitionXls	MUST NOT be used.
UnsupportedFeaturesSaveOverwrite	MUST NOT be used.
UnsupportedFeaturesSaveCopy	The protocol server succeeded to create a session (2) for this workbook but it has unsupported content.
ChallengeAnonymousUser	The anonymous user does not have access to the workbook file.
ClipboardAccessDenied	MUST NOT be used.
CannotMergeCellsInTable	MUST NOT be used.
MergeCellsLoseData	MUST NOT be used.
CollabConflictError	A workbook operation on an edit session failed.
OdfCompatibilityWarning	MUST NOT be used.
OdfUnsupportedEncryption	The protocol server failed to create a session (2) for the specified workbook file, which is in a format specified by [ODF] , because it is an encrypted document .
OdfUnreadableContentGeneric	The protocol server failed to create a session (2) for the specified workbook file, which is in a format specified by [ODF] , because it contains unsupported content.
Ewr_OdfUnreadableContentGeneric	MUST NOT be used.
XLSMacroFailure	MUST NOT be used.
XLSPreBiff8Failure	MUST NOT be used.
XLSPasswordProtectionFailure	MUST NOT be used.
XLSIRMFailure	MUST NOT be used.
XLSUnknownFailures	MUST NOT be used.
GenerateWorkbookFailureInvalidProperty	MUST NOT be used.

Value	Meaning
GenerateWorkbookFailureInvalidGenerationItems	MUST NOT be used.
GenerateWorkbookFailureTable	The protocol server encountered an error while inserting a Table into the workbook as part of GenerateWorkbookFromHtml .
GenerateWorkbookFailureConditionalFormatting	The protocol server encountered an error while applying additional formatting to the Table in the workbook as part of GenerateWorkbookFromHtml .
GenerateWorkbookFailureSlicers	The protocol server encountered an error while inserting a Slicers into the workbook as part of GenerateWorkbookFromHtml .
GenerateWorkbookFailureChart	The protocol server encountered an error while inserting a chart into the workbook as part of GenerateWorkbookFromHtml .
GenerateWorkbookFailureOpenWorkbook	The protocol server encountered an error while creating the workbook as part of GenerateWorkbookFromHtml .
GenerateWorkbookFailureUpdateTheme	The protocol server encountered an error while applying the values of one or more of the following fields of the WorkbookGenerationOptions parameter to GenerateWorkbookFromHtml : <ul style="list-style-type: none"> ▪ DarkColor1 ▪ DarkColor2 ▪ LightColor1 ▪ LightColor2 ▪ AccentColor1 ▪ AccentColor2 ▪ FontSize ▪ FontName
GenerateWorkbookFailureAttribution	The protocol server encountered an error while inserting the value of the Attribution field of the WorkbookGenerationOptions parameter to GenerateWorkbookFromHtml .
GenerateWorkbookFailureResizeColumn	The protocol server encountered an error while setting the width of a column (2) in the workbook as part of GenerateWorkbookFromHtml .
GenerateWorkbookFailureClearUndoStack	The protocol server encountered an error while marking GenerateWorkbookFromHtml as not supporting Undo.
CrossDomainAjaxNotSupported	MUST NOT be used.
WorkbookNotInCollection	MUST NOT be used.
FossEditUnknown	MUST NOT be used.

Value	Meaning
FossSaveUnknown	MUST NOT be used.
FossSaveEmptyTitle	MUST NOT be used.
FossSaveEmptyQuestion	MUST NOT be used.
FossSaveEmptySurvey	MUST NOT be used.
FossSaveSurveyNotFound	MUST NOT be used.
FossSaveTableLimited	MUST NOT be used.
FossSaveTooManyQuestions	MUST NOT be used.
FossSaveBlocked	MUST NOT be used.
FossViewDefaultError	MUST NOT be used.
FossViewBlocked	MUST NOT be used.
FossSubmitDefaultError	MUST NOT be used.
FossSubmitTableLimited	MUST NOT be used.
FossDeleteSurveyNotFound	MUST NOT be used.
FossShareSurveyNotFound	MUST NOT be used.
FossShareHostError	MUST NOT be used.
FossUnshareHostError	MUST NOT be used.
FossEnvironmentUnsupported	MUST NOT be used.
FossViewUnsupportedFeatures	MUST NOT be used.
EwrPrintSelectionTooBig	The number of cells selected for printing exceeds the maximum number of cells that the protocol server supports for printing.
DdaUnsupportedCoercionType	The specified coercion type is not supported by the protocol server for the Document Data Access method.
DdaReadUnsupportedSelection	MUST NOT be used.
DdaReadCoercionBindingMismatch	The specified coercion type is not supported for the combination of BindingData and DdaBindingType .
DdaReadInvalidRowColCount	For a Document Data Access read operation, one or more of the specified counts cause the binding read operation to exceed the bound range.
DdaReadCoercionSelectionMismatch	For a Document Data Access read operation, if the coercion type is table but a table is not in the given range.
DdaReadInvalidRowColOffset	For a Document Data Access read operation, one or more of the specified offsets are outside of the binding range.
DdaReadBeyondDataLimits	For a Document Data Access read operation, if the requested range is larger than the maximum allowed to read by the protocol server.
DdaWriteUnsupportedDataObject	MUST NOT be used.

Value	Meaning
DdaWriteUnsupportedSelection	MUST NOT be used.
DdaWriteSelectionShapeAndDataMismatch	For a Document Data Access write operation, if the size of the data doesn't match the size of the given range. Additionally, if the coercion type is table but a table is not in the given range.
DdaWriteDataOverlap	For a Document Data Access write operation, if the operation is an insert and the new data will overwrite existing data.
DdaWriteDataOverflow	For a Document Data Access write operation, some or all of the new data will be set outside of the bound range.
DdaWriteInvalidRowColOffset	For a Document Data Access write operation, one or more of the specified offsets are outside of the binding range.
DdaWriteCoercionDataMismatch	For a Document Data Access write operation, the given data does not match with the given coercion type.
DdaWriteCoercionSelectionMismatch	For a Document Data Access write operation, the given coercion type does not match the type of binding on the operation.
DdaWriteBeyondDataLimits	For a Document Data Access write operation, if the given data is larger than maximum allowed to write by the protocol server.
DdaWriteTableHasNoHeaders	For a Document Data Access write operation on a table, if the request includes headers but the target table does not have headers.
DdaBindingNotFound	Request is for a binding that does not exist for the given web extension.
DdaBindingInvalidSelection	When adding a binding the given range is invalid.
DdaBindingInvalidOperation	The operation cannot be performed on the given binding's type.
DdaBindingNamedItemNotFound	The add binding operation is using the named item option but the named item does not exist.
DdaBindingMultipleNamedItemFound	The add binding operation is using the named item fail on collision option but the named item exists in more than one overlapping scope.
DdaBindingInvalidNamedItemForBindingType	The add binding operation is using the named item option but the named item type does not match the given binding type.
DdaBindingUnknownType	The given binding type is not known by the protocol server.
DdaBindingInvalidRef	When adding a binding the given range does not exist. When getting or setting binding data the range that the binding represents has been deleted.
DdaStaleSettings	When getting settings the given version does not match the version known by the protocol server.
DdaNoAccessHiddenCells	The operation does not have rights to read or write data from or to hidden cells.

Value	Meaning
JsomBrowserUdfsAbandoned	MUST NOT be used.
JsomBrowserUdfsCanceled	MUST NOT be used.
JsomBrowserUdfsRecalcFailed	MUST NOT be used.
AccessTokenExpiringWarning	MUST NOT be used.
AccessTokenExpiredWarning	MUST NOT be used.
DataTypeMismatch	MUST NOT be used.
CloneWorkbookAllSheetsInteractiveReports	The protocol server encountered an error because all sheets in the workbook were interactive reports .
Count	MUST NOT be used.

2.2.5.14 ExcelServerMessageId

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ExcelServerMessageId** type is an enumeration of values, each of which corresponds to a particular **alert** that is passed between the protocol client and the protocol server.

```
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    <xs:enumeration value="ConfirmDataRefresh"/>
    <xs:enumeration value="ExternalDataRefreshFailed"/>
    <xs:enumeration value="ExternalDataRefreshFailedReal"/>
    <xs:enumeration value="ExternalDataRefreshFailedReadOrViewOnly"/>
    <xs:enumeration value="NoAccessToOdcReadOrViewOnly"/>
    <xs:enumeration value="ErrorConnectingToDataSourceReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPasswordReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPassword"/>
    <xs:enumeration value="ExternalDataNotAllowedOnTL"/>
    <xs:enumeration value="InvalidUriOrLocalConnectionPath"/>
    <xs:enumeration value="DclNotTrusted"/>
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    <xs:enumeration value="SsoError"/>
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    <xs:enumeration value="NoDataItemsOlap"/>
    <xs:enumeration value="OlapSchemaFail"/>
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</xs:simpleType>
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<xs:enumeration value="Ewr_EditSaveAsOverCurrentWorkbook"/>
<xs:enumeration value="Ewr_RequestTimedOut"/>
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<xs:enumeration value="PasteDataLimitHit"/>
<xs:enumeration value="UndoStackEmpty"/>
<xs:enumeration value="RedoStackEmpty"/>
<xs:enumeration value="UndoStackCleared"/>
<xs:enumeration value="UndoCollabFail"/>
<xs:enumeration value="RedoCollabFail"/>
<xs:enumeration value="HyperlinkLocationRequired"/>
<xs:enumeration value="CollabLocaleMismatch"/>
<xs:enumeration value="RestoredLocale"/>
<xs:enumeration value="InvalidEditSession"/>
<xs:enumeration value="InvalidEditSessionPageRefresh"/>
<xs:enumeration value="InvalidEditSessionId"/>
<xs:enumeration value="UnableToLoadEditSession"/>

```

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<xs:enumeration value="SavingWorkbookFailed"/>
<xs:enumeration value="RefreshLockFailed"/>
<xs:enumeration value="InvalidChartName"/>
<xs:enumeration value="RetryOutOfSync"/>
<xs:enumeration value="OperationFailed"/>
<xs:enumeration value="OpenInExcelActiveXError"/>
<xs:enumeration value="OpenInExcelCollaborationError"/>
<xs:enumeration value="ProcessingUserChangesFileDownloadIgnored"/>
<xs:enumeration value="PhoneticDataLossWarning"/>
<xs:enumeration value="NoViewingLicenseError"/>
<xs:enumeration value="NoEditingLicenseError"/>
<xs:enumeration value="BIFeatureNotAvailable"/>
<xs:enumeration value="BIFeatureNotAvailableOnOpen"/>
<xs:enumeration value="NoUnsupportedFeatureCopyAndEdit"/>
<xs:enumeration value="CrossEnvironmentEditNotSupported"/>
<xs:enumeration value="RestBiff8Unsupported"/>
<xs:enumeration value="ExtendedBIFeatureNotAvailable"/>
<xs:enumeration value="ExtendedBIROOFailed"/>
<xs:enumeration value="TransitionXls"/>
<xs:enumeration value="UnsupportedFeaturesSaveOverwrite"/>
<xs:enumeration value="UnsupportedFeaturesSaveCopy"/>
<xs:enumeration value="ChallengeAnonymousUser"/>
<xs:enumeration value="ClipboardAccessDenied"/>
<xs:enumeration value="CannotMergeCellsInTable"/>
<xs:enumeration value="MergeCellsLoseData"/>
<xs:enumeration value="CollabConflictError"/>
<xs:enumeration value="OdfCompatibilityWarning"/>
<xs:enumeration value="OdfUnsupportedEncryption"/>
<xs:enumeration value="OdfUnreadableContentGeneric"/>
<xs:enumeration value="Ewr_OdfUnreadableContentGeneric"/>
<xs:enumeration value="XLSMacroFailure"/>
<xs:enumeration value="XLSPreBiff8Failure"/>
<xs:enumeration value="XLSPasswordProtectionFailure"/>
<xs:enumeration value="XLSIRMFailure"/>
<xs:enumeration value="XLSUnknownFailures"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidProperty"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidGenerationItems"/>
<xs:enumeration value="GenerateWorkbookFailureTable"/>
<xs:enumeration value="GenerateWorkbookFailureConditionalFormatting"/>
<xs:enumeration value="GenerateWorkbookFailureSlicers"/>
<xs:enumeration value="GenerateWorkbookFailureChart"/>
<xs:enumeration value="GenerateWorkbookFailureOpenWorkbook"/>
<xs:enumeration value="GenerateWorkbookFailureUpdateTheme"/>
<xs:enumeration value="GenerateWorkbookFailureAttribution"/>
<xs:enumeration value="GenerateWorkbookFailureResizeColumn"/>
<xs:enumeration value="GenerateWorkbookFailureClearUndoStack"/>
<xs:enumeration value="CrossDomainAjaxNotSupported"/>
<xs:enumeration value="WorkbookNotInCollection"/>
<xs:enumeration value="FossEditUnknown"/>
<xs:enumeration value="FossSaveUnknown"/>
<xs:enumeration value="FossSaveEmptyTitle"/>
<xs:enumeration value="FossSaveEmptyQuestion"/>
<xs:enumeration value="FossSaveEmptySurvey"/>
<xs:enumeration value="FossSaveSurveyNotFound"/>
<xs:enumeration value="FossSaveTableLimited"/>
<xs:enumeration value="FossSaveTooManyQuestions"/>
<xs:enumeration value="FossSaveBlocked"/>
<xs:enumeration value="FossViewDefaultError"/>
<xs:enumeration value="FossViewBlocked"/>
<xs:enumeration value="FossSubmitDefaultError"/>
<xs:enumeration value="FossSubmitTableLimited"/>
<xs:enumeration value="FossDeleteSurveyNotFound"/>
<xs:enumeration value="FossShareSurveyNotFound"/>
<xs:enumeration value="FossShareHostError"/>
<xs:enumeration value="FossUnshareHostError"/>
<xs:enumeration value="FossEnvironmentUnsupported"/>
<xs:enumeration value="FossViewUnsupportedFeatures"/>
<xs:enumeration value="EwrPrintSelectionTooBig"/>
<xs:enumeration value="DdaUnsupportedCoercionType"/>

```

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<xs:enumeration value="DdaReadUnsupportedSelection"/>
<xs:enumeration value="DdaReadCoercionBindingMismatch"/>
<xs:enumeration value="DdaReadInvalidRowColCount"/>
<xs:enumeration value="DdaReadCoercionSelectionMismatch"/>
<xs:enumeration value="DdaReadInvalidRowColOffset"/>
<xs:enumeration value="DdaReadBeyondDataLimits"/>
<xs:enumeration value="DdaWriteUnsupportedDataObject"/>
<xs:enumeration value="DdaWriteUnsupportedSelection"/>
<xs:enumeration value="DdaWriteSelectionShapeAndDataMismatch"/>
<xs:enumeration value="DdaWriteDataOverlap"/>
<xs:enumeration value="DdaWriteDataOverflow"/>
<xs:enumeration value="DdaWriteInvalidRowColOffset"/>
<xs:enumeration value="DdaWriteCoercionDataMismatch"/>
<xs:enumeration value="DdaWriteCoercionSelectionMismatch"/>
<xs:enumeration value="DdaWriteBeyondDataLimits"/>
<xs:enumeration value="DdaWriteTableHasNoHeaders"/>
<xs:enumeration value="DdaBindingNotFound"/>
<xs:enumeration value="DdaBindingInvalidSelection"/>
<xs:enumeration value="DdaBindingInvalidOperation"/>
<xs:enumeration value="DdaBindingNamedItemNotFound"/>
<xs:enumeration value="DdaBindingMultipleNamedItemFound"/>
<xs:enumeration value="DdaBindingInvalidNamedItemForBindingType"/>
<xs:enumeration value="DdaBindingUnknownType"/>
<xs:enumeration value="DdaBindingInvalidRef"/>
<xs:enumeration value="DdaStaleSettings"/>
<xs:enumeration value="DdaNoAccessHiddenCells"/>
<xs:enumeration value="JsomBrowserUdfsAbandoned"/>
<xs:enumeration value="JsomBrowserUdfsCanceled"/>
<xs:enumeration value="JsomBrowserUdfsRecalcFailed"/>
<xs:enumeration value="AccessTokenExpiringWarning"/>
<xs:enumeration value="AccessTokenExpiredWarning"/>
<xs:enumeration value="DataTypeMismatch"/>
<xs:enumeration value="CloneWorkbookAllSheetsInteractiveReports"/>
<xs:enumeration value="Count"/>
</xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **ExcelServerMessageId** simple type.

Value	Meaning
Blank	For details, see section 2.2.5.13 .
InternalError	For details, see section 2.2.5.13.
NotMemberOfRole	For details, see section 2.2.5.13.
EncryptionTooLow	For details, see section 2.2.5.13.
ConfirmDataRefresh	For details, see section 2.2.5.13.
ExternalDataRefreshFailed	For details, see section 2.2.5.13.
ExternalDataRefreshFailedReal	For details, see section 2.2.5.13.
ExternalDataRefreshFailedReadOrViewOnly	For details, see section 2.2.5.13.
NoAccessToOdcReadOrViewOnly	For details, see section 2.2.5.13.
ErrorConnectingToDataSourceReadOrViewOnly	For details, see section 2.2.5.13.
InvalidUserNameOrPasswordReadOrViewOnly	For details, see section 2.2.5.13.
InvalidUserNameOrPassword	For details, see section 2.2.5.13.

Value	Meaning
ExternalDataNotAllowedOnTL	For details, see section 2.2.5.13.
InvalidUriorLocalConnectionPath	For details, see section 2.2.5.13.
DclNotTrusted	For details, see section 2.2.5.13.
OdcFileDoesNotExist	For details, see section 2.2.5.13.
OdcNotSupported	For details, see section 2.2.5.13.
ErrorAccessingSsoFromEcs	For details, see section 2.2.5.13.
SsoError	For details, see section 2.2.5.13.
ErrorConnectingToDataSource	For details, see section 2.2.5.13.
UnattendedAccountNotConfigured	For details, see section 2.2.5.13.
IncorrectAuthUsed	For details, see section 2.2.5.13.
ExternalDataRefreshFailed_Details	For details, see section 2.2.5.13.
GenericModelFailure	For details, see section 2.2.5.13.
ModelStreamingFailure	For details, see section 2.2.5.13.
NoStreamingServers	For details, see section 2.2.5.13.
LegacyModelError	For details, see section 2.2.5.13.
ConnectionChangeOutOfSync	For details, see section 2.2.5.13.
PivotNoOverlapAllowed	For details, see section 2.2.5.13.
PivotOverlapList	For details, see section 2.2.5.13.
PivotCubeNotUnique	For details, see section 2.2.5.13.
NoDataItemsOlap	For details, see section 2.2.5.13.
OlapSchemaFail	For details, see section 2.2.5.13.
InvalidPivot	For details, see section 2.2.5.13.
OlapNoMoreDetail	For details, see section 2.2.5.13.
DrillActionInvalid	For details, see section 2.2.5.13.
DriverNotOlap	For details, see section 2.2.5.13.
CubeMissing	For details, see section 2.2.5.13.
SkipLine	For details, see section 2.2.5.13.
CDimMismatch	For details, see section 2.2.5.13.
DataSetAxisTooBig	For details, see section 2.2.5.13.
CubeIntegrityError	For details, see section 2.2.5.13.
PivotNotExpandedtoProtectCellContents	For details, see section 2.2.5.13.
PivotTruncatedSheetEdge	For details, see section 2.2.5.13.

Value	Meaning
DdlGrpNotSup	For details, see section 2.2.5.13.
PivotFormulasCollided	For details, see section 2.2.5.13.
NoRetItems	For details, see section 2.2.5.13.
OlapConnectVisualModeProvider	For details, see section 2.2.5.13.
PivotNoSourceData	For details, see section 2.2.5.13.
PivotFilteringError	For details, see section 2.2.5.13.
PivotTableIncorrectDateFormat	For details, see section 2.2.5.13.
PivotTableEndingLargerThanStarting	For details, see section 2.2.5.13.
PivotTableIncorrectNumberFormat	For details, see section 2.2.5.13.
MergedCellOverlap	For details, see section 2.2.5.13.
PivotSourceNotAvailable	For details, see section 2.2.5.13.
UnexpectedPivotError	For details, see section 2.2.5.13.
EditModeCannotAcquireLockUnknownReason	For details, see section 2.2.5.13.
EditModeCannotAcquireLock	For details, see section 2.2.5.13.
EditModeCannotAcquireLockUnknownUser	For details, see section 2.2.5.13.
EditModeWorkbookCheckedOutRequired	For details, see section 2.2.5.13.
EditModeWorkbookCheckedOutToLocalDrafts	For details, see section 2.2.5.13.
SiteTooBusy	For details, see section 2.2.5.13.
SiteCollectionMemoryQuotaExceeded	For details, see section 2.2.5.13.
SessionMemoryQuotaExceeded	For details, see section 2.2.5.13.
SiteCollectionChartQuotaExceeded	For details, see section 2.2.5.13.
RequestLimitsExceeded	For details, see section 2.2.5.13.
SavingUnsupportedInViewMode	For details, see section 2.2.5.13.
SavingWorkbookNoWorkbookName	For details, see section 2.2.5.13.
FileSaveGeneric	For details, see section 2.2.5.13.
SavingWorkbookInvalidPermissions	For details, see section 2.2.5.13.
SavingWorkbookLockedOrCheckedOut	For details, see section 2.2.5.13.
SavingWorkbookNotCheckedOut	For details, see section 2.2.5.13.
SavingWorkbookAccessDenied	For details, see section 2.2.5.13.
SavingWorkbookInvalidFileType	For details, see section 2.2.5.13.
SavingWorkbookFileNameExists	For details, see section 2.2.5.13.
HostedSavingWorkbookFileNameExists	For details, see section 2.2.5.13.

Value	Meaning
HostedSavingWorkbookInvalidFileName	For details, see section 2.2.5.13.
SavingWorkbookNotTrustedLocation	For details, see section 2.2.5.13.
SavingWorkbookInvalidLocation	For details, see section 2.2.5.13.
SavingWorkbookInvalidFileName	For details, see section 2.2.5.13.
SavingWorkbookTrustedLocationSettingWarning	For details, see section 2.2.5.13.
SavingWorkbookAlmostTooLarge	A notification that the workbook is close to the maximum allowed file size.
SavingWorkbookTooLarge	A notification that the workbook exceeds the maximum allowed file size.
NewWorkbookInvalidLocation	For details, see section 2.2.5.13.
FileOpenSecuritySettings	For details, see section 2.2.5.13.
FileOpenNotFound	For details, see section 2.2.5.13.
FileOpenAccessDenied	For details, see section 2.2.5.13.
FileCorrupt	For details, see section 2.2.5.13.
OpenWorkbookTooLarge	For details, see section 2.2.5.13.
OpenWorkbookTooLargeNoUrl	For details, see section 2.2.5.13.
OpenWorkbookLocationNotTrusted	For details, see section 2.2.5.13.
OpenWorkbookAccessDenied	For details, see section 2.2.5.13.
WorkbookNotSupported	For details, see section 2.2.5.13.
WorkbookNotSupportedViewRight	For details, see section 2.2.5.13.
UnsupportedFeatureViewWarning	The specified workbook contains unsupported content, but this did not prevent the protocol server from creating a session (2) .
UnsupportedFeatureSaveCopyWarning	For details, see section 2.2.5.13.
UnsupportedFeatureDownloadWarning	For details, see section 2.2.5.13.
ExternalWorkbookLinksDisabled	A notification that the workbook contains links to external workbooks, and those links are disabled. This does not prevent the workbook from loading.
WorkbookLockedRead	For details, see section 2.2.5.13.
EditModeCannotEditNonSharePointWorkbook	For details, see section 2.2.5.13.
EditModeAccessDenied	For details, see section 2.2.5.13.
GenericFileOpenError	For details, see section 2.2.5.13.
IRMedWorkbook	For details, see section 2.2.5.13.
ParameterInvalid	For details, see section 2.2.5.13.
ParameterLimitExceeded	For details, see section 2.2.5.13.

Value	Meaning
WorkbookInternalLimit	For details, see section 2.2.5.13.
OldFormatConversionFailed	For details, see section 2.2.5.13.
EditModeWorkbookExternalData	For details, see section 2.2.5.13.
FormulaEditingNotEnabled	For details, see section 2.2.5.13.
DimensionMismatch	For details, see section 2.2.5.13.
SetRangeFailure	For details, see section 2.2.5.13.
ObjectTypeNotSupported	For details, see section 2.2.5.13.
ParameterDoesNotExist	For details, see section 2.2.5.13.
FormulaParseFailed	For details, see section 2.2.5.13.
SetParameterFailure	For details, see section 2.2.5.13.
CannotEditPivotTable	For details, see section 2.2.5.13.
InsDelCellsNonblankCells	For details, see section 2.2.5.13.
InsDelCellsArrayFmla	For details, see section 2.2.5.13.
InsDelCellsPivotTable	For details, see section 2.2.5.13.
InsDelCellsTable	For details, see section 2.2.5.13.
InsDelCellsMergedCells	For details, see section 2.2.5.13.
InsDelCellsDatatable	For details, see section 2.2.5.13.
InsDelCellsRowsForWholeColumn	For details, see section 2.2.5.13.
InsDelCellsColumnsForWholeRow	For details, see section 2.2.5.13.
InsertChartPivotTable	For details, see section 2.2.5.13.
SuggestChartNoNumericData	For details, see section 2.2.5.13.
SuggestChartFailed	For details, see section 2.2.5.13.
PivotChartInteractivityMissingWarning	For details, see section 2.2.5.13.
EditChartTitleTooLong	For details, see section 2.2.5.13.
EditChartTitleStartsWithEquals	For details, see section 2.2.5.13.
EditChartDataTooLong	For details, see section 2.2.5.13.
EditChartDataInvalidReference	For details, see section 2.2.5.13.
EditChartDataOverlapsPivotTable	For details, see section 2.2.5.13.
ChartOperationNotSupported	For details, see section 2.2.5.13.
EditChartDataPivotChart	For details, see section 2.2.5.13.
ChangeChartTypePivotScatter	For details, see section 2.2.5.13.
ChartTooManyDataSeries	For details, see section 2.2.5.13.

Value	Meaning
InvalidSheetName	For details, see section 2.2.5.13.
RangeParseError	For details, see section 2.2.5.13.
SpecifiedRangeNotFound	For details, see section 2.2.5.13.
RangeDefinitionError	For details, see section 2.2.5.13.
DiscontiguousRangeNotSupported	For details, see section 2.2.5.13.
RangeRequestAreaExceeded	For details, see section 2.2.5.13.
SheetRangeMismatch	For details, see section 2.2.5.13.
ImageGenFailed	For details, see section 2.2.5.13.
ApiInvalidArgument	For details, see section 2.2.5.13.
ApiInvalidCoordinate	For details, see section 2.2.5.13.
ConfirmationUnsupported	For details, see section 2.2.5.13.
ApiInvalidDimensionReturned	For details, see section 2.2.5.13.
ApiMissingSiteContext	For details, see section 2.2.5.13.
Ewr_IllegalPageSize	For details, see section 2.2.5.13.
Ewr_WorkbookNotSpecified	For details, see section 2.2.5.13.
Ewr_LoadProgress	For details, see section 2.2.5.13.
Ewr_FileCorrupt	For details, see section 2.2.5.13.
Ewr_WorkbookNotSupported	For details, see section 2.2.5.13.
Ewr_GenericFileOpenError	For details, see section 2.2.5.13.
Ewr_InvalidParameterGeneric	For details, see section 2.2.5.13.
Ewr_InvalidParameterMandatoryMissing	For details, see section 2.2.5.13.
Ewr_InvalidParameterUnexpectedFormat	For details, see section 2.2.5.13.
Ewr_InvalidParameterOutOfRange	For details, see section 2.2.5.13.
Ewr_InvalidParameterOperationNotAllowed	For details, see section 2.2.5.13.
Ewr_ParameterInvalid	For details, see section 2.2.5.13.
Ewr_ParameterLimitExceeded	For details, see section 2.2.5.13.
Ewr_ParameterDoesNotExist	For details, see section 2.2.5.13.
Ewr_SetParameterFailure	For details, see section 2.2.5.13.
Ewr_SetParameterFailureOnOpen	For details, see section 2.2.5.13.
Ewr_ParameterReadFromDocPropsError	For details, see section 2.2.5.13.
Ewr_FormulaEditingNotEnabled	For details, see section 2.2.5.13.
Ewr_InvalidVisibleItem	For details, see section 2.2.5.13.

Value	Meaning
Ewr_EditSaveAsOverCurrentWorkbook	For details, see section 2.2.5.13.
Ewr_RequestTimedOut	For details, see section 2.2.5.13.
Ewr_ServerCommunicationError	For details, see section 2.2.5.13.
Ewr_ServerAuthenticationError	For details, see section 2.2.5.13.
Ewr_Top10InvalidValue	For details, see section 2.2.5.13.
Ewr_Top10InvalidValue_Float	For details, see section 2.2.5.13.
DocumentIsIrmProtected	For details, see section 2.2.5.13.
Mewa_PageStateInitFailed	For details, see section 2.2.5.13.
Mewa_CriticalParameterMissing	For details, see section 2.2.5.13.
Mewa_GridViewRenderingFailed	For details, see section 2.2.5.13.
Mewa_FeatureNotActive	For details, see section 2.2.5.13.
OperationNotSupportedInViewOnly	For details, see section 2.2.5.13.
OperationOnInvalidState	For details, see section 2.2.5.13.
InvalidOrTimedOutSession	For details, see section 2.2.5.13.
InvalidOrTimedOutSessionRecoverable	For details, see section 2.2.5.13.
InvalidOrTimedOutSessionPageRefresh	For details, see section 2.2.5.13.
ScratchPadChangesLost	For details, see section 2.2.5.13.
MaxSessionsPerUserExceeded	For details, see section 2.2.5.13.
OperationCanceled	For details, see section 2.2.5.13.
MaxRequestDurationExceeded	For details, see section 2.2.5.13.
NoOccurrencesFound	For details, see section 2.2.5.13.
EcsInvalidNamedObject	For details, see section 2.2.5.13.
NoPublishedItems	For details, see section 2.2.5.13.
RetryError	For details, see section 2.2.5.13.
StopOpenOnRefreshFailure	For details, see section 2.2.5.13.
ProductExpired	For details, see section 2.2.5.13.
SortActionInvalid	For details, see section 2.2.5.13.
SortActionNotSupportedWithPivot	For details, see section 2.2.5.13.
CircularReferencesFound	For details, see section 2.2.5.13.
SessionNotFound	For details, see section 2.2.5.13.
NewWorkbookSessionTimeout	For details, see section 2.2.5.13.
NewWorkbookSessionTimeoutRecoverable	For details, see section 2.2.5.13.

Value	Meaning
GeneratedWorkbookSessionTimeoutRegenerate	For details, see section 2.2.5.13.
GeneratedWorkbookSessionTimeoutNonRecoverable	For details, see section 2.2.5.13.
GeneratedWorkbookSessionTimeoutRecoverable	For details, see section 2.2.5.13.
EditXLSFile	For details, see section 2.2.5.13.
UnsupportedFeatureEditWarning	For details, see section 2.2.5.13.
EditModeSessionExists	For details, see section 2.2.5.13.
NewerWorkbookExists	For details, see section 2.2.5.13.
ExternalDataOfficeLive	For details, see section 2.2.5.13.
PowerPivotOfficeLive	For details, see section 2.2.5.13.
LostAuthentication	For details, see section 2.2.5.13.
ListEntryNotFound_1	For details, see section 2.2.5.13.
ListEntryNotFound_2	For details, see section 2.2.5.13.
ListEntryAlreadyExists_1	For details, see section 2.2.5.13.
ListEntryAlreadyExists_2	For details, see section 2.2.5.13.
InvalidArgumentValue	For details, see section 2.2.5.13.
MissingArgumentName	For details, see section 2.2.5.13.
InvalidArgumentName	For details, see section 2.2.5.13.
ArgumentBadInRemove	For details, see section 2.2.5.13.
ManagementUIListEntryAlreadyExists	For details, see section 2.2.5.13.
ManagementUIListEntryNotFound	For details, see section 2.2.5.13.
ManagementUIInternalError	For details, see section 2.2.5.13.
UnsupportedUICulture	For details, see section 2.2.5.13.
UnsupportedDataCulture	For details, see section 2.2.5.13.
SpecifiedItemNotFound	For details, see section 2.2.5.13.
EcsSnapshotAccessDenied	For details, see section 2.2.5.13.
SaveFailed	For details, see section 2.2.5.13.
WrongEcs	For details, see section 2.2.5.13.
PasteDataLimitHit	For details, see section 2.2.5.13.
UndoStackEmpty	For details, see section 2.2.5.13.
RedoStackEmpty	For details, see section 2.2.5.13.
UndoStackCleared	For details, see section 2.2.5.13.
UndoCollabFail	For details, see section 2.2.5.13.

Value	Meaning
RedoCollabFail	For details, see section 2.2.5.13.
HyperlinkLocationRequired	For details, see section 2.2.5.13.
CollabLocaleMismatch	For details, see section 2.2.5.13.
RestoredLocale	For details, see section 2.2.5.13.
InvalidEditSession	For details, see section 2.2.5.13.
InvalidEditSessionPageRefresh	For details, see section 2.2.5.13.
InvalidEditSessionId	For details, see section 2.2.5.13.
UnableToLoadEditSession	For details, see section 2.2.5.13.
SavingWorkbookFailed	For details, see section 2.2.5.13.
RefreshLockFailed	For details, see section 2.2.5.13.
InvalidChartName	For details, see section 2.2.5.13.
RetryOutOfSync	For details, see section 2.2.5.13.
OperationFailed	For details, see section 2.2.5.13.
OpenInExcelActiveXError	For details, see section 2.2.5.13.
OpenInExcelCollaborationError	For details, see section 2.2.5.13.
ProcessingUserChangesFileDownloadIgnored	For details, see section 2.2.5.13.
PhoneticDataLossWarning	For details, see section 2.2.5.13.
NoViewingLicenseError	For details, see section 2.2.5.13.
NoEditingLicenseError	For details, see section 2.2.5.13.
BIFeatureNotAvailable	For details, see section 2.2.5.13.
BIFeatureNotAvailableOnOpen	For details, see section 2.2.5.13.
NoUnsupportedFeatureCopyAndEdit	For details, see section 2.2.5.13.
CrossEnvironmentEditNotSupported	For details, see section 2.2.5.13.
RestBiff8Unsupported	For details, see section 2.2.5.13.
ExtendedBIFeatureNotAvailable	For details, see section 2.2.5.13.
ExtendedBIROOFailed	For details, see section 2.2.5.13.
TransitionXls	For details, see section 2.2.5.13.
UnsupportedFeaturesSaveOverwrite	For details, see section 2.2.5.13.
UnsupportedFeaturesSaveCopy	For details, see section 2.2.5.13.
ChallengeAnonymousUser	For details, see section 2.2.5.13.
ClipboardAccessDenied	For details, see section 2.2.5.13.
CannotMergeCellsInTable	For details, see section 2.2.5.13.

Value	Meaning
MergeCellsLoseData	For details, see section 2.2.5.13.
CollabConflictError	For details, see section 2.2.5.13.
OdfCompatibilityWarning	For details, see section 2.2.5.13.
OdfUnsupportedEncryption	For details, see section 2.2.5.13.
OdfUnreadableContentGeneric	For details, see section 2.2.5.13.
Ewr_OdfUnreadableContentGeneric	For details, see section 2.2.5.13.
XLSMacroFailure	For details, see section 2.2.5.13.
XLSPreBiff8Failure	For details, see section 2.2.5.13.
XLSPasswordProtectionFailure	For details, see section 2.2.5.13.
XLSIRMFailure	For details, see section 2.2.5.13.
XLSUnknownFailures	For details, see section 2.2.5.13.
GenerateWorkbookFailureInvalidProperty	For details, see section 2.2.5.13.
GenerateWorkbookFailureInvalidGenerationItems	For details, see section 2.2.5.13.
GenerateWorkbookFailureTable	For details, see section 2.2.5.13.
GenerateWorkbookFailureConditionalFormatting	For details, see section 2.2.5.13.
GenerateWorkbookFailureSlicers	For details, see section 2.2.5.13.
GenerateWorkbookFailureChart	For details, see section 2.2.5.13.
GenerateWorkbookFailureOpenWorkbook	For details, see section 2.2.5.13.
GenerateWorkbookFailureUpdateTheme	For details, see section 2.2.5.13.
GenerateWorkbookFailureAttribution	For details, see section 2.2.5.13.
GenerateWorkbookFailureResizeColumn	For details, see section 2.2.5.13.
GenerateWorkbookFailureClearUndoStack	For details, see section 2.2.5.13.
CrossDomainAjaxNotSupported	For details, see section 2.2.5.13.
WorkbookNotInCollection	For details, see section 2.2.5.13.
FossEditUnknown	For details, see section 2.2.5.13.
FossSaveUnknown	For details, see section 2.2.5.13.
FossSaveEmptyTitle	For details, see section 2.2.5.13.
FossSaveEmptyQuestion	For details, see section 2.2.5.13.
FossSaveEmptySurvey	For details, see section 2.2.5.13.
FossSaveSurveyNotFound	For details, see section 2.2.5.13.
FossSaveTableLimited	For details, see section 2.2.5.13.
FossSaveTooManyQuestions	For details, see section 2.2.5.13.

Value	Meaning
FossSaveBlocked	For details, see section 2.2.5.13.
FossViewDefaultError	For details, see section 2.2.5.13.
FossViewBlocked	For details, see section 2.2.5.13.
FossSubmitDefaultError	For details, see section 2.2.5.13.
FossSubmitTableLimited	For details, see section 2.2.5.13.
FossDeleteSurveyNotFound	For details, see section 2.2.5.13.
FossShareSurveyNotFound	For details, see section 2.2.5.13.
FossShareHostError	For details, see section 2.2.5.13.
FossUnshareHostError	For details, see section 2.2.5.13.
FossEnvironmentUnsupported	For details, see section 2.2.5.13.
FossViewUnsupportedFeatures	For details, see section 2.2.5.13.
EwrPrintSelectionTooBig	For details, see section 2.2.5.13.
DdaUnsupportedCoercionType	For details, see section 2.2.5.13.
DdaReadUnsupportedSelection	For details, see section 2.2.5.13.
DdaReadCoercionBindingMismatch	For details, see section 2.2.5.13.
DdaReadInvalidRowColCount	For details, see section 2.2.5.13.
DdaReadCoercionSelectionMismatch	For details, see section 2.2.5.13.
DdaReadInvalidRowColOffset	For details, see section 2.2.5.13.
DdaReadBeyondDataLimits	For details, see section 2.2.5.13.
DdaWriteUnsupportedDataObject	For details, see section 2.2.5.13.
DdaWriteUnsupportedSelection	For details, see section 2.2.5.13.
DdaWriteSelectionShapeAndDataMismatch	For details, see section 2.2.5.13.
DdaWriteDataOverlap	For details, see section 2.2.5.13.
DdaWriteDataOverflow	For details, see section 2.2.5.13.
DdaWriteInvalidRowColOffset	For details, see section 2.2.5.13.
DdaWriteCoercionDataMismatch	For details, see section 2.2.5.13.
DdaWriteCoercionSelectionMismatch	For details, see section 2.2.5.13.
DdaWriteBeyondDataLimits	For details, see section 2.2.5.13.
DdaWriteTableHasNoHeaders	For details, see section 2.2.5.13.
DdaBindingNotFound	For details, see section 2.2.5.13.
DdaBindingInvalidSelection	For details, see section 2.2.5.13.
DdaBindingInvalidOperation	For details, see section 2.2.5.13.

Value	Meaning
DdaBindingNamedItemNotFound	For details, see section 2.2.5.13.
DdaBindingMultipleNamedItemFound	For details, see section 2.2.5.13.
DdaBindingInvalidNamedItemForBindingType	For details, see section 2.2.5.13.
DdaBindingUnknownType	For details, see section 2.2.5.13.
DdaBindingInvalidRef	For details, see section 2.2.5.13.
DdaStaleSettings	For details, see section 2.2.5.13.
DdaNoAccessHiddenCells	For details, see section 2.2.5.13.
JsomBrowserUdfsAbandoned	For details, see section 2.2.5.13.
JsomBrowserUdfsCanceled	For details, see section 2.2.5.13.
JsomBrowserUdfsRecalcFailed	For details, see section 2.2.5.13.
AccessTokenExpiringWarning	For details, see section 2.2.5.13.
AccessTokenExpiredWarning	For details, see section 2.2.5.13.
DataTypeMismatch	For details, see section 2.2.5.13.
CloneWorkbookAllSheetsInteractiveReports	For details, see section 2.2.5.13.
Count	For details, see section 2.2.5.13.

2.2.5.15 ExcelServerMessageSeverity

Namespace: <http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server>

Specifies the severity of the **alert** that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageSeverity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error"/>
    <xs:enumeration value="Warning"/>
    <xs:enumeration value="Information"/>
    <xs:enumeration value="Progress"/>
    <xs:enumeration value="GettingStarted"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServerMessageSeverity** simple type.

Value	Meaning
Error	The alert is of type error.
Warning	The alert is of type warning.
Information	The alert is of type information.
Progress	MUST NOT be used.

Value	Meaning
GettingStarted	MUST NOT be used.

2.2.5.16 ExcelServerMessageSeverity

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the severity of the **alert** that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageSeverity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error"/>
    <xs:enumeration value="Warning"/>
    <xs:enumeration value="Information"/>
    <xs:enumeration value="Progress"/>
    <xs:enumeration value="GettingStarted"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServerMessageSeverity** simple type.

Value	Meaning
Error	The alert is of type error.
Warning	The alert is of type warning.
Information	The alert is of type information.
Progress	MUST NOT be used.
GettingStarted	MUST NOT be used.

2.2.5.17 ExcelServerMessageType

Namespace: <http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server>

Specifies type of the **alert** that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Alert"/>
    <xs:enumeration value="Status"/>
    <xs:enumeration value="Confirmation"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServerMessageType** simple type.

Value	Meaning
Alert	The alert is of type alert.

Value	Meaning
Status	The alert is of type status.
Confirmation	The alert is of type confirmation.

2.2.5.18 ExcelServerMessageType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the type of the **alert** that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Alert"/>
    <xs:enumeration value="Status"/>
    <xs:enumeration value="Confirmation"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServerMessageType** simple type.

Value	Meaning
Alert	The alert is of type alert.
Status	The alert is of type status.
Confirmation	The alert is of type confirmation.

2.2.5.19 GridRenderingOptions

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies options to use when rendering a **Workbook** ([\[MS-EXSPXML3\]](#) section 2.1.1).

```
<xs:simpleType name="GridRenderingOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="HideGridlines"/>
        <xs:enumeration value="HideRowAndColumnHeaders"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **GridRenderingOptions** simple type.

Value	Meaning
None	Use the default style.
HideGridlines	Do not include gridlines.
HideRowAndColumnHeaders	Do not include row and column headers.

2.2.5.20 guid

Namespace: <http://microsoft.com/wsdl/types/>

Specifies a **GUID** value, as specified in [\[RFC4122\]](#).

```
<xs:simpleType name="guid" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
  </xs:restriction>
</xs:simpleType>
```

2.2.5.21 ImageRenderingOptions

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the options to use when rendering an image or chart.

```
<xs:simpleType name="ImageRenderingOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="KeepAspectRatio"/>
        <xs:enumeration value="IsThumbnail"/>
        <xs:enumeration value="NonInteractive"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **ImageRenderingOptions** simple type.

Value	Meaning
KeepAspectRatio	Keep the same aspect ratio as the image in the workbook.
IsThumbnail	Format the image for a small display size.
NonInteractive	Render the chart as a non-interactive image.

2.2.5.22 NamedObjectType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the type of a **published item**.

```
<xs:simpleType name="NamedObjectType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="InvalidNamedObjectType"/>
    <xs:enumeration value="Chart"/>
    <xs:enumeration value="PivotTable"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="NamedRange"/>
    <xs:enumeration value="WebExtension"/>
    <xs:enumeration value="MaxNamedObjectType"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **NamedObjectType** simple type.

Value	Meaning
InvalidNamedObjectType	MUST NOT be used.
Chart	Specifies that the published item is a chart.
PivotTable	Specifies that the published item is a PivotTable .
Table	Specifies that the published item is a table .
NamedRange	Specifies that the published item is a named range .
WebExtension	Specifies that the published item is an Office Web Extension .
MaxNamedObjectType	MUST NOT be used.

2.2.5.23 OpenWorkbookFlags

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Control flags for **OpenWorkbook**.

```
<xs:simpleType name="OpenWorkbookFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="NewWorkbook"/>
        <xs:enumeration value="EditMode"/>
        <xs:enumeration value="DisableUndo"/>
        <xs:enumeration value="Recyclable"/>
        <xs:enumeration value="ShouldCheckCanary"/>
        <xs:enumeration value="InternalWorkbook"/>
        <xs:enumeration value="EmbedView"/>
        <xs:enumeration value="DisallowXls"/>
        <xs:enumeration value="CanOverwriteUnsupportedFile"/>
        <xs:enumeration value="SkipAuthentication"/>
        <xs:enumeration value="GenerateWorkbook"/>
        <xs:enumeration value="PreviouslyHadUnsupportedFeatures"/>
        <xs:enumeration value="OnlyOpenFromCollection"/>
        <xs:enumeration value="LoadedOnDemand"/>
        <xs:enumeration value="PreviouslyHadUnsupportedFeaturesForEdit"/>
        <xs:enumeration value="SuppressRefreshOnOpen"/>
        <xs:enumeration value="OpenForRefresh"/>
        <xs:enumeration value="AllowExcelServices"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

    <xs:enumeration value="IgnoreUnsupportedFeatures"/>
    <xs:enumeration value="RetainEditSessionWithUnsupportedFeatures"/>
    <xs:enumeration value="AllowExtendedBIFeatures"/>
  </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **OpenWorkbookFlags** simple type.

Value	Meaning
NewWorkbook	The protocol server creates a new workbook session . Mutually exclusive to EditMode .
EditMode	The protocol server creates an edit session , or adds a participant to an existing open edit session. Mutually exclusive to NewWorkbook and Recyclable .
DisableUndo	The protocol server disables undo functionality in the open workbook.
Recyclable	The protocol server uses session recycling . Mutually exclusive to EditMode .
ShouldCheckCanary	MUST NOT be used.
InternalWorkbook	MUST NOT be used.
EmbedView	MUST NOT be used.
DisallowXls	MUST NOT be used.
CanOverwriteUnsupportedFile	MUST NOT be used.
SkipAuthentication	MUST NOT be used.
GenerateWorkbook	MUST NOT be used.
PreviouslyHadUnsupportedFeatures	The protocol server is reopening a workbook that previously had unsupported content. MUST be used if the PreviousSessionId value of OpenWorkbookInParameters (section 2.2.4.51) is present and HasUnsupportedFeatures was present in the OpenWorkbookOutFlags (section 3.1.4.30.4.1) of the OpenWorkbookResponse (section 3.1.4.30.2.2) from which the PreviousSessionId value was taken. Otherwise, MUST NOT be used.
OnlyOpenFromCollection	MUST NOT be used.
LoadedOnDemand	MUST NOT be used.
PreviouslyHadUnsupportedFeaturesForEdit	The protocol server is reopening a workbook that previously had unsupported content that blocks editing of the workbook.
SuppressRefreshOnOpen	The protocol server MUST NOT refresh connected data during OpenWorkbook .
OpenForRefresh	The database where the data model is loaded MUST NOT be read only. MUST be ignored by the protocol server for workbooks with no data model.

Value	Meaning
AllowExcelServices	MUST be used.
IgnoreUnsupportedFeatures	MUST NOT be used.
RetainEditSessionWithUnsupportedFeatures	The protocol server MUST NOT close the edit session if the workbook contains unsupported content that blocks editing of the workbook.
AllowExtendedBIFeatures	MUST NOT be used.

2.2.5.24 PivotFilterType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFilterType** is an enumeration of types of **PivotTable filters** that can be applied on a **PivotTable field**. The following types of PivotTable filters are supported:

- **Top N filter** or **bottom N filter**
- PivotTable **custom label filter**
- PivotTable **custom value filter**

```
<xs:simpleType name="PivotFilterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Invalid"/>
    <xs:enumeration value="FirstTop10"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Percent"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="LastTop10"/>
    <xs:enumeration value="CaptionFirst"/>
    <xs:enumeration value="CaptionEquals"/>
    <xs:enumeration value="CaptionDoesNotEqual"/>
    <xs:enumeration value="CaptionBeginsWith"/>
    <xs:enumeration value="CaptionDoesNotBeginWith"/>
    <xs:enumeration value="CaptionEndsWith"/>
    <xs:enumeration value="CaptionDoesNotEndWith"/>
    <xs:enumeration value="CaptionContains"/>
    <xs:enumeration value="CaptionDoesNotContain"/>
    <xs:enumeration value="CaptionIsGreaterThan"/>
    <xs:enumeration value="CaptionIsGreaterThanOrEqualTo"/>
    <xs:enumeration value="CaptionIsLessThan"/>
    <xs:enumeration value="CaptionIsLessThanOrEqualTo"/>
    <xs:enumeration value="CaptionIsBetween"/>
    <xs:enumeration value="CaptionIsNotBetween"/>
    <xs:enumeration value="ValueFirst"/>
    <xs:enumeration value="ValueEqual"/>
    <xs:enumeration value="ValueNotEqual"/>
    <xs:enumeration value="ValueGreaterThan"/>
    <xs:enumeration value="ValueGreaterThanOrEqual"/>
    <xs:enumeration value="ValueLessThan"/>
    <xs:enumeration value="ValueLessThanOrEqual"/>
    <xs:enumeration value="ValueBetween"/>
    <xs:enumeration value="ValueNotBetween"/>
    <xs:enumeration value="DateFirst"/>
    <xs:enumeration value="DateEquals"/>
    <xs:enumeration value="DateOlderThan"/>
  </xs:restriction>
</xs:simpleType>
```

```

<xs:enumeration value="DateNewerThan"/>
<xs:enumeration value="DateBetween"/>
<xs:enumeration value="DateTomorrow"/>
<xs:enumeration value="DateToday"/>
<xs:enumeration value="DateYesterday"/>
<xs:enumeration value="DateNextWeek"/>
<xs:enumeration value="DateThisWeek"/>
<xs:enumeration value="DateLastWeek"/>
<xs:enumeration value="DateNextMonth"/>
<xs:enumeration value="DateThisMonth"/>
<xs:enumeration value="DateLastMonth"/>
<xs:enumeration value="DateNextQuarter"/>
<xs:enumeration value="DateThisQuarter"/>
<xs:enumeration value="DateLastQuarter"/>
<xs:enumeration value="DateNextYear"/>
<xs:enumeration value="DateThisYear"/>
<xs:enumeration value="DateLastYear"/>
<xs:enumeration value="DateYearToDate"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter1"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter2"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter3"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter4"/>
<xs:enumeration value="DateAllDatesInPeriodJanuary"/>
<xs:enumeration value="DateAllDatesInPeriodFebruary"/>
<xs:enumeration value="DateAllDatesInPeriodMarch"/>
<xs:enumeration value="DateAllDatesInPeriodApril"/>
<xs:enumeration value="DateAllDatesInPeriodMay"/>
<xs:enumeration value="DateAllDatesInPeriodJune"/>
<xs:enumeration value="DateAllDatesInPeriodJuly"/>
<xs:enumeration value="DateAllDatesInPeriodAugust"/>
<xs:enumeration value="DateAllDatesInPeriodSeptember"/>
<xs:enumeration value="DateAllDatesInPeriodOctober"/>
<xs:enumeration value="DateAllDatesInPeriodNovember"/>
<xs:enumeration value="DateAllDatesInPeriodDecember"/>
<xs:enumeration value="DateNotEqual"/>
<xs:enumeration value="DateOlderOrEqual"/>
<xs:enumeration value="DateNewerOrEqual"/>
<xs:enumeration value="DateNotBetween"/>
<xs:enumeration value="Last"/>
</xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **PivotFilterType** simple type.

Value	Meaning
Invalid	Neither a PivotTable custom filter nor a top N filter nor a bottom N filter are applied.
FirstTop10	A top N filter by count or a bottom N filter by count is applied. Used with top N filter or bottom N filter.
Count	A top N filter by count or a bottom N filter by count is applied. Used with top N filter or bottom N filter.
Percent	A top N filter by percent or a bottom N filter by percent is applied. Used with top N filter or bottom N filter.
Sum	A top N filter by sum or a bottom N filter by sum is applied. Used with top N filter or bottom N filter.
LastTop10	A top N filter by sum or a bottom N filter by sum is applied. Used with top N filter or bottom N filter.
CaptionFirst	The PivotTable member caption is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable

Value	Meaning
	custom label filter.
CaptionEquals	The PivotTable member caption is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotEqual	The PivotTable member caption is not equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionBeginsWith	The PivotTable member caption begins with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotBeginWith	The PivotTable member caption does not begin with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionEndsWith	The PivotTable member caption ends with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotEndWith	The PivotTable member caption does not end with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionContains	The PivotTable member caption contains the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotContain	The PivotTable member caption does not contain the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsGreaterThan	The PivotTable member caption is greater than the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsGreaterThanOrEqualTo	The PivotTable member caption is greater than or equal to the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsLessThan	The PivotTable member caption is less than the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsLessThanOrEqualTo	The PivotTable member caption is less than or equal to the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsBetween	The PivotTable member caption is greater than or equal to the value of the first PivotTable filter parameter and less than or equal to the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
CaptionIsNotBetween	The PivotTable member caption is less than the value of the first PivotTable filter parameter or greater than the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
ValueFirst	The value of the PivotTable member is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.

Value	Meaning
ValueEqual	The value of the PivotTable member is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueNotEqual	The value of the PivotTable member is not equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueGreaterThan	The value of the PivotTable member is greater than the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueGreaterThanOrEqual	The value of the PivotTable member is greater than or equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueLessThan	The value of the PivotTable member is less than the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueLessThanOrEqual	The value of the PivotTable member is less than or equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueBetween	The value of the PivotTable member is greater than or equal to the value of the first PivotTable filter parameter and less than or equal to the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom value filter.
ValueNotBetween	The value of the PivotTable member is less than the value of the first PivotTable filter parameter or greater than the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom value filter.
DateFirst	The PivotTable member caption is equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateEquals	The PivotTable member caption is equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateOlderThan	The PivotTable member caption is less than the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateNewerThan	The PivotTable member caption is greater than the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateBetween	The PivotTable member caption is greater than or equal to the value of the first PivotTable filter parameter and less than or equal to the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
DateTomorrow	The PivotTable member caption is tomorrow's date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateToday	The PivotTable member caption is today's date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateYesterday	The PivotTable member caption is yesterday's date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.

Value	Meaning
DateNextWeek	The PivotTable member caption is a date next week. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisWeek	The PivotTable member caption is a date this week. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateLastWeek	The PivotTable member caption is a date last week. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNextMonth	The PivotTable member caption is a date next month. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisMonth	The PivotTable member caption is a date this month. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateLastMonth	The PivotTable member caption is a date last month. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNextQuarter	The PivotTable member caption is a date next quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisQuarter	The PivotTable member caption is a date this quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateLastQuarter	The PivotTable member caption is a date last quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNextYear	The PivotTable member caption is a date next year. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisYear	The PivotTable member caption is a date this year. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateLastYear	The PivotTable member caption is a date last year. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateYearToDate	The PivotTable member caption is a date year to date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter1	The PivotTable member caption is a date in the first quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter2	The PivotTable member caption is a date in the second quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter3	The PivotTable member caption is a date in the third quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter4	The PivotTable member caption is a date in the fourth quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodJanuary	The PivotTable member caption is a date in January. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodFebruary	The PivotTable member caption is a date in February. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodMarch	The PivotTable member caption is a date in March. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodApril	The PivotTable member caption is a date in April. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.

Value	Meaning
DateAllDatesInPeriodMay	The PivotTable member caption is a date in May. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodJune	The PivotTable member caption is a date in June. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodJuly	The PivotTable member caption is a date in July. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodAugust	The PivotTable member caption is a date in August. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodSeptember	The PivotTable member caption is a date in September. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodOctober	The PivotTable member caption is a date in October. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodNovember	The PivotTable member caption is a date in November. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodDecember	The PivotTable member caption is a date in December. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNotEqual	The PivotTable member caption is not equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateOlderOrEqual	The PivotTable member caption is less than or equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateNewerOrEqual	The PivotTable member caption is greater than or equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateNotBetween	The PivotTable member caption is a date less than the first parameter or greater than the second parameter PivotTable filter parameters. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
Last	MUST NOT be used.

2.2.5.25 RangeReference

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A string that is used by the protocol server to identify a range on a **worksheet** in a **workbook**, in operations specified by this protocol. MUST NOT be longer than 32,768 characters. MAY [<9>](#) use any format to identify the range.

```
<xs:simpleType name="RangeReference" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string"/>
</xs:simpleType>
```

2.2.5.26 ResourceThrottlingScenario

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

MUST NOT be used.

```
<xs:simpleType name="ResourceThrottlingScenario" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Private"/>
    <xs:enumeration value="Public"/>
    <xs:enumeration value="Unlimited"/>
    <xs:enumeration value="Max"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ResourceThrottlingScenario** simple type.

Value	Meaning
Private	MUST NOT be used.
Public	MUST NOT be used.
Unlimited	MUST NOT be used.
Max	MUST NOT be used.

2.2.5.27 RestSlicerSelectionMode

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Indicates the behavior to follow when updating the state of the slicer selection.

```
<xs:simpleType name="RestSlicerSelectionMode" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SelectedOnly"/>
    <xs:enumeration value="ClearFilter"/>
    <xs:enumeration value="Cumulative"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **RestSlicerSelectionMode** simple type.

Value	Meaning
SelectedOnly	The following steps MUST be performed in the following order: <ul style="list-style-type: none">All previously selected items MUST be unselected.Next slicer items identified for selection by the protocol client MUST be selected.The slicer items identified to be unselected by the protocol client MUST be ignored.If there is no selected items as a result of the previous operations, all items in the slicer MUST be selected.

Value	Meaning
ClearFilter	All items in the slicer MUST be selected.
Cumulative	<p>The following steps MUST be performed in the following order:</p> <ul style="list-style-type: none"> ▪ First all slicer items identified for selection by the protocol client MUST be selected ▪ Next all slicer items identified to be unselected by the protocol client MUST be unselected. ▪ If there are no selected items as a result of the previous operation – all items in the slicer MUST be selected.

2.2.5.28 RestTimelineLevel

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Indicates the granularity of the time period in a timeline.

```
<xs:simpleType name="RestTimelineLevel" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Years"/>
    <xs:enumeration value="Quarters"/>
    <xs:enumeration value="Months"/>
    <xs:enumeration value="Days"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **RestTimelineLevel** simple type.

Value	Meaning
Years	Granularity level is years.
Quarters	Granularity level is quarters
Months	Granularity level is months.
Days	Granularity level is days.

2.2.5.29 RestTimelineSelectionState

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Indicates the selection mode for filtering a timeline.

```
<xs:simpleType name="RestTimelineSelectionState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>

    <xs:enumeration value="Between"/>
    <xs:enumeration value="ClearFilter"/>
    <xs:enumeration value="Unsupported"/>
  </xs:restriction>
</xs:simpleType>
```

```

    </xs:restriction>
  </xs:simpleType>

```

The following table specifies the allowable values for the **RestTimelineSelectionState** simple type.

Value	Meaning
None	MUST not be used.
Between	Filter for a timeline is a single contiguous period of time.
ClearFilter	There is no filter applied.
Unsupported	Filter is applied on the underlying connected data but it is not a single contiguous period of time and is not supported by the timeline.

2.2.5.30 ScenarioRestrictions

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Indicates the scenarios which apply to the current request.

```

<xs:simpleType name="ScenarioRestrictions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Forms"/>
        <xs:enumeration value="LegacyWebServices"/>
        <xs:enumeration value="Syndicate"/>
        <xs:enumeration value="LimitedEdit"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **ScenarioRestrictions** simple type.

Value	Meaning
None	MUST NOT be used.
Forms	MUST NOT be used.
LegacyWebServices	The legacy web service scenario. MUST be set if the value of ProtocolClientId element in the parameter as defined in section 2.2.4.20 is set to "ms-soap". Otherwise MUST NOT be used.
Syndicate	MUST NOT be used.
LimitedEdit	MUST NOT be used.

2.2.5.31 ServerStateFlags

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An enumeration specifying the state of the protocol server.

```
<xs:simpleType name="ServerStateFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ShuttingDown"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **ServerStateFlags** simple type.

Value	Meaning
ShuttingDown	The protocol server is shutting down.

2.2.5.32 ServerStateFlags

Namespace: http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server

Specifies the state of the protocol server.

```
<xs:simpleType name="ServerStateFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Probation"/>
        <xs:enumeration value="ShuttingDown"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **ServerStateFlags** simple type.

Value	Meaning
None	MUST NOT be used.
Probation	MUST NOT be used.
ShuttingDown	The protocol server is shutting down.

2.2.5.33 SessionIdentifier

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **SessionIdentifier** string is used to uniquely identify a **session (2)** on the protocol server, and to contain information about the session (2).

The **SessionIdentifier** MUST have the following layout. (Numeric values in parts 1, 3, 5, 6, 8, 10, and 12 MUST follow the **s:integer** type representation.)

- **Part 1:** MUST be the value 1, followed by a period (.).
- **Part 2:** MUST be "E" if the identified session (2) is an **edit session**. MUST be "G" if the identified session (2) is a **new workbook session** created by **GenerateWorkbookFromHtml** (section [3.1.4.50](#)). Otherwise, MUST be "V".
- **Part 3:** The number of characters in part 4, followed by a period (.).
- **Part 4:** A unique string. MUST be greater than or equal to 20 and less than or equal to 32,647 characters long.
- **Part 5:** The sum of number of characters in parts 6-9, followed by a period (.).
- **Part 6:** The number of characters in part 7, followed by a period (.).
- **Part 7:** The UI culture of the session (2). A language tag, as specified in [\[RFC1766\]](#), Section 2.
- **Part 8:** The number of characters in part 9, followed by a period (.).
- **Part 9:** The **data culture** of the session (2). A language tag, as specified in [\[RFC1766\]](#), Section 2.
- **Part 10:** The number of characters in part 11, followed by a period (.).
- **Part 11:** MUST be equal to the value of **RequestSiteId** passed in **parameter**, in the **OpenWorkbook** operation.
- **Part 12:** The number of characters in part 13, followed by a period (.).
- **Part 13:** If the identified session (2) is a new workbook session created by **GenerateWorkbookFromHtml**, MUST be the **trusted location** of the new workbook session. Else if the identified session (2) is any other new workbook session, then MUST be "U".

Otherwise, if the identified session (2) is not an edit session, MUST be "N". If the identified session (2) is an edit session, MUST be a unique string. The protocol server uses this string to uniquely identify a participant in the session.

```
<xs:simpleType name="SessionIdentifier" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string"/>  
</xs:simpleType>
```

2.2.5.34 SharedPivotMenuAnchorType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Type information about a **PivotTable** or PivotTable anchor.

```

<xs:simpleType name="SharedPivotMenuAnchorType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="AnchorNotOnPivot"/>
    <xs:enumeration value="AnchorOnSheetCell"/>
    <xs:enumeration value="AnchorOnChartSeries"/>
    <xs:enumeration value="AnchorOnChartCat"/>
    <xs:enumeration value="AnchorOnChartDataPoint"/>
    <xs:enumeration value="AnchorOnChartPageButton"/>
    <xs:enumeration value="AnchorOnChartRowButton"/>
    <xs:enumeration value="AnchorOnChartColButton"/>
    <xs:enumeration value="AnchorOnChart"/>
    <xs:enumeration value="AnchorOnPivotChartHierarchy"/>
    <xs:enumeration value="AnchorOnPivotHierarchy"/>
    <xs:enumeration value="AnchorOnPivotChartHierarchyNotOnPivot"/>
    <xs:enumeration value="AnchorOnPivotHierarchyNotOnPivot"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **SharedPivotMenuAnchorType** simple type.

Value	Meaning
AnchorNotOnPivot	The anchor is not on a PivotTable or PivotChart
AnchorOnSheetCell	The anchor is on a cell of a sheet (2) , and the cell MUST be in a PivotTable
AnchorOnChartSeries	The anchor is on a chart series
AnchorOnChartCat	The anchor is on a chart category
AnchorOnChartDataPoint	The anchor is on a chart data point
AnchorOnChartPageButton	The anchor is on the filter button of a PivotChart. If the PivotChart has a PivotTable connected to it, the anchor corresponding to a hierarchy in the filter area of the OLAP -based PivotTable, or a field in the filter area of the native-based PivotTable
AnchorOnChartRowButton	The anchor is on the filter button of a PivotChart. If the PivotChart has a PivotTable connected to it, the anchor corresponding to a hierarchy in the row area of the OLAP -based PivotTable, or a field in the row area of the native-based PivotTable.
AnchorOnChartColButton	The anchor is on the filter button of a PivotChart. If the PivotChart has a PivotTable connected to it, the anchor corresponding to a hierarchy in the column area of the OLAP -based PivotTable, or a field in the column area of the native-based PivotTable.
AnchorOnChart	The anchor is on a PivotChart, but not on specific PivotChart element
AnchorOnPivotChartHierarchy	The anchor is on the field in the field list of a native-based PivotChart, or on a hierarchy in the field list of an OLAP-based PivotChart. The field or the hierarchy MUST be used explicitly as a series, category, data point, or implicitly used as a filter criteria for the PivotChart.
AnchorOnPivotHierarchy	The anchor is on the field in the field list of native-based PivotChart, or on a hierarchy in the field list of an OLAP-based PivotChart. The field or the hierarchy MUST NOT be shown explicitly as a series, category, data point, or implicitly used as a filter criteria for the PivotChart.
AnchorOnPivotChartHierarchyNotOnPivot	The anchor is on the field in the field list of native-based PivotChart, or on a hierarchy in the field list of an OLAP-based PivotChart. The field or the hierarchy MUST NOT be used explicitly as a series,

Value	Meaning
	category, data point, and it MUST NOT be used as a filter criteria for the PivotChart.
AnchorOnPivotHierarchyNotOnPivot	The anchor is on the field in the field list of native-based PivotTable, or on a hierarchy in the field list of an OLAP-based PivotTable. The field or the hierarchy MUST NOT be used in row area, column area, data area, filter criteria in the PivotTable.

2.2.5.35 SheetFlags

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Describes options for a **sheet (1)**.

```
<xs:simpleType name="SheetFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="RtlName"/>
        <xs:enumeration value="DisplayRtl"/>
        <xs:enumeration value="HeadersVisible"/>
        <xs:enumeration value="DisplayOutlines"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **SheetFlags** simple type.

Value	Meaning
None	Used if the sheet (1) is not a worksheet , or if none of the other values are set.
RtlName	MUST be present if the worksheet name will display in right-to-left format. MUST NOT be present if the worksheet name will display in left-to-right format.
DisplayRtl	MUST be present if the worksheet content will display in right-to-left format. MUST NOT be present if worksheet content will display in left-to-right format.
HeadersVisible	MUST be present if the worksheet will display worksheet header , otherwise if MUST NOT be present.
DisplayOutlines	MUST be present if the worksheet will display outlines , otherwise it MUST NOT be present.

2.2.5.36 SheetType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Indicates the type of a **sheet (1)**.

```

<xs:simpleType name="SheetType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Worksheet"/>
    <xs:enumeration value="Chart"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **SheetType** simple type.

Value	Meaning
Worksheet	A worksheet consisting of cell data.
Chart	A sheet (1) that consists of a single chart object and no cell data.

2.2.5.37 SheetVisibility

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Indicates the visibility state of a **sheet (2)**.

```

<xs:simpleType name="SheetVisibility" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Visible"/>
    <xs:enumeration value="Hidden"/>
    <xs:enumeration value="VeryHidden"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **SheetVisibility** simple type.

Value	Meaning
Visible	sheet (2) is visible to the user.
Hidden	sheet (2) is not visible to the user, but can be unhidden by the user.
VeryHidden	sheet (2) is not visible to the user and cannot be unhidden by the user.

2.2.5.38 SlicerOptionsBits

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies options for operations on slicers.

```

<xs:simpleType name="SlicerOptionsBits" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="UseNameAsId"/>
        <xs:enumeration value="ReportVersion"/>
        <xs:enumeration value="SelectItemsByName"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

```

    <xs:enumeration value="IgnoreVersionMismatch"/>
    <xs:enumeration value="ReportUniqueNames"/>
    <xs:enumeration value="GetItemSlicers"/>
    <xs:enumeration value="GetTimeSlicers"/>
    <xs:enumeration value="NoExternalDataConnection"/>
  </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **SlicerOptionsBits** simple type.

Value	Meaning
UseNameAsId	MUST not be used.
ReportVersion	MUST not be used.
SelectItemsByName	MUST not be used.
IgnoreVersionMismatch	MUST not be used.
ReportUniqueNames	MUST not be used.
GetItemSlicers	Retrieve a list of items in a slicer.
GetTimeSlicers	Retrieve a list of timelines.
NoExternalDataConnection	MUST not be used.

2.2.5.39 SortByType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Indicates the type of a sort operation.

```

<xs:simpleType name="SortByType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SortByUnsupported"/>
    <xs:enumeration value="SortByNone"/>
    <xs:enumeration value="SortByColumn"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **SortByType** simple type.

Value	Meaning
SortByUnsupported	Unsupported sort status.
SortByNone	No sort status.
SortByColumn	Sort by the specified column.

2.2.5.40 StateSortBy

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Indicates the state of a sort operation.

```
<xs:simpleType name="StateSortBy" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="ByName"/>
    <xs:enumeration value="ColumnID"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **StateSortBy** simple type.

Value	Meaning
None	No sort state.
ByName	Sort by name.
ColumnID	Sort by column ID.

2.2.5.41 Top10FilterType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **Top10FilterType** type is an enumeration that specifies the type of **top N filter** or **bottom N filter** that is applied to a **PivotTable** field.

```
<xs:simpleType name="Top10FilterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Invalid"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Percent"/>
    <xs:enumeration value="Sum"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **Top10FilterType** simple type.

Value	Meaning
Invalid	This value MUST NOT be used.
Count	A top N filter by count or a bottom N filter by count is applied.
Percent	A top N filter by percent or a bottom N filter by percent is applied.
Sum	A top N filter by sum or a bottom N filter by sum is applied.

2.2.5.42 UndoRedoEnabledState

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Indicates the current enabled state of undo and redo operations.

```
<xs:simpleType name="UndoRedoEnabledState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Enabled"/>
    <xs:enumeration value="DisabledEmptyStack"/>
    <xs:enumeration value="DisabledClearedStack"/>
    <xs:enumeration value="DisabledCollab"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **UndoRedoEnabledState** simple type.

Value	Meaning
None	Represents an uninitialized or invalid state.
Enabled	Operations are enabled.
DisabledEmptyStack	Operations are disabled because there is nothing to undo.
DisabledClearedStack	Operations are disabled because an operation was executed that doesn't support undo.
DisabledCollab	Operations are disabled because another user in the session (2) made the last edit.

2.2.5.43 WorkbookType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **WorkbookType** simple type is an enumeration that is used to specify the form of the requested **workbook**.

```
<xs:simpleType name="WorkbookType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="FullWorkbook"/>
    <xs:enumeration value="FullSnapshot"/>
    <xs:enumeration value="PublishedItemsSnapshot"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **WorkbookType** simple type.

Value	Meaning
FullWorkbook	The protocol server returns the workbook.
FullSnapshot	The protocol server returns a snapshot that contains the entire contents of the workbook.
PublishedItemsSnapshot	The protocol server returns a published items snapshot .

2.2.6 Attributes

This specification does not define any common **XML schema** attribute definitions.

2.2.7 Groups

This specification does not define any common **XML schema** group definitions.

2.2.8 Attribute Groups

This specification does not define any common **XML schema** attribute group definitions.

3 Protocol Details

In the following sections, the schema definition might differ from the processing rules imposed by the protocol. The **WSDL** in this specification matches the WSDL that shipped with the product and provides a base description of the schema. The text that introduces the WSDL might specify differences that reflect actual Microsoft product behavior. For example, the schema definition might allow for an element to be **empty**, **null**, or **not present** but the behavior of the protocol as specified restricts the same elements to being **non-empty**, **not null**, and **present**.

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

Except where specified, protocol clients SHOULD interpret HTTP status codes returned by the protocol server as specified in [\[RFC2616\]](#), section 10.

This protocol allows protocol servers to perform implementation-specific authorization checks and notify protocol clients of authorization faults as specified previously in this section.

This protocol allows protocol servers to perform implementation-specific localization of text in various messages. Except where specified, the localization of this text is an implementation-specific behavior of the protocol server and not significant for interoperability.

The following high-level sequence diagram illustrates the operation of the protocol.

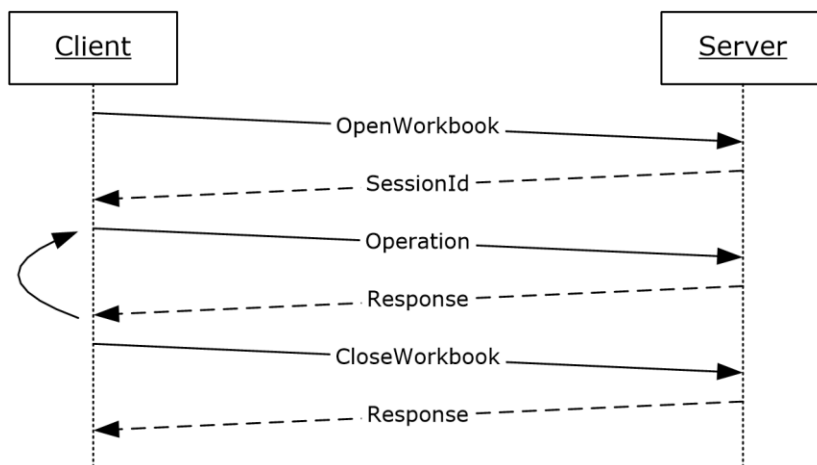


Figure 2: Excel Calculation Web Service Protocol high-level sequence diagram

Session Behavior

View Sessions

A **view session** is created on a successful **OpenWorkbook** request, as specified in **OpenWorkbook** (section [3.1.4.30](#)). A view session stops responding to operations after a successful call to the **CloseWorkbook** operation or after the view session has timed out.

NewWorkbook Sessions

A **new workbook session** is created on a successful **OpenWorkbook** request, as specified in **OpenWorkbook**. A new workbook session stops responding to operations after a successful call to the **CloseWorkbook** operation or after the new workbook session has timed out.

Edit Sessions

An **edit session** is created on a successful **OpenWorkbook** request, unless one already exists for the same **workbook**, as specified by the **url** element in **OpenWorkbook**. A new participant is added to the edit session on a successful **OpenWorkbook** request.

The current participant is removed from the edit session on a successful call to **CloseWorkbook**. An edit session stops responding to operations when all of its participants have been removed.

Request Behavior

A request is created when a **web service** operation starts running on the protocol server, and ends when the web service operation finishes, when it is successfully cancelled by a **CancelRequest** call, or after the request has timed out.

3.1 Server Details

3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

Session: An entity which gives context to operations done against a workbook. A **session (2)** is associated with a **workbook** state, which can be modified by **state changing** operations.

State Identifier: Each session has a counter which represents its state.

Request: An entity which represents a running request on the protocol server.

Instance Identifier: A unique identifier for the protocol server. Used to identify each instance of the protocol server in **farm** installations.

Asynchronous Operations: An operation on the protocol server which begins when a request is received, in which the protocol server returns a response before the operation is complete. The protocol client–protocol server communication is defined as follows:

1. The protocol client issues an initiating request against the server, specifying an estimated response timeout.
2. The protocol server begins a normal operation.
3. If the operation has finished before the estimated response timeout, the protocol server returns a response to the protocol client, as expected for the specific operation.
4. If the operation has not finished before the estimated response timeout, the protocol server returns a response which contains a unique request identifier to the protocol client.
5. The protocol client then queries the protocol server about the completion of the operation by issuing the same operation that was issued in the initiating request, including the unique request identifier which was returned by the protocol server on the response to the initiating request.
6. If the operation is still incomplete, go back to step 4.
7. If the operation is complete, the protocol server returns a response to the protocol client, as expected for the specific operation.

3.1.2 Timers

3.1.2.1 Session Timeout

The **Session Timeout** timer measures the time it takes for a **sessions (2)** to time out.

3.1.2.2 Request Timeout

The **Request Timeout** timer measures the time it takes for a request to time out.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

This section includes specifications of operations for this protocol.

The following table summarizes the list of operations as defined by this specification.

Operation	Description
ApplyItemFilter	This operation is used to change the filtering of a table or worksheet AutoFilter in the workbook .
ApplyPivot	This operation is used to modify a PivotTable or a PivotChart .
ApplyPivotFieldManagerHiddenState	This operation is used to set the visibility of the PivotTable or PivotChart field list for the workbook.
ApplyPivotFilter	This operation is used to apply a PivotTable custom filter or a PivotTable manual filter on a PivotTable field.
ApplyPivotSort	This operation is used to change the sort order of a PivotTable field or PivotChart elements in the workbook.
ApplyPivotTop10Filter	This operation is used to apply a top N filter or a bottom N filter on a PivotTable field.
ApplyPivotValueFieldSettings	This operation is used to modify a PivotTable or PivotChart by changing the aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts. The result is a query .
ApplySlicerSelection	This operation is used to update the state of the slicer items that are part of a slicer .
ApplyTimeSlicerInteractivity	This operation is used to update the state of the time slicer.
ApplyTop10Filter	This operation is used to apply a top N filter or a bottom N filter on a column (2) in a worksheet or in a table.
ApplyToRange	Performs different operations on a specified range based on the value of the id parameter.
AutoFit	This operation adjusts the heights of rows (2) or the widths of columns (2), in a workbook, if necessary, to fit the contents in those rows (2) or columns (2).

Operation	Description
BixDrill	Applies a drill operation to the PivotTable and displays PivotCache hierarchy members at the defined level. This will result in a query.
CancelRequest	This operation is used to cancel all requests currently running on the protocol server against the session .
CloseWorkbook	This operation is used to close a session (2) or leave an edit session on the protocol server.
ConnectAndGetPivotFilterItemList	This operation is used to return the PivotTable members that are part of a PivotTable manual filter hierarchy.
ConnectAndGetPivotMenu	This operation is used to return information about a PivotTable area .
ConnectAndGetSlicerItemList	This operation is used to return the slicer items and formatting information for the slicer visual components that are part of a slicer.
DdaAddBinding	Adds a new or modifies an existing Office Web Extension binding.
DdaAddRowsColumns	Adds the given set of data as rows or columns to a table binding.
DdaDeleteAllDataValues	Removes all non-header data from the given table binding.
DdaGetAllBindings	Returns a list of BindingMetadata items associated with the given Office Web Extension.
DdaGetBinding	Returns BindingMetadata for a single binding associated with an Office Web Extension.
DdaGetBindingData	Returns worksheet cell contents associated with a binding and Office Web Extension.
DdaGetSelectedData	Returns worksheet cell contents associated with the given range.
DdaLoadSettings	Returns settings associated with the given Office Web Extension.
DdaReleaseBinding	Removes the binding specified by name from the given Office Web Extension.
DdaSaveSettings	Replaces all existing settings on the Office Web Extension with the given settings.
DdaSetBindingData	Sets worksheet cell contents associated with a binding on the given Office Web Extension.
DdaSetSelectedData	Sets worksheet cell contents associated with the given range.
EnsureWorkbookModel	Loads a workbook data model and returns information about the model.
ExpandCollapseOutline	This operation is used to toggle the outline state in the workbook.
ExpandPivotFieldListLevels	This operation is used to expand the levels on a PivotTable or PivotChart.
FindRange	This operation is used to find a string inside a workbook.
GenerateWorkbookFromHtml	This operation is used to create a new workbook session for a workbook containing named objects based on the input parameters.
GetAutoFilterItemList	This operation is used to retrieve the filter values and filter date values and their captions in the AutoFilterItemList (section 3.1.4.13.3.1) in the operation response for an AutoFilter in the

Operation	Description
	workbook.
GetBixAnalysis	This operation is used to get the set of analysis operations that could be applied to a PivotTable or a PivotChart.
GetChart	This operation is used to return a chart image.
GetChartElementData	This operation returns information about the chart elements in a PivotChart.
GetFunctionList	Returns a list of all the functions that are available to the users in the current session (2).
GetHealthScore	This operation is used to return information about the health of the protocol server.
GetImage	This operation is used to return a chart image or embedded image .
GetInteractiveReportBootstrapData	This operation returns information about the interactive report in the workbook.
GetObjectInformation	This operation returns the range of a published item in a workbook
GetPivotFieldListData	This operation is used to get the PivotTable fields that are associated with a PivotTable or PivotChart.
GetPivotFieldManagerData	This operation is used to get the PivotTable fields that are associated with a PivotTable or PivotChart query.
GetPivotFilterItemList	This operation is used to return child PivotTable members that are part of a PivotTable manual filter hierarchy, or child PivotChart members that are part of a PivotChart manual filter hierarchy. This operation is used after calling either the ConnectAndGetPivotFilterItemList operation (section 3.1.4.9) or this operation for an ancestor in the hierarchy.
GetPivotMenu	This operation is used to return information about a PivotTable area.
GetPivotValueFieldSettings	This operation is used to get a list of the PivotTable or PivotChart aggregation types and the selected aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts.
GetPublishedObjects	This operation returns a list of the published items in a workbook.
GetPublishedSheetNames	This operation returns a list of the published sheets in a workbook.
GetRange	This operation returns information about the workbook as specified in [MS-EXSPXML3] .
GetRangeEmbeddingInfo	MUST NOT be used.
GetRangeForClipboard	This operation is used to get the number formatted values of visible worksheet cells in a specified range in a workbook.
GetRangeImage	This operation is used to return an image of a worksheet range.
GetRangeValues	This operation is used to get the values contained in a specified range in a workbook.
GetRangeValuesA1	This operation is used to get the values contained in a specified range in a workbook.
GetScaledImage	This operation is used to return a chart image.

Operation	Description
GetSessionInformation	This operation is used to retrieve information about a session (2).
GetSheetNames	The operation returns information about the sheets in a workbook.
GetSlicerItemList	This operation is used to return the slicer items and formatting information for the slicer visual components that are part of a slicer.
GetSparklines	This operation is used to return an image containing sparklines .
GetTimeSlicerFilterState	This operation is used to return the time slicer state and formatting information for the time slicer visual components that are part of a time slicer.
GetTimeSlicerStrings	This operation is used to return the strings for the time slicer visual components that are part of the time slicer.
GetWorkbook	This operation is used to retrieve a workbook file .
GetWorkbookConnections	Returns a list of names of data connection (2) in the workbook.
OpenWorkbook	This operation is used to create a new session (2) or to join an existing edit session.
ParseRange	This operation is used to parse a specified range in the workbook.
PasteRange	Applies the cell contents, cell values or cell formatting of the cells contained in a specified source range to the cells contained in a specified destination range, after the user has performed a cut or copy operation.
PasteString	Parses a specified string and uses its parts to set the cell contents of a specified range of cells.
ProcessRestRequest	This operation performs different operations on the workbook depending on the type of the RestRequest object received and returns a corresponding RestResult .
Recalc	This operation is used to calculate a specified range in the workbook.
RecalcA1	This operation is used to calculate a specified range in the workbook.
RecalcAll	This operation is used to calculate the workbook.
Refresh	This operation is used to refresh connected data on a workbook.
RefreshAll	This operation is used to refresh all connected data on a workbook.
RemovePivotFilter	This operation is used to remove any PivotTable or PivotChart filters that are applied to a PivotTable field or PivotChart field.
ResizeRowsColumns	This operation is used to set the heights or widths of specified rows (2) or columns (2) in a workbook.
SaveWorkbook	This operation is used to save a workbook associated with an open edit session, to the same location from which it was opened.
SaveWorkbookAs	This operation is used to save a session (2) to a specified location, and in a specified format.
SaveWorkbookForEditing	This operation is used to save a workbook associated with an open view session , to the same location from which it was opened.
SetCalculationOptions	This operation is used to set the workbook calculation mode .

Operation	Description
SetParameters	This operation is used to set values of workbook parameters in a workbook.
SetRange	This operation is used to set values to a range of worksheet cells on a workbook.
SetRangeA1	This operation is used to set values to a range of worksheet cells on a workbook.
SortFilterColumn	This operation is used to change the sort order of a table or worksheet AutoFilter in the workbook.
TogglePivotDrill	This operation is used to expand or collapse a PivotTable or PivotChart member .
UpdateSlicer	This operation is used to update the state of the slicer items that are part of a slicer.
ValidatePrint	Verifies that the print options information specified by the protocol client can be used to generate a print-friendly view of the workbook's contents. In the event that validation fails, the protocol server will attempt to modify the print options so that a print-friendly view can be generated or the protocol server will return an error.

3.1.4.1 ApplyItemFilter

This operation is used to change the filtering of a **table** or **worksheet AutoFilter** in the **workbook**.

The following is the **WSDL** port type specification of the **ApplyItemFilter WSDL operation**.

```
<wsdl:operation name="ApplyItemFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilter"
    message="tns2:ExcelServiceSoap ApplyItemFilter InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilterResponse"
    message="tns2:ExcelServiceSoap ApplyItemFilter OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap ApplyItemFilter ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyItemFilter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyItemFilter_OutputMessage** response message, as follows:

- The protocol server sets the filter to the **clear all state** if the **values** element is not present, and the **autoFilterDateNodes** element is not present, and the **blanks** element value is false, and the **hideBlanks** element value is false, and the value of **CriteriaType** element of **AutoFilterOptions** (section [2.2.4.14](#)) is Nil, and the **Criteria** element of **AutoFilterOptions** is not present.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD<10> be one of the values specified in section 2.2.2.1.

This operation is a **state changing** operation on the protocol server.

3.1.4.1.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyItemFilter_InputMessage	The request WSDL message for the ApplyItemFilter WSDL operation .
ExcelServiceSoap_ApplyItemFilter_OutputMessage	The response WSDL message for the ApplyItemFilter WSDL operation .

3.1.4.1.1.1 ExcelServiceSoap_ApplyItemFilter_InputMessage

The request **WSDL message** for the **ApplyItemFilter WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyItemFilter
```

The **SOAP body** contains the **ApplyItemFilter** element.

3.1.4.1.1.2 ExcelServiceSoap_ApplyItemFilter_OutputMessage

The response **WSDL message** for the **ApplyItemFilter WSDL operation**.

The **SOAP body** contains the **ApplyItemFilterResponse** element.

3.1.4.1.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyItemFilter	The input data for the ApplyItemFilter WSDL operation .
ApplyItemFilterResponse	The result data for the ApplyItemFilter WSDL operation .

3.1.4.1.2.1 ApplyItemFilter

The **ApplyItemFilter** element specifies the input data for the **ApplyItemFilter WSDL operation**.

```
<xs:element name="ApplyItemFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns2:AutoFilterOptions"/>
        <xs:element minOccurs="0" maxOccurs="1" name="values" type="tns2:ArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="autoFilterDateNodes"
type="tns2:ArrayOfAutoFilterDateNodeInfo"/>
        <xs:element minOccurs="1" maxOccurs="1" name="blanks" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="hideBlanks" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The **AutoFilter** options for filtering the AutoFilter **column (2)** as specified in section [2.2.4.14](#). MUST be present.

values: The **filter values** to use when filtering the AutoFilter column (2). Specifies the values used by the protocol server to **filter** the AutoFilter with. MUST NOT be present if the value of the **CriteriaType** element of **AutoFilterOptions** is not Nil. MUST NOT be present if the **Criteria** element of **AutoFilterOptions** is present. MUST be present if **autoFilterDateNode** element is present. If present, the count of elements MUST be greater than or equal to 0 and less than or equal to 1000. All **string** elements of **ArrayOfString** (section [2.2.4.11](#)) MUST have a value or be empty. The value of the **string** element of **ArrayOfString** MUST be equal to one of the **DisplayString** element values of **AutoFilterItem** (section [3.1.4.13.3.3](#)) in the **AutoFilterItemList** (section [3.1.4.13.3.1](#)) of the **GetAutoFilterItemList** response (section [3.1.4.13](#)).

autoFilterDateNodes: The **filter date values** to use when filtering the AutoFilter column (2). Specifies the filter date values used by the protocol server to filter the AutoFilter with, as specified in **AutoFilterDateNodeInfo** (section [2.2.4.13](#)). MUST NOT be present if the **values** element is not present. If present the count of elements MUST be greater than or equal to 0 and less than or equal to 1000. The value of the **NodeType** element of **AutoFilterDateNodeInfo** MUST NOT be Nil. If the value of the **NodeType** element of **AutoFilterDateNodeInfo** is "Year", the value of the **Month** and **Day** elements of **AutoFilterDateNodeInfo** MUST be 0. If the value of the **NodeType** element of **AutoFilterDateNodeInfo** is "Month", the value of the **Day** element of **AutoFilterDateNodeInfo** MUST be 0.

blanks: Specifies whether to include blank values in the filter. The value **true** specifies to include filter blank values in the filter. The value **false** specifies to exclude filter blank values in the filter.

hideBlanks: Specifies whether to hide blank values in the filter. Specifies filtering to include all values but blank values. The value **true** specifies to include all values but blank values in the filter. The value **false** MUST be ignored by the protocol server. The protocol client MUST NOT set this element value to **true** if the values element is present or the **Criteria** element of **AutoFilterOptions** is present or the value of **CriteriaType** element of **AutoFilterOptions** is not Nil.

3.1.4.1.2.2 ApplyItemFilterResponse

The **ApplyItemFilterResponse** element specifies the result data for the **ApplyItemFilter WSDL operation**.

```

<xs:element name="ApplyItemFilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyItemFilterResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyItemFilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.1.3 Complex Types

None.

3.1.4.1.4 Simple Types

None.

3.1.4.1.5 Attributes

None.

3.1.4.1.6 Groups

None.

3.1.4.1.7 Attribute Groups

None.

3.1.4.2 ApplyPivotFilter

This operation is used to apply a **PivotTable custom filter** or a PivotTable **manual filter** on a **PivotTable** field.

The following is the **WSDL** port type specification of the **ApplyPivotFilter WSDL operation**.

```
<wsdl:operation name="ApplyPivotFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotFilter"
    message="tns2:ExcelServiceSoap_ApplyPivotFilter_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotFilterResponse"
    message="tns2:ExcelServiceSoap_ApplyPivotFilter_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotFilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ApplyPivotFilter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyPivotFilter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotFilter_OutputMessage** response message, as follows:

1. The protocol client sends the PivotTable custom filter or PivotTable manual filter to be applied, and the information identifying the **PivotTable** field in the **pivotOperationOptions** element.
2. The protocol server applies the PivotTable custom filter or PivotTable manual filter to the **PivotTable** field.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<11>](#) be one of the values specified in section 2.2.2.1 or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

This operation is a **state changing** operation on the protocol server.

3.1.4.2.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivotFilter_InputMessage	The request WSDL message for the ApplyPivotFilter WSDL operation .
ExcelServiceSoap_ApplyPivotFilter_OutputMessage	The response WSDL message for the ApplyPivotFilter WSDL operation.

3.1.4.2.1.1 ExcelServiceSoap_ApplyPivotFilter_InputMessage

The request **WSDL message** for the **ApplyPivotFilter WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivotFilter
```

The **SOAP body** contains the **ApplyPivotFilter** element.

3.1.4.2.1.2 ExcelServiceSoap_ApplyPivotFilter_OutputMessage

The response **WSDL message** for the **ApplyPivotFilter WSDL operation**.

The **SOAP body** contains the **ApplyPivotFilterResponse** element.

3.1.4.2.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyPivotFilter	The input data for the ApplyPivotFilter WSDL operation .
ApplyPivotFilterResponse	The result data for the ApplyPivotFilter WSDL operation .

3.1.4.2.2.1 ApplyPivotFilter

The **ApplyPivotFilter** element specifies the input data for the **ApplyPivotFilter WSDL operation**.

```
<xs:element name="ApplyPivotFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable field identification and information about the PivotTable custom filter or PivotTable manual filter to apply. MUST be present. The following MUST extend or override the standard behavior specified in **PivotOperationOptions** (section [2.2.4.28](#)):

- **FilterType:** MUST contain the value **Invalid** if a PivotTable manual filter is applied. Otherwise, it MUST contain one of the values used for PivotTable custom filter as specified in **PivotFilterType** (section [2.2.5.24](#)).
- **DataFieldId:** MUST NOT be present if **FilterType** is not used for PivotTable custom value filter as specified in **PivotFilterType**. Otherwise, MUST be present and equal to the **IdString** element of one of the **PivotField** elements nested under the **PivotDataFields** element of the **pivotMenu** element returned from the protocol server in the last call to **GetPivotMenu** (section [3.1.4.19](#)).
- **MemberPropertyId:** MUST NOT be present if **FilterType** has the value **Invalid**. Otherwise, it MUST be present and equal to the **IdString** element of one of the **PivotField** elements nested under the **MemberProperties** element of the **PivotField** element that is the PivotTable field on which the filter is being applied if this is a member properties PivotTable custom filter.
- **FilterValue1:** MUST NOT be present if **FilterType** has the value **Invalid**. Otherwise, it MUST NOT be present if **FilterType** supports zero **PivotTable filter parameters** as specified in **PivotFilterType**. Otherwise, it MUST be present and contain the value of the first PivotTable filter parameter.

- **FilterValue2:** MUST NOT be present if **FilterType** has the value **Invalid**. Otherwise, it MUST NOT be present if **FilterType** supports zero or one PivotTable filter parameters as specified in **PivotFilterType**. Otherwise, it MUST be present and contain the value of the second PivotTable filter parameter.
- **Items:** MUST be present if **FilterType** has the value **Invalid**. MUST contain one or more elements. MUST be equal to the **Id** element of one of the **PivotFilterItem** elements nested under the **itemList** element returned from the protocol server in the last call to **GetPivotFilterItemList** (section [3.1.4.18](#)). Otherwise, MUST NOT be present.

3.1.4.2.2 ApplyPivotFilterResponse

The **ApplyPivotFilterResponse** element specifies the result data for the **ApplyPivotFilter WSDL operation**.

```
<xs:element name="ApplyPivotFilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotFilterResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyPivotFilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.2.3 Complex Types

None.

3.1.4.2.4 Simple Types

None.

3.1.4.2.5 Attributes

None.

3.1.4.2.6 Groups

None.

3.1.4.2.7 Attribute Groups

None.

3.1.4.3 ApplyPivotSort

This operation is used to change the **sort order** of a **PivotTable field** or **PivotChart** elements in the **workbook**.

The following is the **WSDL** port type specification of the **ApplyPivotSort WSDL operation**.

```
<wsdl:operation name="ApplyPivotSort" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSort"
```

```

message="tns2:ExcelServiceSoap_ApplyPivotSort_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortResponse"
message="tns2:ExcelServiceSoap_ApplyPivotSort_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivotSort_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyPivotSort_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotSort_OutputMessage** response message, as follows:

- The protocol client sends information that identifies either the PivotTable field or the PivotChart elements in the **pivotOperationOptions** element.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<12>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.13](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.3.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivotSort_InputMessage	The request WSDL message for the ApplyPivotSort WSDL operation .
ExcelServiceSoap_ApplyPivotSort_OutputMessage	The response WSDL message for the ApplyPivotSort WSDL operation .

3.1.4.3.1.1 ExcelServiceSoap_ApplyPivotSort_InputMessage

The request **WSDL message** for the **ApplyPivotSort WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivotSort
```

The **SOAP body** contains the **ApplyPivotSort** element.

3.1.4.3.1.2 ExcelServiceSoap_ApplyPivotSort_OutputMessage

The response **WSDL message** for the **ApplyPivotSort WSDL operation**.

The **SOAP body** contains the **ApplyPivotSortResponse** element.

3.1.4.3.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyPivotSort	The input data for the ApplyPivotSort WSDL operation .
ApplyPivotSortResponse	The result data for the ApplyPivotSort WSDL operation .

3.1.4.3.2.1 ApplyPivotSort

The **ApplyPivotSort** element specifies the input data for the **ApplyPivotSort WSDL operation**.

```
<xs:element name="ApplyPivotSort" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ascending" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart field identification as specified in section [2.2.4.28](#). MUST be present. The following MUST extend or override the standard behavior specified in **PivotOperationOptions**:

- **SortByValue:** Specifies whether the operation is a sort by value operation. MUST be **true** when it is a sort by value operation. MUST be **false** otherwise.
- **DataFieldIndex:** Specified the index of **PivotTable** or **PivotChart** data field. MUST be ignored on receipt except when used in a sort by value operation.

ascending: The **sort order** to apply to the PivotTable or PivotChart field. A **true** value specifies an ascending order, and a **false** value specifies a descending order.

3.1.4.3.2.2 ApplyPivotSortResponse

The **ApplyPivotSortResponse** element specifies the result data for the **ApplyPivotSort WSDL operation**.

```
<xs:element name="ApplyPivotSortResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotSortResult"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyPivotSortResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.3.3 Complex Types

None.

3.1.4.3.4 Simple Types

None.

3.1.4.3.5 Attributes

None.

3.1.4.3.6 Groups

None.

3.1.4.3.7 Attribute Groups

None.

3.1.4.4 ApplyPivotTop10Filter

This operation is used to apply a **top N filter** or a **bottom N filter** on a **PivotTable field**.

The following is the **WSDL** port type specification of the **ApplyPivotTop10Filter WSDL operation**.

```

<wsdl:operation name="ApplyPivotTop10Filter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotTop10Filter"
    message="tns2:ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotTop10FilterResponse"
    message="tns2:ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotTop10FilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ApplyPivotTop10Filter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage** response message, as follows:

1. The protocol client sends the top N filter or bottom N filter to be applied, and the information identifying the PivotTable field in the **pivotOperationOptions** element.
2. The protocol server applies the top N filter or bottom N filter to the **PivotTable** field.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<13>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**

- **UnattendedAccountNotConfigured**

3.1.4.4.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage	The request WSDL message for the ApplyPivotTop10Filter WSDL operation .
ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage	The response WSDL message for the ApplyPivotTop10Filter WSDL operation .

3.1.4.4.1.1 ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage

The request **WSDL message** for the **ApplyPivotTop10Filter WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivotTop10Filter
```

The **SOAP body** contains the **ApplyPivotTop10Filter** element.

3.1.4.4.1.2 ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage

The response **WSDL message** for the **ApplyPivotTop10Filter WSDL operation**.

The **SOAP body** contains the **ApplyPivotTop10FilterResponse** element.

3.1.4.4.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyPivotTop10Filter	The input data for the ApplyPivotTop10Filter WSDL operation .
ApplyPivotTop10FilterResponse	The result data for the ApplyPivotTop10Filter WSDL operation .

3.1.4.4.2.1 ApplyPivotTop10Filter

The **ApplyPivotTop10Filter** element specifies the input data for the **ApplyPivotTop10Filter WSDL operation**.

```
<xs:element name="ApplyPivotTop10Filter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```



```

    <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    <xs:element minOccurs="1" maxOccurs="1" name="top" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="value" type="xs:double"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** field identification and information about the **top N filter** or **bottom N filter** to be applied. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.28](#):

- **DataFieldId** MUST be present and equal to the **IdString** element of one of the **PivotField** elements nested under the **PivotDataFields** element of the **pivotMenu** element returned from the protocol server in the last call to **GetPivotMenu** (section [3.1.4.19](#)).
- **FilterType** MUST be one of the following values, as specified in section [2.2.5.24](#): **FirstTop10**, **Percent**, or **Sum**.

top: Specifies whether a top N filter or a bottom N filter is performed. MUST be set to true to perform a top N filter, and MUST be set to false to perform a bottom N filter.

value: The **PivotTable filter parameter**. If the value of the **FilterType** element of the **pivotOperationOptions** element is **FirstTop10**, **value** MUST be greater than or equal to 0 and less than or equal to the value of the **Top10MaxItems** element of the **pivotMenu** element returned from the protocol server in the last call to **GetPivotMenu**. If the value of the **FilterType** element of the **pivotOperationOptions** element is **Percent**, **value** MUST be greater than or equal to 0 and less than or equal to 100. If the value of the **FilterType** element of the **pivotOperationOptions** element is **Sum**, **value** MUST be greater than or equal to 0.

3.1.4.4.2.2 ApplyPivotTop10FilterResponse

The **ApplyPivotTop10FilterResponse** element specifies the result data for the **ApplyPivotTop10Filter** **WSDL operation**.

```

<xs:element name="ApplyPivotTop10FilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotTop10FilterResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyPivotTop10FilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.4.3 Complex Types

None.

3.1.4.4.4 Simple Types

None.

3.1.4.4.5 Attributes

None.

3.1.4.4.6 Groups

None.

3.1.4.4.7 Attribute Groups

None.

3.1.4.5 ApplySlicerSelection

This operation is used to update the state of the **slicer items** that are part of a **slicer** .

The following is the **WSDL** port type specification of the **ApplySlicerSelection WSDL operation** .

```
<wsdl:operation name="ApplySlicerSelection" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplySlicerSelection"
    message="tns2:ExcelServiceSoap_ApplySlicerSelection_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplySlicerSelectionResponse"
    message="tns2:ExcelServiceSoap_ApplySlicerSelection_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplySlicerSelectionExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ApplySlicerSelection_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplySlicerSelection_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplySlicerSelection_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the slicer and the slicer items that will be selected and unselected in the **slicerOptions** element.
2. The protocol server updates the state of the slicer items in the slicer.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#) . The **Id** element of the **ExcelServerMessage** SHOULD [<14>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**

- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.5.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplySlicerSelection_InputMessage	The request WSDL message for the ApplySlicerSelection WSDL operation .
ExcelServiceSoap_ApplySlicerSelection_OutputMessage	The response WSDL message for the ApplySlicerSelection WSDL operation.

3.1.4.5.1.1 ExcelServiceSoap_ApplySlicerSelection_InputMessage

The request **WSDL message** for the **ApplySlicerSelection WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplySlicerSelection
```

The **SOAP body** contains the **ApplySlicerSelection** element.

3.1.4.5.1.2 ExcelServiceSoap_ApplySlicerSelection_OutputMessage

The response **WSDL message** for the **ApplySlicerSelection WSDL operation**.

The **SOAP body** contains the **ApplySlicerSelectionResponse** element.

3.1.4.5.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplySlicerSelection	The input data for the ApplySlicerSelection WSDL operation .
ApplySlicerSelectionResponse	The result data for the ApplySlicerSelection WSDL operation .

3.1.4.5.2.1 ApplySlicerSelection

The **ApplySlicerSelection** element specifies the input data for the **ApplySlicerSelection WSDL operation**.

```
<xs:element name="ApplySlicerSelection" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns2:SlicerOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The **slicer** identification. MUST be present. The following extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerItemsCount:** MUST be ignored.
- **SlicerClearItems:** When set to **true**, specifies unselecting all **slicer items** in the slicer before applying a selection. Otherwise, MUST be ignored by the protocol server.

3.1.4.5.2.2 ApplySlicerSelectionResponse

The **ApplySlicerSelectionResponse** element specifies the result data for the **ApplySlicerSelection WSDL operation**.

```
<xs:element name="ApplySlicerSelectionResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplySlicerSelectionResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplySlicerSelectionResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.5.3 Complex Types

None.

3.1.4.5.4 Simple Types

None.

3.1.4.5.5 Attributes

None.

3.1.4.5.6 Groups

None.

3.1.4.5.7 Attribute Groups

None.

3.1.4.6 ApplyTop10Filter

This operation is used to apply a **top N filter** or a **bottom N filter** on a **column (2)** in a **worksheet** or in a **table**.

The following is the **WSDL** port type specification of the **ApplyTop10Filter WSDL operation**.

```
<wsdl:operation name="ApplyTop10Filter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTop10Filter"
    message="tns2:ExcelServiceSoap_ApplyTop10Filter_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTop10FilterResponse"
    message="tns2:ExcelServiceSoap_ApplyTop10Filter_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTop10FilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ApplyTop10Filter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyTop10Filter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyTop10Filter_OutputMessage** response message, as follows:

- The protocol client MUST NOT call this operation on **AutoFilters** that have their **Data Type** attribute in the **CT_item** element (as specified in [\[MS-EXSPXML3\]](#) section 2.3.18) present and with a value different from **Number**.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<15>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.6.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyTop10Filter_InputMessage	The request WSDL message for the ApplyTop10Filter WSDL operation .

Message	Description
ExcelServiceSoap_ApplyTop10Filter_OutputMessage	The response WSDL message for the ApplyTop10Filter WSDL operation.

3.1.4.6.1.1 ExcelServiceSoap_ApplyTop10Filter_InputMessage

The request **WSDL message** for the **ApplyTop10Filter** WSDL operation.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyTop10Filter
```

The **SOAP body** contains the **ApplyTop10Filter** element.

3.1.4.6.1.2 ExcelServiceSoap_ApplyTop10Filter_OutputMessage

The response **WSDL message** for the **ApplyTop10Filter** WSDL operation.

The **SOAP body** contains the **ApplyTop10FilterResponse** element.

3.1.4.6.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyTop10Filter	The input data for the ApplyTop10Filter WSDL operation.
ApplyTop10FilterResponse	The result data for the ApplyTop10Filter WSDL operation.

3.1.4.6.2.1 ApplyTop10Filter

The **ApplyTop10Filter** element specifies the input data for the **ApplyTop10Filter** WSDL operation.

```
<xs:element name="ApplyTop10Filter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns2:AutoFilterOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="top" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="percent" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="value" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The options to be used when filtering the **AutoFilter column (2)**. See section [2.2.4.14](#). The **CriteriaType** element MUST have the value of Nil. The **Criteria** element MUST NOT be present.

top: Specifies whether to apply the **top N filter** or **bottom N filter**. If **true**, the protocol server MUST apply a top N filter on the specified column (2). If **false**, the protocol server MUST apply a bottom N filter on the specified column (2).

percent: Specifies whether the top N filter or bottom N filter is based on percentage of the total sum of values in the column (2) or not. If **true**, the protocol server applies a **top N filter by percent** or a **bottom N filter by percent** on the specified column (2). If **false**, the protocol server applies a **top N filter by count** or a **bottom N filter by count** on the specified column (2).

value: The value to be used when applying the top N filter or bottom N filter. If **percent** is **true**, the value of **value** MUST be greater than or equal to 0 and less than or equal to 100. If **percent** is **false**, the value of **value** MUST be greater than or equal to 1 and less than or equal to 500.

3.1.4.6.2.2 ApplyTop10FilterResponse

The **ApplyTop10FilterResponse** element specifies the result data for the **ApplyTop10Filter WSDL operation**.

```
<xs:element name="ApplyTop10FilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyTop10FilterResult"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyTop10FilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.6.3 Complex Types

None.

3.1.4.6.4 Simple Types

None.

3.1.4.6.5 Attributes

None.

3.1.4.6.6 Groups

None.

3.1.4.6.7 Attribute Groups

None.

3.1.4.7 CancelRequest

This operation is used to cancel all requests currently running on the protocol server against the **session**.

The following is the **WSDL** port type specification of the **CancelRequest WSDL operation**.

```
<wsdl:operation name="CancelRequest" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/CancelRequest"
    message="tns2:ExcelServiceSoap CancelRequest InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/CancelRequestResponse"
    message="tns2:ExcelServiceSoap CancelRequest_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/CancelRequestExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap CancelRequest ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_CancelRequest_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_CancelRequest_OutputMessage** response message, as follows:

- The protocol server tries to cancel all requests currently running on the protocol server against the session specified inside the **parameter** element as specified in section [3.1.4.7.2.1](#).

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<16>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.7.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_CancelRequest_InputMessage	The request WSDL message for the CancelRequest WSDL operation .
ExcelServiceSoap_CancelRequest_OutputMessage	The response WSDL message for the CancelRequest WSDL operation .

3.1.4.7.1.1 ExcelServiceSoap_CancelRequest_InputMessage

The request **WSDL message** for the **CancelRequest WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/CancelRequest
```

The **SOAP body** contains the **CancelRequest** element.

3.1.4.7.1.2 ExcelServiceSoap_CancelRequest_OutputMessage

The response **WSDL message** for the **CancelRequest WSDL operation**.

The **SOAP body** contains the **CancelRequestResponse** element.

3.1.4.7.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
CancelRequest	The input data for the CancelRequest WSDL operation .
CancelRequestResponse	The result data for the CancelRequest WSDL operation .

3.1.4.7.2.1 CancelRequest

The **CancelRequest** element specifies the input data for the **CancelRequest WSDL operation**.

```
<xs:element name="CancelRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: Common operation parameters. MUST be present. The **WorkbookId** element of the **CommandParameter** complex type MUST be present. The **WorkOnBehalfRequest** element of the **CommandParameter** complex type MUST be as specified in section [2.2.4.20](#). The **RequestSiteId** element of the **CommandParameter** complex type MUST be present. All other elements MUST be ignored by the protocol server.

3.1.4.7.2.2 CancelRequestResponse

The **CancelRequestResponse** element specifies the result data for the **CancelRequest WSDL operation**.

```
<xs:element name="CancelRequestResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CancelRequestResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

CancelRequestResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.7.3 Complex Types

None.

3.1.4.7.4 Simple Types

None.

3.1.4.7.5 Attributes

None.

3.1.4.7.6 Groups

None.

3.1.4.7.7 Attribute Groups

None.

3.1.4.8 CloseWorkbook

This operation is used to close a **session (2)** or leave an **edit session** on the protocol server.

The following is the **WSDL** port type specification of the **CloseWorkbook WSDL operation**.

```
<wsdl:operation name="CloseWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/CloseWorkbook"
    message="tns2:ExcelServiceSoap_CloseWorkbook_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/CloseWorkbookResponse"
    message="tns2:ExcelServiceSoap_CloseWorkbook_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/CloseWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_CloseWorkbook_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_CloseWorkbook_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_CloseWorkbook_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a soap fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<17>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.8.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_CloseWorkbook_InputMessage	The request WSDL message for the CloseWorkbook WSDL operation .
ExcelServiceSoap_CloseWorkbook_OutputMessage	The response WSDL message for the CloseWorkbook WSDL operation .

3.1.4.8.1.1 ExcelServiceSoap_CloseWorkbook_InputMessage

The request **WSDL message** for the **CloseWorkbook WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/CloseWorkbook
```

The **SOAP body** contains the **CloseWorkbook** element.

3.1.4.8.1.2 ExcelServiceSoap_CloseWorkbook_OutputMessage

The response **WSDL message** for the **CloseWorkbook WSDL operation**.

The **SOAP body** contains the **CloseWorkbookResponse** element.

3.1.4.8.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
CloseWorkbook	The input data for the CloseWorkbook WSDL operation .
CloseWorkbookResponse	The result data for the CloseWorkbook WSDL operation .

3.1.4.8.2.1 CloseWorkbook

The **CloseWorkbook** element specifies the input data for the **CloseWorkbook WSDL operation**.

```
<xs:element name="CloseWorkbook" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="forceSync" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: Common operation parameters. MUST be present. The **WorkbookId** element of the **CommandParameter** complex type MUST be present. The **WorkOnBehalfRequest** element of the **CommandParameter** complex type MUST be as prescribed in section [2.2.4.20](#). All other elements MUST be ignored by the protocol server.

forceSync: Close and leave an **edit session**. When set to true, if the operation leaves the edit session with no participants, then specifies also closing the **session (2)**. Otherwise or when set to false, specifies leaving the edit session. MUST be ignored by the protocol server if the session (2) is not an edit session.

3.1.4.8.2.2 CloseWorkbookResponse

The **CloseWorkbookResponse** element specifies the result data for the **CloseWorkbook WSDL operation**.

```

<xs:element name="CloseWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CloseWorkbookResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

CloseWorkbookResult: A result as specified in section [2.2.4.21](#). MUST be present.

3.1.4.8.3 Complex Types

None.

3.1.4.8.4 Simple Types

None.

3.1.4.8.5 Attributes

None.

3.1.4.8.6 Groups

None.

3.1.4.8.7 Attribute Groups

None.

3.1.4.9 ConnectAndGetPivotFilterItemList

This operation is used to return the **PivotTable members** that are part of a **PivotTable manual filter hierarchy**.

The following is the **WSDL** port type specification of the **ConnectAndGetPivotFilterItemList WSDL operation**.

```

<wsdl:operation name="ConnectAndGetPivotFilterItemList"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemList"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListResponse"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_ExcelServerMessageFault_Fault
Message" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"7>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the PivotTable manual filter in the **pivotOperationOptions** element.
2. The protocol server returns the hierarchy of PivotTable members in **itemList**, as follows:
 - The **PivotFilterItems** element of **itemList** MUST contain the list of all the PivotTable members at the top hierarchy **level** of the PivotTable manual filter if there are no more than 1000 such PivotTable members, and MUST contain the first 1000 such PivotTable members if there are more than 1000 such PivotTable members.
 - The **ItemListMaxExceeded** element of **itemList** MUST be set to **true** if there were more than 1000 PivotTable members at the top hierarchy level of the PivotTable manual filter and MUST be set to **false** otherwise.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<18>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.9.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage	The request WSDL message for the ConnectAndGetPivotFilterItemList WSDL operation .
ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage	The response WSDL message for the ConnectAndGetPivotFilterItemList WSDL operation .

3.1.4.9.1.1 ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage

The request **WSDL message** for the **ConnectAndGetPivotFilterItemList WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ConnectAndGetPivotFilterItemList
```

The **SOAP body** contains the **ConnectAndGetPivotFilterItemList** element.

3.1.4.9.1.2 ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage

The response **WSDL message** for the **ConnectAndGetPivotFilterItemList WSDL operation**.

The **SOAP body** contains the **ConnectAndGetPivotFilterItemListResponse** element.

3.1.4.9.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ConnectAndGetPivotFilterItemList	The input data for the ConnectAndGetPivotFilterItemList WSDL operation .
ConnectAndGetPivotFilterItemListResponse	The result data for the ConnectAndGetPivotFilterItemList WSDL operation .

3.1.4.9.2.1 ConnectAndGetPivotFilterItemList

The **ConnectAndGetPivotFilterItemList** element specifies the input data for the **ConnectAndGetPivotFilterItemList WSDL operation**.

```
<xs:element name="ConnectAndGetPivotFilterItemList"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: Contains the location of the manual filter of the PivotTable. MUST be present and MUST NOT have the attribute **xsi:nil** set. The following MUST extend or override the standard behavior specified in section [2.2.4.28](#):

- **ParentId:** MUST be -1.

3.1.4.9.2.2 ConnectAndGetPivotFilterItemListResponse

The **ConnectAndGetPivotFilterItemListResponse** element specifies the result data for the **ConnectAndGetPivotFilterItemList WSDL operation**.

```
<xs:element name="ConnectAndGetPivotFilterItemListResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ConnectAndGetPivotFilterItemListResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList"
type="tns2:PivotFilterItemList"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ConnectAndGetPivotFilterItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

itemList: The list of PivotTable members at the top hierarchy level of the PivotTable manual filter. MUST be present.

3.1.4.9.3 Complex Types

None.

3.1.4.9.4 Simple Types

None.

3.1.4.9.5 Attributes

None.

3.1.4.9.6 Groups

None.

3.1.4.9.7 Attribute Groups

None.

3.1.4.10 ConnectAndGetSlicerItemList

This operation is used to return the **slicer items** and formatting information for the **slicer** visual components that are part of a slicer.

The following is the **WSDL** port type specification of the **ConnectAndGetSlicerItemList WSDL operation**.

```
<wsdl:operation name="ConnectAndGetSlicerItemList"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemList"
message="tns2:ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListResponse"
message="tns2:ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ConnectAndGetSlicerItemList_ExcelServerMessageFault_FaultMessa
ge" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the slicer in the **slicerOptions** element.

2. If the data source for the slicer is **OLAP** then the protocol server will connect to the **data source** to obtain the requested slicer items. Otherwise the protocol server will behave the same as in **GetSlicerItemList** (section [3.1.4.27](#)).
3. The protocol server returns a **SlicerItemList** (section [2.2.4.40](#)) in **itemList**, as follows:
 - If the **SlicerItemsOffset** element of the **slicerOptions** element is equal to -1 then the protocol server will determine the first slicer item in the resulting **itemList** in the following way:
 - If a call to **ApplySlicerSelection** was made in the current session, then the protocol server will determine the first slicer item in the resulting **itemList** as follows:
 - It will take the floor of the value obtained by taking the value of the of the **SlicerItemsOffset** element of the **slicerOptions** element of the last call to **ApplySlicerSelection**, and dividing it by the number of visible slicer items.
 - From this value, the protocol server will subtract 2.
 - To the resulting value, the protocol server will multiple by the number of visible slicer items.
 - Finally, the protocol server will take the maximum of this value and 0, and get the first slicer item.
 - Otherwise, if a call was not made to **ApplySlicerSelection** in the current session, the protocol server will use the value in the **startItem** attribute in **CT_Slicer** ([\[MS-XLSX\]](#) section 2.6.68).
 - If **SlicerItemsCount** is equal to -1 then the lesser of total number of slicer **items** or 5 times the **visible** number of items is returned.
4. If **SlicerItemsOffset** is equal to -1, the protocol server returns a **SlicerFormatElementList** (section [2.2.4.38](#)) in **formatList** that MUST contain 10 elements as specified in section [2.2.4.9](#). Otherwise the protocol server MUST return a **formatList** with 0 elements.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<19>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**

- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.10.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage	The request WSDL message for the ConnectAndGetSlicerItemList WSDL operation .
ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage	The response WSDL message for the ConnectAndGetSlicerItemList WSDL operation .

3.1.4.10.1.1 ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage

The request **WSDL message** for the **ConnectAndGetSlicerItemList WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ConnectAndGetSlicerItemList
```

The **SOAP body** contains the **ConnectAndGetSlicerItemList** element.

3.1.4.10.1.2 ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage

The response **WSDL message** for the **ConnectAndGetSlicerItemList WSDL operation**.

The **SOAP body** contains the **ConnectAndGetSlicerItemListResponse** element.

3.1.4.10.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ConnectAndGetSlicerItemList	The input data for the ConnectAndGetSlicerItemList WSDL operation .
ConnectAndGetSlicerItemListResponse	The result data for the ConnectAndGetSlicerItemList WSDL operation .

3.1.4.10.2.1 ConnectAndGetSlicerItemList

The **ConnectAndGetSlicerItemList** element specifies the input data for the **ConnectAndGetSlicerItemList** **WSDL operation**.

```
<xs:element name="ConnectAndGetSlicerItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns2:SlicerOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The **slicer** identification. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerClearItems:** MUST be ignored.

3.1.4.10.2.2 ConnectAndGetSlicerItemListResponse

The **ConnectAndGetSlicerItemListResponse** element specifies the result data for the **ConnectAndGetSlicerItemList** **WSDL operation**.

```
<xs:element name="ConnectAndGetSlicerItemListResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ConnectAndGetSlicerItemListResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList" type="tns2:SlicerItemList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns2:SlicerFormatElementList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerView" type="tns2:SlicerView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ConnectAndGetSlicerItemListResult: A **CommandResult** as specified in **CommandResult** (section [2.2.4.21](#)). MUST be present.

itemList: A **SlicerItemList** as specified in section [2.2.4.40](#). MUST be present.

formatList: A **SlicerFormatElementList** as specified in section [2.2.4.38](#). MUST be present.

slicerView: A **SlicerView** element as specified in section [2.2.4.42](#). MUST be present.

3.1.4.10.3 Complex Types

None.

3.1.4.10.4 Simple Types

None.

3.1.4.10.5 Attributes

None.

3.1.4.10.6 Groups

None.

3.1.4.10.7 Attribute Groups

None.

3.1.4.11 ExpandCollapseOutline

This operation is used to toggle the **outline state** in the **workbook**.

The following is the **WSDL** port type specification of the **ExpandCollapseOutline WSDL operation**.

```
<wsdl:operation name="ExpandCollapseOutline" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ExpandCollapseOutline"
    message="tns2:ExcelServiceSoap_ExpandCollapseOutline_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ExpandCollapseOutlineResponse"
    message="tns2:ExcelServiceSoap_ExpandCollapseOutline_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ExpandCollapseOutlineExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ExpandCollapseOutline_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ExpandCollapseOutline_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ExpandCollapseOutline_OutputMessage** response message, as follows:

- The protocol server expands the outline state if the **outline** is in a **collapsed outline state**. The protocol server collapses the outline state if the outline is in an **expanded outline state**.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<20>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.11.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ExpandCollapseOutline_InputMessage	The request WSDL message for the ExpandCollapseOutline WSDL operation .
ExcelServiceSoap_ExpandCollapseOutline_OutputMessage	The response WSDL message for the ExpandCollapseOutline WSDL operation.

3.1.4.11.1.1 ExcelServiceSoap_ExpandCollapseOutline_InputMessage

The request **WSDL message** for the **ExpandCollapseOutline WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/Webservices/ExcelServerInternalService/ExcelServiceSoap/ExpandCollapseOutline
```

The **SOAP body** contains the **ExpandCollapseOutline** element.

3.1.4.11.1.2 ExcelServiceSoap_ExpandCollapseOutline_OutputMessage

The response **WSDL message** for the **ExpandCollapseOutline WSDL operation**.

The **SOAP body** contains the **ExpandCollapseOutlineResponse** element.

3.1.4.11.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ExpandCollapseOutline	The input data for the ExpandCollapseOutline WSDL operation .
ExpandCollapseOutlineResponse	The result data for the ExpandCollapseOutline WSDL operation .

3.1.4.11.2.1 ExpandCollapseOutline

The **ExpandCollapseOutline** element specifies the input data for the **ExpandCollapseOutline WSDL operation**.

```
<xs:element name="ExpandCollapseOutline" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetOrNamedRange" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="namedRange" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="outlineLevel" type="xs:unsignedByte"/>
      <xs:element minOccurs="1" maxOccurs="1" name="rowColumn" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="row" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sheetOrNamedRange: The name of the **worksheet** or **named object** containing the **outline**. MUST be present. MUST NOT be empty. If the value of **namedRange** element is true then MUST NOT be longer than 287 characters. If the value of **namedRange** element is false then MUST NOT be longer than 31 characters.

namedRange: When set to **true**, specifies that the value of the **sheetOrNamedRange** element is a named object name. Otherwise, when set to **false**, specifies a worksheet name.

outlineLevel: The **outline level** to **outline expand** or **outline collapse**. MUST be greater than or equal to 1 and less than or equal to 8.

rowColumn: The zero-based **column (2)** or **row (2)** index of the location of the outline. MUST be greater than or equal to -1. If **row** element value is set to true, MUST be less than or equal to 1048575. If **row** element value is set to false, MUST be less than or equal to 16383. A value of -1 specifies that all outlines at the value of **outlineLevel** be outline expanded or outline collapsed by the protocol server. If **rowColumn** contains a positive value, the following apply:

- If the value of the **row** element is true, then the value of **outlineLevel** element MUST be the value specified for the **outlineLevel** attribute of the **CT_RowAxisItem** element ([\[MS-EXSPXML3\]](#) section 2.3.57) that corresponds to row (2) index.
- If the value of the **row** element is false, then the value of **outlineLevel** element MUST be the value specified for the **outlineLevel** attribute of the **CT_ColumnAxisItem** element ([\[MS-EXSPXML3\]](#) section 2.3.58) that corresponds to column (2) index.

row: The axis location of the outline specified by the **rowColumn** element. If **true**, the outline is located on a row (2). If **false**, the outline is located on a column (2).

3.1.4.11.2 ExpandCollapseOutlineResponse

The **ExpandCollapseOutlineResponse** element specifies the result data for the **ExpandCollapseOutline WSDL operation**.

```
<xs:element name="ExpandCollapseOutlineResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ExpandCollapseOutlineResult"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ExpandCollapseOutlineResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.11.3 Complex Types

None.

3.1.4.11.4 Simple Types

None.

3.1.4.11.5 Attributes

None.

3.1.4.11.6 Groups

None.

3.1.4.11.7 Attribute Groups

None.

3.1.4.12 FindRange

This operation is used to find a string inside a **workbook**.

The following is the **WSDL** port type specification of the **FindRange WSDL operation**.

```
<wsdl:operation name="FindRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/FindRange" message="tns2:ExcelServiceSoap FindRange InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/FindRangeResponse"
    message="tns2:ExcelServiceSoap FindRange OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/FindRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap FindRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_FindRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_FindRange_OutputMessage** response message, as follows:

1. The protocol server searches for the string specified by **searchTerm**.
2. The search starts at the adjacent cell of the one specified by **searchAfterCell**, in the direction specified by **searchUp**.
3. If the **ObjectName** element in the **VisibleSheetRangeRequest** element in the **parameter** element is not present, the scope of the search is the worksheet specified by the **SheetName** element in the **searchAfterCell** element. Otherwise, the scope of the search is the named object specified by the **SheetName** element in the **searchAfterCell** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<21>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.12.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_FindRange_InputMessage	The request WSDL message for the FindRange WSDL operation .
ExcelServiceSoap_FindRange_OutputMessage	The response WSDL message for the FindRange WSDL operation .

3.1.4.12.1.1 ExcelServiceSoap_FindRange_InputMessage

The request **WSDL message** for the **FindRange WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/FindRange
```

The **SOAP body** contains the **FindRange** element.

3.1.4.12.1.2 ExcelServiceSoap_FindRange_OutputMessage

The response **WSDL message** for the **FindRange WSDL operation**.

The **SOAP body** contains the **FindRangeResponse** element.

3.1.4.12.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
FindRange	The input data for the FindRange WSDL operation .
FindRangeResponse	The result data for the FindRange WSDL operation .

3.1.4.12.2.1 FindRange

The **FindRange** element specifies the input data for the **FindRange WSDL operation**.

```
<xs:element name="FindRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="searchTerm" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="searchUp" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="searchAfterCell" type="tns2:SheetCell"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present. The **VisibleSheetRangeRequest** element MUST be present.

searchTerm: The string to search for in the workbook. MUST be present. MUST NOT be empty. MUST NOT be longer than 255 characters.

searchUp: Specifies the search direction. MUST be present. A value of **true** specifies to **search up**. A value of **false** specifies to **search down**.

searchAfterCell: Specifies the starting point of the search. The **SheetName** element of the **SheetCell** complex type MUST be present. MUST NOT be empty. If **SheetName** is the name of a worksheet, the following apply:

- It MUST NOT be longer than 31 characters.

- The value of the **SheetName** element of **VisibleSheetRange** element (section [2.2.4.44](#)) in **parameter**, MUST be equal to this value.

If **SheetName** is not the name of a worksheet, the following apply:

- If the value of the **SheetName** element is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** MUST be **InternalError**.
- The value of the **ObjectName** element of **VisibleSheetRange** element in **parameter**, MUST be equal to this value.

3.1.4.12.2 FindRangeResponse

The **FindRangeResponse** element specifies the result data for the **FindRange WSDL operation**.

```
<xs:element name="FindRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="FindRangeResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="foundCell" type="tns2:SheetCell"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

FindRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

foundCell: A worksheet cell that contains the term specified by the **searchTerm** element. MUST be present. The **SheetName** element of the **SheetCell** complex type MUST NOT be present.

3.1.4.12.3 Complex Types

None.

3.1.4.12.4 Simple Types

None.

3.1.4.12.5 Attributes

None.

3.1.4.12.6 Groups

None.

3.1.4.12.7 Attribute Groups

None.

3.1.4.13 GetAutoFilterItemList

This operation is used to retrieve the **filter values** and **filter date values** and their **captions** in the **AutoFilterItemList** (section [3.1.4.13.3.1](#)) in the operation response for an **AutoFilter** in the **workbook**.

The following is the **WSDL** port type specification of the **GetAutoFilterItemList WSDL operation**.

```
<wsdl:operation name="GetAutoFilterItemList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetAutoFilterItemList"
    message="tns2:ExcelServiceSoap_GetAutoFilterItemList_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetAutoFilterItemListResponse"
    message="tns2:ExcelServiceSoap_GetAutoFilterItemList_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetAutoFilterItemListExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetAutoFilterItemList_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetAutoFilterItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetAutoFilterItemList_OutputMessage** response message, as follows:

- The protocol server fills the **AutoFilterItems** and **AutoFilterDateNodes** elements with information about filtering as follows:
 1. The protocol server adds the filter values that exist in the AutoFilter with their current **filtering state** as specified in section [3.1.4.13.3.3](#) and **AutoFilterItems**.
 2. The protocol server adds the filter date values that exist in the AutoFilter with their current filtering state as specified in **AutoFilterDateNodeInfo** (section [2.2.4.13](#)) and **AutoFilterDateNodes**. The protocol server also adds the filter date value caption for the **Year**, **Month**, **Day**, **Hour**, **Minute**, and **Second** elements of the **AutoFilterDateNodeInfo** as follows:
 1. Each unique value of the **Year** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **YearKeys** element as specified in **AutoFilterItemList** complex type (section [3.1.4.13.3.1](#)). The protocol server also adds the corresponding caption to **YearValues** as specified in **YearValues** element.
 2. Each unique value of the **Month** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **MonthKeys** element as specified in **AutoFilterItemList** complex type. The protocol server also adds the corresponding caption to **MonthValues** as specified in **MonthValues** element.
 3. Each unique value of the **Day** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **DayKeys** element as specified in **AutoFilterItemList** complex type. The protocol server also adds the corresponding caption to **DayValues** as specified in **DayValues** element.
 4. Each unique value of the **Hour** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **HourKeys** element as specified in **AutoFilterItemList** complex type. The protocol server also adds the corresponding caption to **HourValues** as specified in **HourValues** element.
 5. Each unique value of the **Minute** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **MinuteKeys** element as specified in **AutoFilterItemList** complex type. The protocol server also adds the corresponding caption to **MinuteValues** as specified in **MinuteValues** element.

6. Each unique value of the **Second** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **SecondKeys** element as specified in **AutoFilterItemList** complex type. The protocol server also adds the corresponding caption to **SecondValues** as specified in **SecondValues** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<22>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.13.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetAutoFilterItemList_InputMessage	The request WSDL message for the GetAutoFilterItemList WSDL operation .
ExcelServiceSoap_GetAutoFilterItemList_OutputMessage	The response WSDL message for the GetAutoFilterItemList WSDL operation .

3.1.4.13.1.1 ExcelServiceSoap_GetAutoFilterItemList_InputMessage

The request **WSDL message** for the **GetAutoFilterItemList WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetAutoFilterItemList
```

The **SOAP body** contains the **GetAutoFilterItemList** element.

3.1.4.13.1.2 ExcelServiceSoap_GetAutoFilterItemList_OutputMessage

The response **WSDL message** for the **GetAutoFilterItemList WSDL operation**.

The **SOAP body** contains the **GetAutoFilterItemListResponse** element.

3.1.4.13.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetAutoFilterItemList	The input data for the GetAutoFilterItemList WSDL operation .
GetAutoFilterItemListResponse	The result data for the GetAutoFilterItemList WSDL operation .

3.1.4.13.2.1 GetAutoFilterItemList

The **GetAutoFilterItemList** element specifies the input data for the **GetAutoFilterItemList WSDL operation**.

```

<xs:element name="GetAutoFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns2:AutoFilterOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The options to use when filtering the **AutoFilter** columns specified in section [2.2.4.14](#). MUST be present.

3.1.4.13.2 GetAutoFilterItemListResponse

The **GetAutoFilterItemListResponse** element specifies the result data for the **GetAutoFilterItemList WSDL operation**.

```

<xs:element name="GetAutoFilterItemListResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAutoFilterItemListResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterItemList"
type="tns2:AutoFilterItemList"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetAutoFilterItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

autoFilterItemList: The **filter values**, **filter date values** and blank values **filtering state** of the **AutoFilter** as specified in section [3.1.4.13.3.1](#). MUST be present.

3.1.4.13.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfAutoFilterItem	A list of filter values caption and filtering state .
AutoFilterItem	Specifies a filter value filtering state and its caption.
AutoFilterItemList	Specifies the filtering state of an AutoFilter .

3.1.4.13.3.1 AutoFilterItemList

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the **filtering state** of an **AutoFilter** on the protocol server in the **GetAutoFilterItemList** response (section [3.1.4.13.2.2](#)).

```

<xs:complexType name="AutoFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowTime" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemListMaxExceeded" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsBlanksSelected" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterDateNodes"
type="tns2:ArrayOfAutoFilterDateNodeInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterItems"
type="tns2:ArrayOfAutoFilterItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecondValues" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecondKeys" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinuteValues" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinuteKeys" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HourValues" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HourKeys" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayValues" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayKeys" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthValues" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthKeys" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearValues" type="tns2:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearKeys" type="tns2:ArrayOfAnyType"/>
  </xs:sequence>
</xs:complexType>

```

ShowTime: Specifies whether the AutoFilter filtering includes hour, minute and seconds. If the value is **true**, the following apply:

- The protocol client MUST ignore the **Second**, **Hour**, and **Minute** elements of the **AutoFilterDateNodeInfo** elements (section [2.2.4.13](#)) contained in **AutoFilterDateNodes** element.
- The protocol client MUST ignore the **HourValues**, **HourKeys**, **MinuteValues**, **MinuteKeys**, **SecondValues**, and **SecondKeys** elements.

ItemListMaxExceeded: Specifies whether the number of **filter values** and **filter date values** in the AutoFilter is larger than 1000. The protocol server MUST set the value to true if it has more than 1000 elements for both the **AutoFilterDateNodes** and **AutoFilterItems** combined.

IsBlanksSelected: Specifies whether the AutoFilter is filtering blank values. The value set to **true** specifies that the AutoFilter filtering includes blank values, the value set to **false** specifies that AutoFilter filtering does not include filtering blank values. MUST be **false** if the value of **HasBlanks** element is **false**.

HasBlanks: Specifies whether the AutoFilter contains a blank value. The value **true** specifies that blank values exist. The value **false** specifies that there is no blank value.

AutoFilterDateNodes: A list of filter date values as specified in section [2.2.4.3](#). MUST be present. If the list contains 0 elements, the protocol client MUST ignore it. MUST NOT contain more than 1000 **AutoFilterDateNodeInfo** elements. If the value of **ShowTime** element is false, then for all elements in the **AutoFilterDateNodeInfo** element the filter date values for the **Hour**, **Minute**, and **Second** elements of the **AutoFilterDateNodeInfo** complex type MUST be set to 0. When the protocol client needs to determine the **caption** for the **Year**, **Month**, **Day**, **Hour**, **Minute** or **Second** elements of **AutoFilterDateNodeInfo**, it MUST do the following:

- For the **Year** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **YearKeys** element and then access the value at the determined index in the **YearValues** element.

- For the **Month** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **MonthKeys** element, and then access the value at the determined index in the **MonthValues** element.
- For the **Day** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **DayKeys** element and then access the value at the determined index in the **DayValues** element.
- For the **Hour** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **HourKeys** element and then access the value at the determined index in the **HourValues** element.
- For the **Minute** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **MinuteKeys** element and then access the value at the determined index in the **MinuteValues** element.
- For the **Second** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **SecondKeys** element and then access the value at the determined index in the **SecondValues** element.

AutoFilterItems: A list of filter values as specified in section [3.1.4.13.3.2](#). MUST be present. If the list contains 0 elements, the client protocol MUST ignore it. MUST NOT contain more than the subtraction of the count of **AutoFilterDateNodeInfo** in the **AutoFilterDateNode** element from 1000.

SecondValues: A list of captions corresponding to second filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session. MUST contain 0 elements if the value of **ShowTime** is **false**.

SecondKeys: A sorted list of number values that represent seconds. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **SecondValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **SecondValues** list.

MinuteValues: A list of captions corresponding to minute filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session. MUST contain 0 elements if the value of **ShowTime** is **false**.

MinuteKeys: A sorted list of number values that represent minutes. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **MinuteValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **MinuteValues** list.

HourValues: A list of captions corresponding to hour filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session. MUST contain 0 elements if the value of **ShowTime** is **false**.

HourKeys: A sorted list of number values that represent hours. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **HourValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **HourValues** list.

DayValues: A list of captions corresponding to day filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session.

DayKeys: A sorted list of number values that represent days. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **DayValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **DayValues** list.

MonthValues: A list of captions corresponding to month filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session.

MonthKeys: A sorted list of number values that represent months. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **MonthValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values.

The index of each contained element in the list MUST match the index of its corresponding display string value element in **MonthValues** list.

YearValues: A list of caption corresponding to year filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session.

YearKeys: A sorted list of number values that represent years. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **YearValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **YearValues** list.

3.1.4.13.3.2 ArrayOfAutoFilterItem

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A list of **filter values caption** and **filtering state**.

```
<xs:complexType name="ArrayOfAutoFilterItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="AutoFilterItem" nillable="true"
type="tns2:AutoFilterItem"/>
  </xs:sequence>
</xs:complexType>
```

AutoFilterItem: A filter value, as specified in section [3.1.4.13.3.3](#).

3.1.4.13.3.3 AutoFilterItem

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies a **filter value filtering state** and its **caption**.

```
<xs:complexType name="AutoFilterItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Selected" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayString" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Selected: Specifies whether the filter value is included in the **filter**. A **true** value specifies that the filter value is included. A **false** value specifies that the filter value is excluded.

DisplayString: The caption of a filter value. MUST be present. The number of characters MUST be greater than or equal to 1 and less than or equal to 255.

3.1.4.13.4 Simple Types

None.

3.1.4.13.5 Attributes

None.

3.1.4.13.6 Groups

None.

3.1.4.13.7 Attribute Groups

None.

3.1.4.14 GetChart

This operation is used to return a chart image.

The following is the **WSDL** port type specification of the **GetChart WSDL operation**.

```
<wsdl:operation name="GetChart" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChart" message="tns2:ExcelServiceSoap GetChart InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartResponse"
    message="tns2:ExcelServiceSoap_GetChart_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetChart_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetChart_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetChart_OutputMessage** response, message as follows:

- The protocol server MUST return a chart image as specified in the **getChartInformation** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<23>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.14.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetChart_InputMessage	The request WSDL message for the GetChart WSDL operation .
ExcelServiceSoap_GetChart_OutputMessage	The response WSDL message for the GetChart WSDL operation .

3.1.4.14.1.1 ExcelServiceSoap_GetChart_InputMessage

The request **WSDL message** for the **GetChart WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetChart
```

The **SOAP body** contains the **GetChart** element.

3.1.4.14.1.2 ExcelServiceSoap_GetChart_OutputMessage

The response **WSDL message** for the **GetChart WSDL operation**.

The **SOAP body** contains the **GetChartResponse** element.

3.1.4.14.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetChart	The input data for the GetChart WSDL operation .
GetChartResponse	The result data for the GetChart WSDL operation .

3.1.4.14.2.1 GetChart

The **GetChart** element specifies the input data for the **GetChart WSDL operation**.

```
<xs:element name="GetChart" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="getChartInformation"
type="tns2:GetChartInformation"/>
      <xs:element minOccurs="1" maxOccurs="1" name="renderingOptions"
type="tns2:ImageRenderingOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

getChartInformation: Specifies which chart to return and its width and height, as specified in section [3.1.4.14.3.1](#). MUST be present.

renderingOptions: Specifies options that affect the style of the returned image. See section [2.2.5.21](#). MUST be present.

3.1.4.14.2.2 GetChartResponse

The **GetChartResponse** element specifies the result data for the **GetChart WSDL operation**.

```
<xs:element name="GetChartResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetChartResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binaryChartImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetChartResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binaryChartImage** field. MUST be the string "x-png".

binaryChartImage: The image of the chart. MUST be present. MUST be in the format specified in [\[RFC2083\]](#).

3.1.4.14.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
GetChartInformation	Information about a GetChart operation.

3.1.4.14.3.1 GetChartInformation

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Additional information about a **GetChart** operation.

```
<xs:complexType name="GetChartInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Height: Specifies the height of the image to be returned. MUST be either -1 or an integer greater than or equal to 4 and less than or equal to 4096. If -1, then the original height of the chart will be used. MUST be -1 if **Width** is -1. MUST be present.

Width: Specifies the width of the image to be returned. MUST be either -1 or an integer greater than or equal to 4 and less than or equal to 4096. If -1, then the original width of the chart will be used. MUST be -1 if **Height** is -1. MUST be present.

Name: The string identifier for a chart. MUST be present. MUST be non-empty. MUST be the **Name** value specified in **CT_NamedObject** ([\[MS-EXSPXML3\]](#) section 2.3.4).

3.1.4.14.4 Simple Types

None.

3.1.4.14.5 Attributes

None.

3.1.4.14.6 Groups

None.

3.1.4.14.7 Attribute Groups

None.

3.1.4.15 GetHealthScore

This operation is used to return information about the health of the protocol server.

The following is the **WSDL** port type specification of the **GetHealthScore WSDL operation**.

```
<wsdl:operation name="GetHealthScore" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetHealthScore"
    message="tns2:ExcelServiceSoap_GetHealthScore_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetHealthScoreResponse"
    message="tns2:ExcelServiceSoap_GetHealthScore_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetHealthScoreExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetHealthScore_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetHealthScore_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetHealthScore_OutputMessage**, as follows:

- The **CommandResult** returned by the protocol server MUST contain **ServerHealthInformation** as specified in sections [2.2.4.21](#) and [2.2.4.34](#).

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<24>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.15.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetHealthScore_InputMessage	The request WSDL message for the GetHealthScore WSDL operation .
ExcelServiceSoap_GetHealthScore_OutputMessage	The response WSDL message for the GetHealthScore WSDL operation .

3.1.4.15.1.1 ExcelServiceSoap_GetHealthScore_InputMessage

The request **WSDL message** for the **GetHealthScore WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetHealthScore
```

The **SOAP body** contains the **GetHealthScore** element.

3.1.4.15.1.2 ExcelServiceSoap_GetHealthScore_OutputMessage

The response **WSDL message** for the **GetHealthScore WSDL operation**.

The **SOAP body** contains the **GetHealthScoreResponse** element.

3.1.4.15.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetHealthScore	The input data for the GetHealthScore WSDL operation .
GetHealthScoreResponse	The result data for the GetHealthScore WSDL operation .

3.1.4.15.2.1 GetHealthScore

The **GetHealthScore** element specifies the input data for the **GetHealthScore WSDL operation**.

```
<xs:element name="GetHealthScore" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

3.1.4.15.2.2 GetHealthScoreResponse

The **GetHealthScoreResponse** element specifies the result data for the **GetHealthScore WSDL operation**.

```

<xs:element name="GetHealthScoreResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetHealthScoreResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetHealthScoreResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.15.3 Complex Types

None.

3.1.4.15.4 Simple Types

None.

3.1.4.15.5 Attributes

None.

3.1.4.15.6 Groups

None.

3.1.4.15.7 Attribute Groups

None.

3.1.4.16 GetImage

This operation is used to return a chart image or **embedded image**.

The following is the **WSDL** port type specification of the **GetImage WSDL operation**.

```

<wsdl:operation name="GetImage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input>
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImage" message="tns2:ExcelServiceSoap_GetImage_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output>
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImageResponse"
message="tns2:ExcelServiceSoap_GetImage_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault>
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImageExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetImage_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetImage_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetImage_OutputMessage** response message, as follows:

- The protocol server MUST return a chart image or embedded image as specified in the **imageId** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<25>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.16.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetImage_InputMessage	The request WSDL message for the GetImage WSDL operation .
ExcelServiceSoap_GetImage_OutputMessage	The response WSDL message for the GetImage WSDL operation .

3.1.4.16.1.1 ExcelServiceSoap_GetImage_InputMessage

The request **WSDL message** for the **GetImage WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetImage
```

The **SOAP body** contains the **GetImage** element.

3.1.4.16.1.2 ExcelServiceSoap_GetImage_OutputMessage

The response **WSDL message** for the **GetImage WSDL operation**.

The **SOAP body** contains the **GetImageResponse** element.

3.1.4.16.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetImage	The input data for the GetImage WSDL operation .
GetImageResponse	The result data for the GetImage WSDL operation .

3.1.4.16.2.1 GetImage

The **GetImage** element specifies the input data for the **GetImage WSDL operation**.

```
<xs:element name="GetImage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="imageId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="renderingOptions"
type="tns2:ImageRenderingOptions"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

imageId: The chart or image identifier. MUST be present. MUST NOT be empty. MUST be the value specified in **CT_Image** element ([\[MS-EXSPXML3\]](#) section 2.3.33).

renderingOptions: Specifies options that affect the style of the returned image. See section [2.2.5.21](#). MUST be present.

3.1.4.16.2.2 GetImageResponse

The **GetImageResponse** element specifies the result data for the **GetImage WSDL operation**.

```

<xs:element name="GetImageResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetImageResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binaryChartImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetImageResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binaryChartImage** field. MUST be either the string "x-png" or the string "jpeg".

binaryChartImage: The image of the chart or embedded image. MUST be present. If **imageFormatType** is "x-png", MUST be in the format specified in [\[RFC2083\]](#). If **imageFormatType** is "jpeg", MUST be in the format specified in [\[JFIF\]](#).

3.1.4.16.3 Complex Types

None.

3.1.4.16.4 Simple Types

None.

3.1.4.16.5 Attributes

None.

3.1.4.16.6 Groups

None.

3.1.4.16.7 Attribute Groups

None.

3.1.4.17 GetObjectInformation

This operation returns the **range** of a **published item** in a **workbook**

The following is the **WSDL** port type specification of the **GetObjectInformation WSDL operation**.

```
<wsdl:operation name="GetObjectInformation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetObjectInformation"
    message="tns2:ExcelServiceSoap_GetObjectInformation_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetObjectInformationResponse"
    message="tns2:ExcelServiceSoap_GetObjectInformation_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetObjectInformationExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetObjectInformation_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetObjectInformation_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetObjectInformation_OutputMessage**.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<26>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.17.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetObjectInformation_InputMessage	The request WSDL message for the GetObjectInformation WSDL operation .
ExcelServiceSoap_GetObjectInformation_OutputMessage	The response WSDL message for the GetObjectInformation WSDL operation .

3.1.4.17.1.1 ExcelServiceSoap_GetObjectInformation_InputMessage

The request **WSDL message** for the **GetObjectInformation WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetObjectInformation
```

The **SOAP body** contains the **GetObjectInformation** element.

3.1.4.17.1.2 ExcelServiceSoap_GetObjectInformation_OutputMessage

The response **WSDL message** for the **GetObjectInformation WSDL operation**.

The **SOAP body** contains the **GetObjectInformationResponse** element.

3.1.4.17.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetObjectInformation	The input data for the GetObjectInformation WSDL operation .
GetObjectInformationResponse	The result data for the GetObjectInformation WSDL operation .

3.1.4.17.2.1 GetObjectInformation

The **GetObjectInformation** element specifies the input data for the **GetObjectInformation WSDL operation**.

```
<xs:element name="GetObjectInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="objectName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="objectType" type="tns2:NamedObjectType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

objectName: The name of the requested **published item**. MUST be present.

objectType: The type of the published item as specified in section [2.2.5.22](#).

3.1.4.17.2.2 GetObjectInformationResponse

The **GetObjectInformationResponse** element specifies the result data for the **GetObjectInformation WSDL operation**.

```
<xs:element name="GetObjectInformationResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetObjectInformationResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="objectInformation"
type="tns2:ObjectInformation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```


GetObjectInformationResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

objectInformation: Information about the requested **published item** as specified in section [3.1.4.17.3.1](#). MUST be present.

3.1.4.17.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ObjectInformation	Specifies the range of a published item .

3.1.4.17.3.1 ObjectInformation

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the **range** of a **published item**.

```
<xs:complexType name="ObjectInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetRange" type="tns2:SheetRange"/>
  </xs:sequence>
</xs:complexType>
```

SheetRange: A range in the **workbook**, as specified in section [2.2.4.35](#). MUST be present.

3.1.4.17.4 Simple Types

None.

3.1.4.17.5 Attributes

None.

3.1.4.17.6 Groups

None.

3.1.4.17.7 Attribute Groups

None.

3.1.4.18 GetPivotFilterItemList

This operation is used to return **child PivotTable members** that are part of a **PivotTable manual filter hierarchy**, or **child PivotChart members** that are part of a PivotChart manual filter hierarchy. This operation is used after calling either the **ConnectAndGetPivotFilterItemList** operation (section [3.1.4.9](#)) or this operation for an **ancestor** in the hierarchy.

The following is the **WSDL** port type specification of the **GetPivotFilterItemList WSDL operation**.

```

<wsdl:operation name="GetPivotFilterItemList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemList"
message="tns2:ExcelServiceSoap_GetPivotFilterItemList_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemListResponse"
message="tns2:ExcelServiceSoap_GetPivotFilterItemList_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotFilterItemList_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetPivotFilterItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotFilterItemList_OutputMessage** response message, as follows:

1. The protocol client sends the following information in the **pivotOperationOptions** element:
 - The PivotTable or PivotChart manual filter.
 - The PivotTable or PivotChart member that is the common ancestor of all the PivotTable or PivotChart members in the hierarchy to be returned.
2. The protocol server returns the PivotTable members or PivotChart members in the **itemList** element as follows:
 - The **PivotFilterItems** element of **itemList** MUST contain a list of the PivotTable or PivotChart members that are child PivotTable members or child PivotChart members of a particular PivotTable or PivotChart—specifically, of the member that has an **Id** element equal to the **ParentId** element of **pivotOperationOptions**. If no more than 1000 such child members exist, the list MUST contain all those child members. If more than 1000 such child members exist, the list MUST contain the first 1000 such child members.
 - If the PivotTable or PivotChart member that has an **Id** element equal to the **ParentId** element of **pivotOperationOptions** has more than 1000 child PivotTable members or child PivotChart members, the **ItemListMaxExceeded** element of **itemList** MUST be set to **true**. Otherwise, the **ItemListMaxExceeded** element of **itemList** MUST be set to **false**.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<27>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.18.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotFilterItemList_InputMessage	The request WSDL message for the GetPivotFilterItemList WSDL operation .
ExcelServiceSoap_GetPivotFilterItemList_OutputMessage	The response WSDL message for the GetPivotFilterItemList WSDL operation .

3.1.4.18.1.1 ExcelServiceSoap_GetPivotFilterItemList_InputMessage

The request **WSDL message** for the **GetPivotFilterItemList WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotFilterItemList
```

The **SOAP body** contains the **GetPivotFilterItemList** element.

3.1.4.18.1.2 ExcelServiceSoap_GetPivotFilterItemList_OutputMessage

The response **WSDL message** for the **GetPivotFilterItemList WSDL operation**.

The **SOAP body** contains the **GetPivotFilterItemListResponse** element.

3.1.4.18.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetPivotFilterItemList	The input data for the GetPivotFilterItemList WSDL operation .
GetPivotFilterItemListResponse	The result data for the GetPivotFilterItemList WSDL operation .

3.1.4.18.2.1 GetPivotFilterItemList

The **GetPivotFilterItemList** element specifies the input data for the **GetPivotFilterItemList WSDL operation**.

```
<xs:element name="GetPivotFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). **MUST** be present.

pivotOperationOptions: The **PivotTable** or **PivotChart manual filter** location or anchor information. **MUST** be present. The following behavior **MUST** extend or override the standard behavior that is specified in section [2.2.4.28](#):

- **ParentId:** **MUST** be set to the **Id** element of the element whose **child PivotTable members** or child **PivotChart members** are to be returned. **MUST** be equal to the **Id** element of one of the nested **PivotFilterItem** elements returned in the **itemList** element in a previous call to the **ConnectAndGetPivotFilterItemList** (section [3.1.4.9](#)) operation or **GetPivotFilterItemList** (section [3.1.4.18](#)) operation for the same **PivotTable** or **PivotChart manual filter**.

3.1.4.18.2.2 GetPivotFilterItemListResponse

The **GetPivotFilterItemListResponse** element specifies the result data for the **GetPivotFilterItemList** **WSDL operation**.

```
<xs:element name="GetPivotFilterItemListResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFilterItemListResult"
        type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList"
        type="tns2:PivotFilterItemList"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotFilterItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

itemList: The list of **child PivotTable members** or child **PivotChart** members. MUST be present.

3.1.4.18.3 Complex Types

None.

3.1.4.18.4 Simple Types

None.

3.1.4.18.5 Attributes

None.

3.1.4.18.6 Groups

None.

3.1.4.18.7 Attribute Groups

None.

3.1.4.19 GetPivotMenu

This operation is used to return information about a **PivotTable area**.

The following is the **WSDL** port type specification of the **GetPivotMenu** **WSDL operation**.

```
<wsdl:operation name="GetPivotMenu" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotMenu"
    message="tns2:ExcelServiceSoap_GetPivotMenu_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotMenuResponse"
    message="tns2:ExcelServiceSoap_GetPivotMenu_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
```

```

<wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotMenuExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotMenu_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetPivotMenu_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotMenu_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the PivotTable area in the **pivotOperationOptions** element.
2. The protocol server returns the PivotTable area information in the **pivotMenu** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<28>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.19.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotMenu_InputMessage	The request WSDL message for the GetPivotMenu WSDL operation .
ExcelServiceSoap_GetPivotMenu_OutputMessage	The response WSDL message for the GetPivotMenu WSDL operation .

3.1.4.19.1.1 ExcelServiceSoap_GetPivotMenu_InputMessage

The request **WSDL message** for the **GetPivotMenu WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetPivotMenu

```

The **SOAP body** contains the **GetPivotMenu** element.

3.1.4.19.1.2 ExcelServiceSoap_GetPivotMenu_OutputMessage

The response **WSDL message** for the **GetPivotMenu WSDL operation**.

The **SOAP body** contains the **GetPivotMenuResponse** element.

3.1.4.19.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetPivotMenu	The input data for the GetPivotMenu WSDL operation .
GetPivotMenuResponse	The result data for the GetPivotMenu WSDL operation .

3.1.4.19.2.1 GetPivotMenu

The **GetPivotMenu** element specifies the input data for the **GetPivotMenu WSDL operation**.

```
<xs:element name="GetPivotMenu" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

pivotOperationOptions: The **PivotTable area** location, the **PivotTable** anchor information, or the **PivotChart** anchor information. This element MUST be present. The following behavior MUST extend or override the standard behavior that is specified in section [2.2.4.28](#):

- The value of the **SourceIndex** element MUST be greater than or equal to 0.
- The **FieldId** element MUST NOT be present.

3.1.4.19.2.2 GetPivotMenuResponse

The **GetPivotMenuResponse** element specifies the result data for the **GetPivotMenu WSDL operation**.

```
<xs:element name="GetPivotMenuResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotMenuResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotMenu" type="tns2:PivotMenu"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotMenuResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

pivotMenu: The information about the **PivotTable** or **PivotChart** anchor information as specified in section [2.2.4.101](#). This element MUST be present.

3.1.4.19.3 Complex Types

None.

3.1.4.19.4 Simple Types

None.

3.1.4.19.5 Attributes

None.

3.1.4.19.6 Groups

None.

3.1.4.19.7 Attribute Groups

None.

3.1.4.20 GetPublishedObjects

This operation returns a list of the **published items** in a **workbook**.

The following is the **WSDL** port type specification of the **GetPublishedObjects WSDL operation**.

```
<wsdl:operation name="GetPublishedObjects" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPublishedObjects"
    message="tns2:ExcelServiceSoap_GetPublishedObjects_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPublishedObjectsResponse"
    message="tns2:ExcelServiceSoap_GetPublishedObjects_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPublishedObjectsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetPublishedObjects_ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPublishedObjects_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetPublishedObjects_OutputMessage**.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<29>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.20.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPublishedObjects_InputMessage	The request WSDL message for the GetPublishedObjects WSDL operation .
ExcelServiceSoap_GetPublishedObjects_OutputMessage	The response WSDL message for the GetPublishedObjects WSDL operation .

3.1.4.20.1.1 ExcelServiceSoap_GetPublishedObjects_InputMessage

The request **WSDL message** for the **GetPublishedObjects WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPublishedObjects
```

The **SOAP body** contains the **GetPublishedObjects** element.

3.1.4.20.1.2 ExcelServiceSoap_GetPublishedObjects_OutputMessage

The response **WSDL message** for the **GetPublishedObjects WSDL operation**.

The **SOAP body** contains the **GetPublishedObjectsResponse** element.

3.1.4.20.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetPublishedObjects	The input data for the GetPublishedObjects WSDL operation .
GetPublishedObjectsResponse	The result data for the GetPublishedObjects WSDL operation .

3.1.4.20.2.1 GetPublishedObjects

The **GetPublishedObjects** element specifies the input data for the **GetPublishedObjects WSDL operation**.

```
<xs:element name="GetPublishedObjects" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="options"
type="tns2:GetPublishedObjectsOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). **MUST** be present.

options: **GetPublishedObjectsOptions** as specified in section [3.1.4.20.4.1](#).

3.1.4.20.2.2 GetPublishedObjectsResponse

The **GetPublishedObjectsResponse** element specifies the result data for the **GetPublishedObjects WSDL operation**.

```
<xs:element name="GetPublishedObjectsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```



```

    <xs:element minOccurs="0" maxOccurs="1" name="GetPublishedObjectsResult"
type="tns2:CommandResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="publishedObjects"
type="tns2:ArrayOfPublishedObjectName"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

GetPublishedObjectsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

publishedObjects: An array of **PublishedObjectName** elements, as specified in section [3.1.4.20.3.1](#). MUST be present.

3.1.4.20.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfPublishedObjectName	An array of PublishedObjectName elements.
PublishedObjectName	Specifies the name and type of a published item .

3.1.4.20.3.1 ArrayOfPublishedObjectName

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfPublishedObjectName** type is an array of **PublishedObjectName** elements (section [3.1.4.20.3.2](#)).

```

<xs:complexType name="ArrayOfPublishedObjectName"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PublishedObjectName"
nillable="true" type="tns2:PublishedObjectName"/>
  </xs:sequence>
</xs:complexType>

```

PublishedObjectName: A **PublishedObjectName** element as specified in section 3.1.4.20.3.2.

3.1.4.20.3.2 PublishedObjectName

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the name and type of a **published item**.

```

<xs:complexType name="PublishedObjectName" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns2:NamedObjectType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="TableId" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

Name: The name of the published item. MUST be present.

Type: The type of the published item as specified in section [2.2.5.22](#).

TableId: The identifier of the published item.

3.1.4.20.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
GetPublishedObjectsOptions	Specifies criteria for the published items returned by the protocol server.

3.1.4.20.4.1 GetPublishedObjectsOptions

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies criteria for the **published items** returned by the protocol server.

```
<xs:simpleType name="GetPublishedObjectsOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ReturnImplicitPublish"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **GetPublishedObjectsOptions** simple type.

Value	Meaning
ReturnImplicitPublish	Specifies that, if the workbook contains no items that have been published explicitly, the list returned from the operation will contain, from each published sheet , the charts from that sheet (1) and the named objects that intersect the used range of that sheet (1). The used range is the smallest range containing all cells that are not empty.

3.1.4.20.5 Attributes

None.

3.1.4.20.6 Groups

None.

3.1.4.20.7 Attribute Groups

None.

3.1.4.21 GetRange

This operation returns information about the **workbook** as specified in [\[MS-EXSPXML3\]](#).

The following is the **WSDL** port type specification of the **GetRange WSDL operation**.

```
<wsdl:operation name="GetRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRange" message="tns2:ExcelServiceSoap_GetRange_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeResponse"
    message="tns2:ExcelServiceSoap_GetRange_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRange_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<30>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.21.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetRange_InputMessage	The request WSDL message for the GetRange WSDL operation .
ExcelServiceSoap_GetRange_OutputMessage	The response WSDL message for the GetRange WSDL operation .

3.1.4.21.1.1 ExcelServiceSoap_GetRange_InputMessage

The request **WSDL message** for the **GetRange WSDL operation**.

The **SOAP action** value is:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetRange

The **SOAP body** contains the **GetRange** element.

3.1.4.21.1.2 ExcelServiceSoap_GetRange_OutputMessage

The response **WSDL message** for the **GetRange WSDL operation**.

The **SOAP body** contains the **GetRangeResponse** element.

3.1.4.21.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetRange	The input data for the GetRange WSDL operation .
GetRangeResponse	The result data for the GetRange WSDL operation .

3.1.4.21.2.1 GetRange

The **GetRange** element specifies the input data for the **GetRange WSDL operation**.

```
<xs:element name="GetRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.21.2.2 GetRangeResponse

The **GetRangeResponse** element specifies the result data for the **GetRange WSDL operation**.

```
<xs:element name="GetRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.21.3 Complex Types

None.

3.1.4.21.4 Simple Types

None.

3.1.4.21.5 Attributes

None.

3.1.4.21.6 Groups

None.

3.1.4.21.7 Attribute Groups

None.

3.1.4.22 GetRangeForClipboard

This operation is used to get the number formatted values of **visible worksheet cells** in a specified **range** in a **workbook**.

The following is the **WSDL** port type specification of the **GetRangeForClipboard WSDL operation**.

```
<wsdl:operation name="GetRangeForClipboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeForClipboard"
    message="tns2:ExcelServiceSoap_GetRangeForClipboard_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeForClipboardResponse"
    message="tns2:ExcelServiceSoap_GetRangeForClipboard_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeForClipboardExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetRangeForClipboard_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetRangeForClipboard_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeForClipboard_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the requested range in the **source** element. The protocol server trims the ending empty **columns (2)** and the ending empty **rows (2)** in the range.
2. The protocol server will not include trailing columns (2) that do not contain any values.
3. The protocol server will not include trailing rows (2) that do not contain any values.
4. Depending on security settings, the protocol server MAY [<31>](#) return a **SOAP fault** even if the requested range is present in the workbook.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<32>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.22.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetRangeForClipboard_InputMessage	The request WSDL message for the GetRangeForClipboard WSDL operation .
ExcelServiceSoap_GetRangeForClipboard_OutputMessage	The response WSDL message for the GetRangeForClipboard WSDL operation .

3.1.4.22.1.1 ExcelServiceSoap_GetRangeForClipboard_InputMessage

The request **WSDL message** for the **GetRangeForClipboard WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetRangeForClipboard
```

The **SOAP body** contains the **GetRangeForClipboard** element.

3.1.4.22.1.2 ExcelServiceSoap_GetRangeForClipboard_OutputMessage

The response **WSDL message** for the **GetRangeForClipboard WSDL operation**.

The **SOAP body** contains the **GetRangeForClipboardResponse** element.

3.1.4.22.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetRangeForClipboard	The input data for the GetRangeForClipboard WSDL operation .
GetRangeForClipboardResponse	The result data for the GetRangeForClipboard WSDL operation .

3.1.4.22.2.1 GetRangeForClipboard

The **GetRangeForClipboard** element specifies the input data for the **GetRangeForClipboard WSDL operation**.

```

<xs:element name="GetRangeForClipboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="source" type="tns2:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

source: The **range** that the protocol client requests data to be fetched from the protocol server. MUST be present.

3.1.4.22.2 GetRangeForClipboardResponse

The **GetRangeForClipboardResponse** element specifies the result data for the **GetRangeForClipboard WSDL operation**.

```

<xs:element name="GetRangeForClipboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeForClipboardResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clipboardString" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetRangeForClipboardResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

clipboardString: The string with the number formatted values for the requested **worksheet cells** in the **workbook**. MUST be present. For each **visible** cell the protocol server adds the number formatted value of the cell to the response in the **clipboardString** element. If the **range** contains more than one visible cell in a **row (2)**, then the protocol server MUST include the tab (\t) character between each of the values for the cells in the response. If the range contains more than one visible row (2), then the protocol server MUST include the following string "\r\n" between each visible row (2) in response. The length of the value of **clipboardString** MUST be less than or equal to 102400 characters.

3.1.4.22.3 Complex Types

None.

3.1.4.22.4 Simple Types

None.

3.1.4.22.5 Attributes

None.

3.1.4.22.6 Groups

None.

3.1.4.22.7 Attribute Groups

None.

3.1.4.23 GetRangeValues

This operation is used to get the values contained in a specified **range** in a **workbook**.

The following is the **WSDL** port type specification of the **GetRangeValues WSDL operation**.

```
<wsdl:operation name="GetRangeValues" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeValues"
    message="tns2:ExcelServiceSoap_GetRangeValues_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeValuesResponse"
    message="tns2:ExcelServiceSoap_GetRangeValues_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeValuesExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetRangeValues_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetRangeValues_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeValues_OutputMessage** response message, as follows:

1. Depending on security settings, the protocol server MAY [<33>](#) return a **SOAP fault** even if the requested range is present in the workbook.
2. Each element inside the **cellValues** element MUST be of type **ArrayOfAnyType** and is a **row (2)** of **sheet (2) cells** returned from the protocol server. The number of rows (2) returned MUST be equal to the number of rows (2) requested in the **sheetRange** element.
3. Each element inside each of the **ArrayOfAnyType** type nested inside **cellValues** MUST be a single workbook sheet (2) cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of **columns (2)** requested in the **sheetRange** element.
4. If **formatted** is **true**, all sheet (2) cells returned as part of the **cellValues** element MUST be of type **string** and MUST be number formatted according to how the sheet (2) cell is number formatted in the workbook.
5. If **formatted** is false, the following apply:
 - If the sheet (2) cells returned as part of the **cellValues** element is empty, the **xsi:nil** attribute MUST be set to true.
 - If a cell is not empty, then the type returned as part of **cellValues** element for this cell MUST be one of the following types: **boolean**, **double**, **string**, or **CellError** (section [3.1.4.34.4.2](#)).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<34>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **EcsInvalidNamedObject**

- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.23.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetRangeValues_InputMessage	The request WSDL message for the GetRangeValues WSDL operation .
ExcelServiceSoap_GetRangeValues_OutputMessage	The response WSDL message for the GetRangeValues WSDL operation.

3.1.4.23.1.1 ExcelServiceSoap_GetRangeValues_InputMessage

The request **WSDL message** for the **GetRangeValues WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetRangeValues
```

The **SOAP body** contains the **GetRangeValues** element.

3.1.4.23.1.2 ExcelServiceSoap_GetRangeValues_OutputMessage

The response **WSDL message** for the **GetRangeValues WSDL operation**.

The **SOAP body** contains the **GetRangeValuesResponse** element.

3.1.4.23.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetRangeValues	The input data for the GetRangeValues WSDL operation .
GetRangeValuesResponse	The result data for the GetRangeValues WSDL operation.

3.1.4.23.2.1 GetRangeValues

The **GetRangeValues** element specifies the input data for the **GetRangeValues WSDL operation**.

```
<xs:element name="GetRangeValues" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns2:SheetRange"/>
    <xs:element minOccurs="1" maxOccurs="1" name="formatted" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sheetRange: The range that the protocol client requests data to be fetched from the protocol server. MUST be present.

formatted: Specifies whether or not the data retrieved is number formatted.

3.1.4.23.2 GetRangeValuesResponse

The **GetRangeValuesResponse** element specifies the result data for the **GetRangeValues WSDL operation**.

```

<xs:element name="GetRangeValuesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeValuesResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="cellValues" type="tns2:ArrayOfAnyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetRangeValuesResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

cellValues: The values returned from the protocol server. MUST be present.

3.1.4.23.3 Complex Types

None.

3.1.4.23.4 Simple Types

None.

3.1.4.23.5 Attributes

None.

3.1.4.23.6 Groups

None.

3.1.4.23.7 Attribute Groups

None.

3.1.4.24 GetRangeValuesA1

This operation is used to get the values contained in a specified **range** in a **workbook**.

The following is the **WSDL** port type specification of the **GetRangeValuesA1 WSDL operation**.

```
<wsdl:operation name="GetRangeValuesA1" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeValuesA1"
    message="tns2:ExcelServiceSoap_GetRangeValuesA1_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeValuesA1Response"
    message="tns2:ExcelServiceSoap_GetRangeValuesA1_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeValuesA1ExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetRangeValuesA1_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetRangeValuesA1_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeValuesA1_OutputMessage** response message, as follows:

1. If **sheetName** is not present, the protocol server MUST return a **SOAP fault**. The **Id** element of the **ExcelServerMessage** MUST be **InternalError**.
2. Depending on security settings, the protocol server MAY [<35>](#) return a SOAP fault even if the requested range is present in the workbook.
3. Each element inside the **rangeRequests** element MUST be of type **RangeValuesA1** as specified in section [2.2.4.31](#). The number of elements MUST be equal to the number of **named ranges** that the protocol client tries to get values from.
4. For each named range, the protocol server determines the range to return in the following manner:
 - If **sheetName** is empty and the protocol server cannot determine the **sheet (1)** from the **rangeName** element, the protocol server MUST return the requested values from the range specified in **rangeName** on the first sheet (1).
 - If **sheetName** is empty and the protocol server can determine the sheet (1) from the **rangeName** element, the protocol server MUST return the requested values from the range specified in **rangeName** on the determined sheet (1).
 - If **sheetName** is not empty and exists in the workbook, the protocol MUST return the range specified in **rangeName** from the sheet (1) that is specified in **sheetName**.
 - If **sheetName** is not empty and does not reference an existing sheet (1) in the workbook, the protocol server MUST return a SOAP fault. The **Id** element of the **ExcelServerMessage** MUST be **InvalidSheetName**.
5. If **formatted** is "Formatted", all **worksheet cells** returned as part of the **Values** element in the **RangeValuesA1** element MUST be of type **string** and MUST be number formatted according to how the sheet cell is number formatted in the workbook.
6. If **formatted** is "Unformatted", the following apply:
 - If the sheet (2) cells returned as part of the **Values** element in the **RangeValuesA1** element is empty, the **xsi:nil** attribute MUST be set to true.

- If a cell is not empty, it MUST be one of the following types: **boolean**, **double**, **string**, or **CellError** (section [3.1.4.34.4.2](#)).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<36>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.24.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetRangeValuesA1_InputMessage	The request WSDL message for the GetRangeValuesA1 WSDL operation .
ExcelServiceSoap_GetRangeValuesA1_OutputMessage	The response WSDL message for the GetRangeValuesA1 WSDL operation .

3.1.4.24.1.1 ExcelServiceSoap_GetRangeValuesA1_InputMessage

The request **WSDL message** for the **GetRangeValuesA1 WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetRangeValuesA1
```

The **SOAP body** contains the **GetRangeValuesA1** element.

3.1.4.24.1.2 ExcelServiceSoap_GetRangeValuesA1_OutputMessage

The response **WSDL message** for the **GetRangeValuesA1 WSDL operation**.

The **SOAP body** contains the **GetRangeValuesA1Response** element.

3.1.4.24.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetRangeValuesA1	The input data for the GetRangeValuesA1 WSDL operation .

Element	Description
GetRangeValuesA1Response	The result data for the GetRangeValuesA1 WSDL operation.

3.1.4.24.2.1 GetRangeValuesA1

The **GetRangeValuesA1** element specifies the input data for the **GetRangeValuesA1 WSDL operation**.

```
<xs:element name="GetRangeValuesA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeRequests"
type="tns2:ArrayOfRangeValuesA1"/>
      <xs:element minOccurs="1" maxOccurs="1" name="formatting" type="tns2:CellDataFormat"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

rangeRequests: An array of **RangeValuesA1** elements that specifies the **named range** that the protocol client requests data to be fetched from the protocol server. MUST be present.

formatting: Specifies whether or not the data retrieved is number formatted. This element MUST be "Formatted" if the values need to be **number formatted** and "Unformatted" if the values do not need to be number formatted. This element MUST be "Compound" if the values need to be both number formatted and unformatted.

3.1.4.24.2.2 GetRangeValuesA1Response

The **GetRangeValuesA1Response** element specifies the result data for the **GetRangeValuesA1 WSDL operation**.

```
<xs:element name="GetRangeValuesA1Response" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeValuesA1Result"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeRequests"
type="tns2:ArrayOfRangeValuesA1"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetRangeValuesA1Result: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

rangeRequests: An array of **RangeValuesA1** elements that contains the values retrieved from the protocol server.

3.1.4.24.3 Complex Types

None.

3.1.4.24.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
CellDataFormat	Specifies a list of enumeration values where the retrieved cell values need to be number formatted.

3.1.4.24.4.1 CellDataFormat

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies a list of enumeration values where the retrieved **cell values** need to be number formatted. If the value **Compound** is used, the formatted element **MUST** also use both the values **Formatted** and **Unformatted**. If the value **Compound** is not used, the formatted element **MUST** use either the value **Formatted** or **Unformatted**.

```
<xs:simpleType name="CellDataFormat" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="Formatted"/>
        <xs:enumeration value="Unformatted"/>
        <xs:enumeration value="Compound"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **CellDataFormat** simple type.

Value	Meaning
Formatted	Specifies that the retrieved cell values MUST be number formatted.
Unformatted	Specifies that the retrieved cell values MUST NOT be number formatted.
Compound	Specifies that the retrieved cell values MUST be of type CellCompoundValue as specified in section 2.2.4.16 .

3.1.4.24.5 Attributes

None.

3.1.4.24.6 Groups

None.

3.1.4.24.7 Attribute Groups

None.

3.1.4.25 GetSessionInformation

This operation is used to retrieve information about a **session (2)**.

The following is the **WSDL** port type specification of the **GetSessionInformation WSDL operation**.

```
<wsdl:operation name="GetSessionInformation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSessionInformation"
    message="tns2:ExcelServiceSoap_GetSessionInformation_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSessionInformationResponse"
    message="tns2:ExcelServiceSoap_GetSessionInformation_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSessionInformationExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetSessionInformation_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetSessionInformation_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetSessionInformation_OutputMessage**, as follows:

- The protocol server MUST return the **UI culture** and the **data culture** for the specified session. These are the languages specified in the **OpenWorkbook** operation (section [3.1.4.30](#)) or the languages that the protocol server falls back to as specified in **OpenWorkbook**.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<37>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.25.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSessionInformation_InputMessage	The request WSDL message for the GetSessionInformation WSDL operation .
ExcelServiceSoap_GetSessionInformation_OutputMessage	The response WSDL message for the GetSessionInformation WSDL operation .

3.1.4.25.1.1 ExcelServiceSoap_GetSessionInformation_InputMessage

The request **WSDL message** for the **GetSessionInformation WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSessionInformation
```

The **SOAP body** contains the **GetSessionInformation** element.

3.1.4.25.1.2 ExcelServiceSoap_GetSessionInformation_OutputMessage

The response **WSDL message** for the **GetSessionInformation WSDL operation**.

The **SOAP body** contains the **GetSessionInformationResponse** element.

3.1.4.25.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetSessionInformation	The input data for the GetSessionInformation WSDL operation .
GetSessionInformationResponse	The result data for the GetSessionInformation WSDL operation .

3.1.4.25.2.1 GetSessionInformation

The **GetSessionInformation** element specifies the input data for the **GetSessionInformation WSDL operation**.

```
<xs:element name="GetSessionInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.20](#):

- **StateId** MUST be -1.
- **ProtocolClientId** value MUST be "ms-soap".

3.1.4.25.2.2 GetSessionInformationResponse

The **GetSessionInformationResponse** element specifies the result data for the **GetSessionInformation WSDL operation**.

```
<xs:element name="GetSessionInformationResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSessionInformationResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="serverVersion" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="uiCultureName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataCultureName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```


GetSessionInformationResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

serverVersion: The version of the protocol server. MUST be present. MAY [<38>](#) contain any string value.

uiCultureName: The **UI culture**. MUST be present. MUST be a language tag as specified in [\[RFC1766\]](#) section 2.

dataCultureName: The **data culture**. MUST be present. MUST be a language tag, as specified in [\[RFC1766\]](#) section 2.

3.1.4.25.3 Complex Types

None.

3.1.4.25.4 Simple Types

None.

3.1.4.25.5 Attributes

None.

3.1.4.25.6 Groups

None.

3.1.4.25.7 Attribute Groups

None.

3.1.4.26 GetSheetNames

The operation returns information about the **sheets** in a **workbook**.

The following is the **WSDL** port type specification of the **GetSheetNames WSDL operation**.

```
<wsdl:operation name="GetSheetNames" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSheetNames"
    message="tns2:ExcelServiceSoap_GetSheetNames_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSheetNamesResponse"
    message="tns2:ExcelServiceSoap_GetSheetNames_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSheetNamesExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetSheetNames_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetSheetNames_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetSheetNames_OutputMessage**, as follows:

1. If the **session (2)** is a **view session** in **view-only mode**, the number of elements inside **GetSheetNamesResult** MUST be equal to the number of **visible published sheets** in the workbook.
2. If the session (2) is not a view session in view-only mode, the number of elements inside **GetSheetNamesResult** MUST be equal to the number of loaded sheets in the workbook.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<39>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.26.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSheetNames_InputMessage	The request WSDL message for the GetSheetNames WSDL operation .
ExcelServiceSoap_GetSheetNames_OutputMessage	The response WSDL message for the GetSheetNames WSDL operation .

3.1.4.26.1.1 ExcelServiceSoap_GetSheetNames_InputMessage

The request **WSDL message** for the **GetSheetNames WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSheetNames
```

The **SOAP body** contains the **GetSheetNames** element.

3.1.4.26.1.2 ExcelServiceSoap_GetSheetNames_OutputMessage

The response **WSDL message** for the **GetSheetNames WSDL operation**.

The **SOAP body** contains the **GetSheetNamesResponse** element.

3.1.4.26.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetSheetNames	The input data for the GetSheetNames WSDL operation .
GetSheetNamesResponse	The result data for the GetSheetNames WSDL operation .

3.1.4.26.2.1 GetSheetNames

The **GetSheetNames** element specifies the input data for the **GetSheetNames WSDL operation**.

```
<xs:element name="GetSheetNames" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.26.2 GetSheetNamesResponse

The **GetSheetNamesResponse** element specifies the result data for the **GetSheetNames WSDL operation**.

```
<xs:element name="GetSheetNamesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSheetNamesResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetNames"
type="tns2:ArrayOfSheetName"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetSheetNamesResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

sheetNames: An array of **SheetName** elements, as specified in section [2.2.4.106](#). MUST be present.

3.1.4.26.3 Complex Types

None.

3.1.4.26.4 Simple Types

None.

3.1.4.26.5 Attributes

None.

3.1.4.26.6 Groups

None.

3.1.4.26.7 Attribute Groups

None.

3.1.4.27 GetSlicerItemList

This operation is used to return the **slicer items** and formatting information for the **slicer** visual components that are part of a slicer.

The following is the **WSDL** port type specification of the **GetSlicerItemList WSDL operation**.

```
<wsdl:operation name="GetSlicerItemList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSlicerItemList"
    message="tns2:ExcelServiceSoap_GetSlicerItemList_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSlicerItemListResponse"
    message="tns2:ExcelServiceSoap_GetSlicerItemList_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSlicerItemListExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetSlicerItemList_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetSlicerItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetSlicerItemList_OutputMessage** response message, as follows:

- The protocol server returns a **SlicerItemList** (section [2.2.4.40](#)) in **itemList** with the following conditions.
 - If the **SlicerItemsCount** element in **SlicerOptions** (section [2.2.4.41](#)) is greater than or equal to 0 and less than or equal to the total number of slicer items, the **SlicerItems** element of **itemList** MUST contain a list with a number of **SlicerItem** elements (section [2.2.4.39](#)) equal to the **SlicerItemsCount** element in **SlicerOptions**.
 - If **SlicerItemsCount** element of **SlicerOptions** is greater than the total number of slicer items, then the **SlicerItems** element of **itemList** MUST contain a list with all slicer items starting at **SlicerItemsOffset**.
 - If **SlicerItemsOffset** is greater than or equal to 0 then the list of elements in **itemList** MUST begin at **SlicerItemsOffset**.
 - If **SlicerItemsOffset** is equal to -1 then the protocol server will determine the first slicer item in the resulting **itemList** in the following way:
 - If a call to **ApplySlicerSelection** was made in the current session, then the protocol server will use the value of the **SlicerItemsOffset** element of the **SlicerOptions** of the last call to **ApplySlicerSelection**.
 - Otherwise, the protocol server will use the value in the **startItem** attribute in **CT_Slicer** ([\[MS-XLSX\]](#) section 2.6.68).
 - If the sum of **SlicerItemsOffset** and **SlicerItemsCount** is greater than the number of slicer items then **itemList** MUST be empty.
 - If **SlicerItemsCount** is equal to -1, the lesser of total number of items or 5 times the **visible** number of items is returned.
 - If **SlicerItemsOffset** is equal to -1, the protocol server returns a **SlicerFormatElementList** (section [2.2.4.38](#)) in **formatList** that MUST contain 10 elements as specified in section [2.2.4.9](#). Otherwise the protocol server MUST return a **formatList** with 0 elements.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<40>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.27.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSlicerItemList_InputMessage	The request WSDL message for the GetSlicerItemList WSDL operation .
ExcelServiceSoap_GetSlicerItemList_OutputMessage	The response WSDL message for the GetSlicerItemList WSDL operation .

3.1.4.27.1.1 ExcelServiceSoap_GetSlicerItemList_InputMessage

The request **WSDL message** for the **GetSlicerItemList WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSlicerItemList
```

The **SOAP body** contains the **GetSlicerItemList** element.

3.1.4.27.1.2 ExcelServiceSoap_GetSlicerItemList_OutputMessage

The response **WSDL message** for the **GetSlicerItemList WSDL operation**.

The **SOAP body** contains the **GetSlicerItemListResponse** element.

3.1.4.27.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetSlicerItemList	The input data for the GetSlicerItemList WSDL operation .
GetSlicerItemListResponse	The result data for the GetSlicerItemList WSDL operation .

3.1.4.27.2.1 GetSlicerItemList

The **GetSlicerItemList** element specifies the input data for the **GetSlicerItemList WSDL operation**.

```
<xs:element name="GetSlicerItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns2:SlicerOptions"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The **slicer** identification. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerClearItems:** MUST be ignored.

3.1.4.27.2 GetSlicerItemListResponse

The **GetSlicerItemListResponse** element specifies the result data for the **GetSlicerItemList WSDL operation**.

```

<xs:element name="GetSlicerItemListResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSlicerItemListResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList" type="tns2:SlicerItemList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns2:SlicerFormatElementList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerView" type="tns2:SlicerView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetSlicerItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

itemList: A **SlicerItemList** as specified in section [2.2.4.40](#). MUST be present.

formatList: A **SlicerFormatElementList** as specified in section [2.2.4.38](#). MUST be present.

slicerView: A **SlicerView** element as specified in section [2.2.4.42](#). MUST be present.

3.1.4.27.3 Complex Types

None.

3.1.4.27.4 Simple Types

None.

3.1.4.27.5 Attributes

None.

3.1.4.27.6 Groups

None.

3.1.4.27.7 Attribute Groups

None.

3.1.4.28 GetSparklines

This operation is used to return an image containing **sparklines**.

The following is the **WSDL** port type specification of the **GetSparklines WSDL operation**.

```
<wsdl:operation name="GetSparklines" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSparklines"
    message="tns2:ExcelServiceSoap_GetSparklines_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSparklinesResponse"
    message="tns2:ExcelServiceSoap_GetSparklines_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSparklinesExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetSparklines_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetSparklines_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetSparklines_OutputMessage** response message, as follows:

- The protocol server MUST return an image containing all sparklines residing in the **range** specified in the **VisibleSheetRangeRequest** of the **parameter** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<41>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.28.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSparklines_InputMessage	The request WSDL message for the GetSparklines WSDL operation .
ExcelServiceSoap_GetSparklines_OutputMessage	The response WSDL message for the GetSparklines WSDL operation .

3.1.4.28.1.1 ExcelServiceSoap_GetSparklines_InputMessage

The request **WSDL message** for the **GetSparklines WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSparklines
```

The **SOAP body** contains the **GetSparklines** element.

3.1.4.28.1.2 ExcelServiceSoap_GetSparklines_OutputMessage

The response **WSDL message** for the **GetSparklines WSDL operation**.

The **SOAP body** contains the **GetSparklinesResponse** element.

3.1.4.28.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetSparklines	The input data for the GetSparklines WSDL operation .
GetSparklinesResponse	The result data for the GetSparklines WSDL operation .

3.1.4.28.2.1 GetSparklines

The **GetSparklines** element specifies the input data for the **GetSparklines WSDL operation**.

```
<xs:element name="GetSparklines" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

- The **VisibleSheetRangeRequest** element MUST be present.

3.1.4.28.2.2 GetSparklinesResponse

The **GetSparklinesResponse** element specifies the result data for the **GetSparklines WSDL operation**.

```
<xs:element name="GetSparklinesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSparklinesResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binarySparklineImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetSparklinesResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binarySparklineImage** field. MUST be the string "x-png".

binarySparklineImage: The image of the **sparklines**. MUST be present. MUST be in the format specified in [RFC2083](#).

3.1.4.28.3 Complex Types

None.

3.1.4.28.4 Simple Types

None.

3.1.4.28.5 Attributes

None.

3.1.4.28.6 Groups

None.

3.1.4.28.7 Attribute Groups

None.

3.1.4.29 GetWorkbook

This operation is used to retrieve a **workbook file**.

The following is the **WSDL** port type specification of the **GetWorkbook WSDL operation**.

```
<wsdl:operation name="GetWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbook"
    message="tns2:ExcelServiceSoap_GetWorkbook_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbookResponse"
    message="tns2:ExcelServiceSoap_GetWorkbook_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetWorkbook_ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetWorkbook_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetWorkbook_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<42>](#) be one of the values specified in section [2.2.2.1](#).

If **workbookType** is "FullWorkbook" or "FullSnapshot" and the user does not have Open Item permission, the protocol server returns an **ExcelServerMessage** with **Id** set to "EcsSnapshotAccessDenied".

3.1.4.29.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetWorkbook_InputMessage	The request WSDL message for the GetWorkbook WSDL operation .
ExcelServiceSoap_GetWorkbook_OutputMessage	The response WSDL message for the GetWorkbook WSDL operation .

3.1.4.29.1.1 ExcelServiceSoap_GetWorkbook_InputMessage

The request **WSDL message** for the **GetWorkbook WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetWorkbook
```

The **SOAP body** contains the **GetWorkbook** element.

3.1.4.29.1.2 ExcelServiceSoap_GetWorkbook_OutputMessage

The response **WSDL message** for the **GetWorkbook WSDL operation**.

The **SOAP body** contains the **GetWorkbookResponse** element.

3.1.4.29.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetWorkbook	The input data for the GetWorkbook WSDL operation .
GetWorkbookResponse	The result data for the GetWorkbook WSDL operation .

3.1.4.29.2.1 GetWorkbook

The **GetWorkbook** element specifies the input data for the **GetWorkbook WSDL operation**.

```
<xs:element name="GetWorkbook" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="workbookType" type="tns2:WorkbookType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present. The following MUST extend or override the standard behavior specified in section 2.2.4.20.

- **StateId** MUST be -1.

workbookType: The form of the requested workbook as specified in section [2.2.5.43](#).

3.1.4.29.2 GetWorkbookResponse

The **GetWorkbookResponse** element specifies the result data for the **GetWorkbook WSDL operation**.

```
<xs:element name="GetWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetWorkbookResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="result" type="tns2:GetWorkbookResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetWorkbookResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

result: A **GetWorkbookResult** as defined in section [3.1.4.29.3.1](#).

3.1.4.29.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
GetWorkbookResult	The result data of the GetWorkbook operation.

3.1.4.29.3.1 GetWorkbookResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The result data of the **GetWorkbook** operation.

```
<xs:complexType name="GetWorkbookResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Bits" type="xs:base64Binary"/>
    <xs:element minOccurs="0" maxOccurs="1" name="StoredWorkbookName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Bits: A **workbook file**. MUST be present.

StoredWorkbookName: The name of the workbook file.

3.1.4.29.4 Simple Types

None.

3.1.4.29.5 Attributes

None.

3.1.4.29.6 Groups

None.

3.1.4.29.7 Attribute Groups

None.

3.1.4.30 OpenWorkbook

This operation is used to create a new **session (2)** or to join an existing **edit session**.

The following is the **WSDL** port type specification of the **OpenWorkbook WSDL operation**.

```
<wsdl:operation name="OpenWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/OpenWorkbook"
    message="tns2:ExcelServiceSoap_OpenWorkbook_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/OpenWorkbookResponse"
    message="tns2:ExcelServiceSoap_OpenWorkbook_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/OpenWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_OpenWorkbook_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_OpenWorkbook_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_OpenWorkbook_OutputMessage** response message, as follows:

1. If **flags** does not have any values set, a new **view session** will be created by the protocol server.
2. If **flags** does not contain the **NewWorkbook** value, the following apply:
 - The workbook **file**, specified by **url**, is specified as follows:
 - It SHOULD be in a format specified by [\[MS-XLSB\]](#), [\[MS-OFFMACRO2\]](#), [\[ISO/IEC29500-1:2012\]](#), or [\[ODF\]](#) but MAY be in any other format.
 - If it is in the [\[ISO/IEC29500-1:2012\]](#) or in the [\[MS-OFFMACRO2\]](#) formats:
 - It MAY [<43>](#) contain any valid SpreadsheetML records in that format.
 - If an **odcFile** attribute of a **connection** element ([\[ISO/IEC29500-1:2012\]](#), Section 12.3.4) is present, it SHOULD be the path of a file in the format specified by [\[MS-ODCFF\]](#).
 - If a **connection** attribute of **dbPr** element ([\[ISO/IEC29500-1:2012\]](#), Section 12.3.4) is present, it SHOULD be in the format specified by [\[MS-ODBCSTR\]](#) or [\[MS-OLEDBSTR\]](#).
 - If it is in the [\[MS-XLSB\]](#) format:
 - It MAY [<44>](#) contain any valid records in that format.

- If a **brtBeginExternalConnection** record is present and it has the **stConnectionFile** field present, the **stConnectionFile** SHOULD be the path of a file in the format specified by [MS-ODCFF].
 - If a **BrtBeginECDBProps** record is present, its **stConn** field SHOULD be in the format specified by [MS-ODBCSTR] or [MS-OLEDBSTR].
 - If a file in [MS-ODCFF] is referenced by the workbook file:
 - **SourceFile** element of **OfficeDataConnection** ([MS-ODCFF] section 2.7.1.1) MUST NOT be present.
 - **Parameter** elements of **CT_Connection** ([MS-ODCFF] section 2.2.1) MUST be ignored.
3. If the operation succeeds, the protocol server MUST return the **session identifier** of the newly created or joined session in the response message, to be used in any future operations against the newly created session.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<45>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **EcsInvalidNamedObject**
- **EditModeCannotAcquireLock**
- **EditModeCannotEditNonSharePointWorkbook**
- **EditModeWorkbookCheckedOutRequired**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **FileCorrupt**
- **FileOpenAccessDenied**
- **FileOpenNotFound**
- **FileOpenSecuritySettings**
- **GenericFileOpenError**
- **IncorrectAuthUsed**
- **InvalidSheetName**
- **InvalidUriOrLocalConnectionPath**

- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **OpenWorkbookAccessDenied**
- **OpenWorkbookLocationNotTrusted**
- **OpenWorkbookTooLarge**
- **ParameterInvalid**
- **ParameterLimitExceeded**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**
- **UnattendedAccountNotConfigured**
- **WorkbookNotSupported**
- **WorkbookNotSupportedViewRight**

3.1.4.30.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_OpenWorkbook_InputMessage	The request WSDL message for the OpenWorkbook WSDL operation .
ExcelServiceSoap_OpenWorkbook_OutputMessage	The response WSDL message for the OpenWorkbook WSDL operation .

3.1.4.30.1.1 ExcelServiceSoap_OpenWorkbook_InputMessage

The request **WSDL message** for the **OpenWorkbook WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/OpenWorkbook
```

The **SOAP body** contains the **OpenWorkbook** element.

3.1.4.30.1.2 ExcelServiceSoap_OpenWorkbook_OutputMessage

The response **WSDL message** for the **OpenWorkbook WSDL operation**.

The **SOAP body** contains the **OpenWorkbookResponse** element.

3.1.4.30.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
OpenWorkbook	The input data for the OpenWorkbook WSDL operation .
OpenWorkbookResponse	The result data for the OpenWorkbook WSDL operation .

3.1.4.30.2.1 OpenWorkbook

The **OpenWorkbook** element specifies the input data for the **OpenWorkbook WSDL operation**.

```
<xs:element name="OpenWorkbook" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="inParameters"
type="tns2:OpenWorkbookInParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

inParameters: An **OpenWorkbookInParameters** as specified in section [2.2.4.51](#). MUST be present.

3.1.4.30.2.2 OpenWorkbookResponse

The **OpenWorkbookResponse** element specifies the result data for the **OpenWorkbook WSDL operation**.

```
<xs:element name="OpenWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="OpenWorkbookResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="workbookId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="outFlags"
type="tns2:OpenWorkbookOutFlags"/>
      <xs:element minOccurs="0" maxOccurs="1" name="outParameters"
type="tns2:OpenWorkbookOutParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

OpenWorkbookResult: A result as specified in section [2.2.4.21](#). MUST be present.

workbookId: The **session identifier** of the newly created or joined session. MUST be present.

outFlags: Output flags, as specified in section [3.1.4.30.4.1](#). MUST be present.

outParameters: An **OpenWorkbookOutParameters** as specified in section [2.2.4.52](#). MUST be present.

3.1.4.30.3 Complex Types

None.

3.1.4.30.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
OpenWorkbookOutFlags	The output flags for OpenWorkbook .

3.1.4.30.4.1 OpenWorkbookOutFlags

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Output flags for **OpenWorkbook**.

```
<xs:simpleType name="OpenWorkbookOutFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ViewOnly"/>
        <xs:enumeration value="HasOpenItemPermission"/>
        <xs:enumeration value="HasEditItemPermission"/>
        <xs:enumeration value="RequiresCheckOut"/>
        <xs:enumeration value="Biff8Format"/>
        <xs:enumeration value="HasUnsupportedFeatures"/>
        <xs:enumeration value="SupportsEditing"/>
        <xs:enumeration value="StaticView"/>
        <xs:enumeration value="HasXlsMacros"/>
        <xs:enumeration value="HasUnsupportedFeaturesForEdit"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **OpenWorkbookOutFlags** simple type.

Value	Meaning
ViewOnly	Specified if a view session in view-only mode was opened.
HasOpenItemPermission	Specified if the user has Open Item permission on the workbook file.
HasEditItemPermission	Specified if the user has permissions to edit the workbook file in the document library .
RequiresCheckOut	Specified if the user has to check out the workbook file in the document library to make changes to the file .
Biff8Format	MUST NOT be used.
HasUnsupportedFeatures	Specified if the workbook contains unsupported content.

Value	Meaning
SupportsEditing	Specified if making changes to the workbook file is supported in the document library.
StaticView	MUST NOT be used.
HasXlsMacros	MUST NOT be used.
HasUnsupportedFeaturesForEdit	Specifies whether the workbook file has unsupported content that blocks editing of the workbook.

3.1.4.30.5 Attributes

None.

3.1.4.30.6 Groups

None.

3.1.4.30.7 Attribute Groups

None.

3.1.4.31 ParseRange

This operation is used to parse a specified **range** in the **workbook**.

The following is the **WSDL** port type specification of the **ParseRange WSDL operation**.

```
<wsdl:operation name="ParseRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ParseRange" message="tns2:ExcelServiceSoap_ParseRange_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ParseRangeResponse"
    message="tns2:ExcelServiceSoap_ParseRange_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ParseRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ParseRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ParseRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ParseRange_OutputMessage** response message, as follows:

- The protocol server determines the **SheetRange** (section [2.2.4.35](#)) to return in the following manner:
 - If the protocol server cannot determine the **worksheet** from the **rangeToParse** element, the protocol server MUST return the range specified in **rangeToParse** on the first worksheet.

- If the protocol server can determine the worksheet from the **rangeToParse** element, the protocol server MUST return the range specified in **rangeToParse** on the determined worksheet.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD<46> be one of the values specified in section 2.2.2.1 or any of the following values:

- **RangeParseError**

3.1.4.31.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ParseRange_InputMessage	The request WSDL message for the ParseRange WSDL operation .
ExcelServiceSoap_ParseRange_OutputMessage	The response WSDL message for the ParseRange WSDL operation .

3.1.4.31.1.1 ExcelServiceSoap_ParseRange_InputMessage

The request **WSDL message** for the **ParseRange WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ParseRange
```

The **SOAP body** contains the **ParseRange** element.

3.1.4.31.1.2 ExcelServiceSoap_ParseRange_OutputMessage

The response **WSDL message** for the **ParseRange WSDL operation**.

The **SOAP body** contains the **ParseRangeResponse** element.

3.1.4.31.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ParseRange	The input data for the ParseRange WSDL operation .
ParseRangeResponse	The result data for the ParseRange WSDL operation .

3.1.4.31.2.1 ParseRange

The **ParseRange** element specifies the input data for the **ParseRange WSDL operation**.

```
<xs:element name="ParseRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeToParse" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

rangeToParse: A **range** to be parsed. This field MUST follow the **RangeReference** (section [2.2.5.25](#)) specification. MUST be present.

3.1.4.31.2 ParseRangeResponse

The **ParseRangeResponse** element specifies the result data for the **ParseRange WSDL operation**.

```
<xs:element name="ParseRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ParseRangeResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns2:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ParseRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

sheetRange: The **range**, as specified in section [2.2.4.35](#), was parsed by the protocol server. MUST be present. **SheetName** MUST be present and MUST NOT be empty.

3.1.4.31.3 Complex Types

None.

3.1.4.31.4 Simple Types

None.

3.1.4.31.5 Attributes

None.

3.1.4.31.6 Groups

None.

3.1.4.31.7 Attribute Groups

None.

3.1.4.32 Recalc

This operation is used to **calculate** a specified **range** in the **workbook**.

The following is the **WSDL** port type specification of the **Recalc WSDL operation**.

```
<wsdl:operation name="Recalc" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/Recalc" message="tns2:ExcelServiceSoap_Recalc_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RecalcResponse" message="tns2:ExcelServiceSoap_Recalc_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RecalcExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_Recalc_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_Recalc_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_Recalc_OutputMessage** response message.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <47> be one of the values specified in section 2.2.2.1 or any of the following values:

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.32.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_Recalc_InputMessage	The request WSDL message for the Recalc WSDL operation .
ExcelServiceSoap_Recalc_OutputMessage	The response WSDL message for the Recalc WSDL operation .

3.1.4.32.1.1 ExcelServiceSoap_Recalc_InputMessage

The request **WSDL message** for the **Recalc WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/Recalc
```

The **SOAP body** contains the **Recalc** element.

3.1.4.32.1.2 ExcelServiceSoap_Recalc_OutputMessage

The response **WSDL message** for the **Recalc WSDL operation**.

The **SOAP body** contains the **RecalcResponse** element.

3.1.4.32.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
Recalc	The input data for the Recalc WSDL operation .
RecalcResponse	The result data for the Recalc WSDL operation .

3.1.4.32.2.1 Recalc

The **Recalc** element specifies the input data for the **Recalc WSDL operation**.

```
<xs:element name="Recalc" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns2:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sheetRange: A **SheetRange** (section [2.2.4.35](#)) to **calculate** in the **workbook**. MUST be present.
SheetName MUST be present and MUST NOT be empty.

3.1.4.32.2.2 RecalcResponse

The **RecalcResponse** element specifies the result data for the **Recalc WSDL operation**.

```
<xs:element name="RecalcResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcResult" type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RecalcResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.32.3 Complex Types

None.

3.1.4.32.4 Simple Types

None.

3.1.4.32.5 Attributes

None.

3.1.4.32.6 Groups

None.

3.1.4.32.7 Attribute Groups

None.

3.1.4.33 RecalcA1

This operation is used to **calculate** a specified **range** in the **workbook**.

The following is the **WSDL** port type specification of the **RecalcA1 WSDL operation**.

```
<wsdl:operation name="RecalcA1" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcA1" message="tns2:ExcelServiceSoap_RecalcA1_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcA1Response"
    message="tns2:ExcelServiceSoap_RecalcA1_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcA1ExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_RecalcA1_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_RecalcA1_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RecalcA1_OutputMessage** response message, as follows:

1. If **rangeName** is empty, the protocol server calculates the whole **sheet (2)**, which is specified in the **sheetName** element.
2. If **rangeName** is not empty, the protocol server calculates the specified range.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD<48> be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.33.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RecalcA1_InputMessage	The request WSDL message for the RecalcA1 WSDL operation .
ExcelServiceSoap_RecalcA1_OutputMessage	The response WSDL message for the RecalcA1 WSDL operation .

3.1.4.33.1.1 ExcelServiceSoap_RecalcA1_InputMessage

The request **WSDL message** for the **RecalcA1 WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RecalcA1
```

The **SOAP body** contains the **RecalcA1** element.

3.1.4.33.1.2 ExcelServiceSoap_RecalcA1_OutputMessage

The response **WSDL message** for the **RecalcA1 WSDL operation**.

The **SOAP body** contains the **RecalcA1Response** element.

3.1.4.33.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
RecalcA1	The input data for the RecalcA1 WSDL operation .
RecalcA1Response	The result data for the RecalcA1 WSDL operation .

3.1.4.33.2.1 RecalcA1

The **RecalcA1** element specifies the input data for the **RecalcA1 WSDL operation**.

```
<xs:element name="RecalcA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter**, as specified in section [2.2.4.20](#). MUST be present.

sheetName: The name of the **sheet (2)** to **calculate**. MUST be present and MUST NOT be empty. MUST NOT be longer than 31 characters.

rangeName: The name of the **range** to calculate. This field MUST follow the **RangeReference** (section [2.2.5.25](#)) specification. MUST be present.

3.1.4.33.2 RecalcA1Response

The **RecalcA1Response** element specifies the result data for the **RecalcA1 WSDL operation**.

```
<xs:element name="RecalcA1Response" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcA1Result"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RecalcA1Result: A **CommandResult**, as specified in section [2.2.4.21](#). MUST be present.

3.1.4.33.3 Complex Types

None.

3.1.4.33.4 Simple Types

None.

3.1.4.33.5 Attributes

None.

3.1.4.33.6 Groups

None.

3.1.4.33.7 Attribute Groups

None.

3.1.4.34 RecalcAll

This operation is used to **calculate** the **workbook**.

The following is the **WSDL** port type specification of the **RecalcAll WSDL operation**.

```
<wsdl:operation name="RecalcAll" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input>
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcAll" message="tns2:ExcelServiceSoap_RecalcAll_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output>
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcAllResponse"
    message="tns2:ExcelServiceSoap_RecalcAll_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
```



```

    <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcAllExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_RecalcAll_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  </wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_RecalcAll_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RecalcAll_OutputMessage** response message.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <49> be one of the values specified in section 2.2.2.1.

3.1.4.34.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RecalcAll_InputMessage	The request WSDL message for the RecalcAll WSDL operation .
ExcelServiceSoap_RecalcAll_OutputMessage	The response WSDL message for the RecalcAll WSDL operation .

3.1.4.34.1.1 ExcelServiceSoap_RecalcAll_InputMessage

The request **WSDL message** for the **RecalcAll WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/RecalcAll

```

The **SOAP body** contains the **RecalcAll** element.

3.1.4.34.1.2 ExcelServiceSoap_RecalcAll_OutputMessage

The response **WSDL message** for the **RecalcAll WSDL operation**.

The **SOAP body** contains the **RecalcAllResponse** element.

3.1.4.34.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
RecalcAll	The input data for the RecalcAll WSDL operation .

Element	Description
RecalcAllResponse	The result data for the RecalcAll WSDL operation.

3.1.4.34.2.1 RecalcAll

The **RecalcAll** element specifies the input data for the **RecalcAll WSDL operation**.

```
<xs:element name="RecalcAll" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="calculateType"
type="tns2:CalculateType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="recalcParams"
type="tns2:RecalcParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter**, as specified in section [2.2.4.20](#). MUST be present.

calculateType: The type of calculation to be executed as specified in section [3.1.4.34.4.1](#).

recalcParams: Parameters for running the calculation as specified in 3.1.4.34.3.1.

3.1.4.34.2.2 RecalcAllResponse

The **RecalcAllResponse** element specifies the result data for the **RecalcAll WSDL operation**.

```
<xs:element name="RecalcAllResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcAllResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RecalcAllResult: A **CommandResult**, as specified in section [2.2.4.21](#). MUST be present.

3.1.4.34.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfClientUdfResult	A list of ClientUdfResult elements
ClientUdfResult	A result of a client side UDF call requested by the protocol server from the protocol client.
ClientUdfResultInfo	Contains a list of results for client side UDF calculations done by the protocol client and that are needed by the protocol server to complete workbook calculation.
RecalcParameters	Contains more optional parameters for the RecalcAll operation

3.1.4.34.3.1 RecalcParameters

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains more optional parameters for the RecalcAll operation.

```
<xs:complexType name="RecalcParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfResultInfo"
type="tns2:ClientUdfResultInfo"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstClientUdfRecalc" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfResultInfo: Results of client side UDFs that were calculated by the protocol client.

FirstClientUdfRecalc: MUST be ignored by the protocol server.

3.1.4.34.3.2 ClientUdfResultInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains a list of results for client side UDF calculations done by the protocol client and that are needed by the protocol server to complete workbook calculation.

```
<xs:complexType name="ClientUdfResultInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Results"
type="tns2:ArrayOfClientUdfResult"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Results: List of **ClientUdfResult** as described in section [3.1.4.34.3.4](#).

CalcVersion: The calculation version this result is in response for. MUST be a number previously received from the server as part of **ClientUdfCallInfo** as described in section [2.2.4.88](#).

3.1.4.34.3.3 ArrayOfClientUdfResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

A list of **ClientUdfResult** elements.

```
<xs:complexType name="ArrayOfClientUdfResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfResult" nillable="true"
type="tns2:ClientUdfResult"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfResult: A result of a client side UDF call as calculated on the protocol client.

3.1.4.34.3.4 ClientUdfResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

A result of a client side UDF call requested by the protocol server from the protocol client.

```
<xs:complexType name="ClientUdfResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Id" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Result"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ErrorResult" type="tns2:CellError"/>
  </xs:sequence>
</xs:complexType>
```

Id: The opaque identifier of the call requested by the protocol server – received by the protocol client as described in section [2.2.4.87](#). MUST be present.

Result: The result of the client side UDF calculation. MUST be present if **ErrorResult** is not present. MUST NOT be present if **ErrorResult** is present. If present, MUST be of type `xsi:string`, `xsi:decimal`, `xsi:bool` or `xsi:nil`.

ErrorResult: If the protocol client had an error when calculating the client side UDF requested by the protocol server, this element will contain that error. MUST be present if **Result** is not present. MUST NOT be present if **Result** is present.

3.1.4.34.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
CalculateType	Specifies the type of calculation to be executed.
CellError	Specifies the type of error from the calculation.

3.1.4.34.4.1 CalculateType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the type of calculation to be executed.

```
<xs:simpleType name="CalculateType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Recalculate"/>
    <xs:enumeration value="CalculateFull"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **CalculateType** simple type.

Value	Meaning
Recalculate	The protocol server calculates all formulas in the workbook that need to be calculated.
CalculateFull	The protocol server calculates all formulas in the workbook.

3.1.4.34.4.2 CellError

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **CellError** type is an enumeration of a set of **cell error values** that a **worksheet cell** can contain.

```
<xs:simpleType name="CellError" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Div0"/>
    <xs:enumeration value="NotApplicable"/>
    <xs:enumeration value="Name"/>
    <xs:enumeration value="Null"/>
    <xs:enumeration value="Num"/>
    <xs:enumeration value="Ref"/>
    <xs:enumeration value="Value"/>
    <xs:enumeration value="GettingData"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **CellError** simple type.

Value	Meaning
None	Worksheet cell contains a value that does not result in an error.
Div0	Worksheet cell contains a number that is divided by 0.
NotApplicable	Worksheet cell contains a value not available to a formula .
Name	Worksheet cell contains text not recognized by a formula.
Null	Worksheet cell contains an intersection of two areas that do not intersect.
Num	Worksheet cell contains invalid numeric values in a formula.
Ref	Worksheet cell contains a reference (2) that is not valid.
Value	Worksheet cell contains a formula that includes worksheet cells that contain different data types.
GettingData	Worksheet cell contains a value that is still being evaluated.

3.1.4.34.5 Attributes

None.

3.1.4.34.6 Groups

None.

3.1.4.34.7 Attribute Groups

None.

3.1.4.35 Refresh

This operation is used to **refresh connected data** on a **workbook**.

The following is the **WSDL** port type specification of the **Refresh WSDL operation**.

```
<wsdl:operation name="Refresh" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/Refresh" message="tns2:ExcelServiceSoap_Refresh_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshResponse"
    message="tns2:ExcelServiceSoap_Refresh_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_Refresh_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_Refresh_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_Refresh_OutputMessage** response message, as follows:

1. If **dataConnectionName** is present and is not empty, the protocol server refreshes the connected data as uniquely identified by the values of the **dataConnectionName** and **externalSourceIndex** elements.
2. For the lifetime of the **session (2)** the protocol server allows **external data** refresh.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<50>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**

- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**
- **OdcNotSupported**
- **GenericModelFailure**
- **ModelStreamingFailure**
- **NoStreamingServers**
- **LegacyModelError**

3.1.4.35.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_Refresh_InputMessage	The request WSDL message for the Refresh WSDL operation .
ExcelServiceSoap_Refresh_OutputMessage	The response WSDL message for the Refresh WSDL operation .

3.1.4.35.1.1 ExcelServiceSoap_Refresh_InputMessage

The request **WSDL message** for the **Refresh WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/Refresh
```

The **SOAP body** contains the **Refresh** element.

3.1.4.35.1.2 ExcelServiceSoap_Refresh_OutputMessage

The response **WSDL message** for the **Refresh WSDL operation**.

The **SOAP body** contains the **RefreshResponse** element.

3.1.4.35.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
Refresh	The input data for the Refresh WSDL operation .
RefreshResponse	The result data for the Refresh WSDL operation .

3.1.4.35.2.1 Refresh

The **Refresh** element specifies the input data for the **Refresh WSDL operation**.

```
<xs:element name="Refresh" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataConnectionName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="externalSourceIndex" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="targetAppId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clientSessionId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

dataConnectionName: A **data connection (2)**. MUST be present. MUST NOT be empty. MUST NOT be longer than 255 characters.

externalSourceIndex: The index of the **connected data**. MUST be equal to the value of the **ExternalSourceIndex** attribute of the **CT_PivotTable** element, as specified in [\[MS-EXSPXML3\]](#) section 2.3.27, that is the **PivotTable** on which the operation is being performed.

targetAppId: Single Sign On identifier, as defined in [\[ISO/IEC29500-1:2012\]](#) section 18.13.1, used for the **Refresh** operation

clientSessionId: A **session identifier** to use for the **Refresh** operation.

3.1.4.35.2.2 RefreshResponse

The **RefreshResponse** element specifies the result data for the **Refresh WSDL operation**.

```
<xs:element name="RefreshResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RefreshResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RefreshResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.35.3 Complex Types

None.

3.1.4.35.4 Simple Types

None.

3.1.4.35.5 Attributes

None.

3.1.4.35.6 Groups

None.

3.1.4.35.7 Attribute Groups

None.

3.1.4.36 RefreshAll

This operation is used to **refresh** all **connected data** on a **workbook**.

The following is the **WSDL** port type specification of the **RefreshAll WSDL operation**.

```
<wsdl:operation name="RefreshAll" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshAll" message="tns2:ExcelServiceSoap_RefreshAll_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshAllResponse"
    message="tns2:ExcelServiceSoap_RefreshAll_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshAllExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap RefreshAll ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_RefreshAll_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RefreshAll_OutputMessage** response message, as follows:

- For the lifetime of the **session (2)** the protocol server allows **external data** refresh.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<51>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**

- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.36.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RefreshAll_InputMessage	The request WSDL message for the RefreshAll WSDL operation .
ExcelServiceSoap_RefreshAll_OutputMessage	The response WSDL message for the RefreshAll WSDL operation .

3.1.4.36.1.1 ExcelServiceSoap_RefreshAll_InputMessage

The request **WSDL message** for the **RefreshAll WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RefreshAll
```

The **SOAP body** contains the **RefreshAll** element.

3.1.4.36.1.2 ExcelServiceSoap_RefreshAll_OutputMessage

The response **WSDL message** for the **RefreshAll WSDL operation**.

The **SOAP body** contains the **RefreshAllResponse** element.

3.1.4.36.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
RefreshAll	The input data for the RefreshAll WSDL operation .
RefreshAllResponse	The result data for the RefreshAll WSDL operation .

3.1.4.36.2.1 RefreshAll

The **RefreshAll** element specifies the input data for the **RefreshAll WSDL operation**.

```
<xs:element name="RefreshAll" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="periodic" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ssoAppId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clientSessionId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

periodic: Specifies whether to only **refresh connected data** that has **expired**. If set to **true**, specifies to refresh only connected data that has expired by the protocol server. If set to **false**, specifies to refresh all connected data by the protocol server on the **workbook**.

ssoAppId: Single Sign On identifier, as defined in [\[ISO/IEC29500-1:2012\]](#) section 18.13.1, used for the **RefreshAll** operation.

clientSessionId: A **session identifier** to use for the **RefreshAll** operation.

3.1.4.36.2.2 RefreshAllResponse

The **RefreshAllResponse** element specifies the result data for the **RefreshAll WSDL operation**.

```
<xs:element name="RefreshAllResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RefreshAllResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RefreshAllResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.36.3 Complex Types

None.

3.1.4.36.4 Simple Types

None.

3.1.4.36.5 Attributes

None.

3.1.4.36.6 Groups

None.

3.1.4.36.7 Attribute Groups

None.

3.1.4.37 RemovePivotFilter

This operation is used to remove any **PivotTable** or **PivotChart filters** that are applied to a **PivotTable field** or PivotChart field.

The following is the **WSDL** port type specification of the **RemovePivotFilter WSDL operation**.

```
<wsdl:operation name="RemovePivotFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RemovePivotFilter"
    message="tns2:ExcelServiceSoap_RemovePivotFilter_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RemovePivotFilterResponse"
    message="tns2:ExcelServiceSoap_RemovePivotFilter_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RemovePivotFilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_RemovePivotFilter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_RemovePivotFilter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RemovePivotFilter_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable field or the PivotChart field in the **pivotOperationOptions** element.
2. The protocol server removes any PivotTable or PivotChart filters that are applied to that PivotTable field or PivotChart field.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<52>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.13](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**

- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.37.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RemovePivotFilter_InputMessage	The request WSDL message for the RemovePivotFilter WSDL operation .
ExcelServiceSoap_RemovePivotFilter_OutputMessage	The response WSDL message for the RemovePivotFilter WSDL operation.

3.1.4.37.1.1 ExcelServiceSoap_RemovePivotFilter_InputMessage

The request **WSDL message** for the **RemovePivotFilter WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RemovePivotFilter
```

The **SOAP body** contains the **RemovePivotFilter** element.

3.1.4.37.1.2 ExcelServiceSoap_RemovePivotFilter_OutputMessage

The response **WSDL message** for the **RemovePivotFilter WSDL operation**.

The **SOAP body** contains the **RemovePivotFilterResponse** element.

3.1.4.37.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
RemovePivotFilter	The input data for the RemovePivotFilter WSDL operation .
RemovePivotFilterResponse	The result data for the RemovePivotFilter WSDL operation .

3.1.4.37.2.1 RemovePivotFilter

The **RemovePivotFilter** element specifies the input data for the **RemovePivotFilter WSDL operation**.

```
<xs:element name="RemovePivotFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or **PivotChart field** identification as specified in section [2.2.4.28](#). MUST be present.

3.1.4.37.2.2 RemovePivotFilterResponse

The **RemovePivotFilterResponse** element specifies the result data for the **RemovePivotFilter WSDL operation**.

```
<xs:element name="RemovePivotFilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RemovePivotFilterResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RemovePivotFilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.37.3 Complex Types

None.

3.1.4.37.4 Simple Types

None.

3.1.4.37.5 Attributes

None.

3.1.4.37.6 Groups

None.

3.1.4.37.7 Attribute Groups

None.

3.1.4.38 ResizeRowsColumns

This operation is used to set the heights or widths of specified **rows (2)** or **columns (2)** in a **workbook**.

The following is the **WSDL** port type specification of the **ResizeRowsColumns WSDL operation**.

```
<wsdl:operation name="ResizeRowsColumns" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ResizeRowsColumns"
    message="tns2:ExcelServiceSoap_ResizeRowsColumns_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ResizeRowsColumnsResponse"
    message="tns2:ExcelServiceSoap_ResizeRowsColumns_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ResizeRowsColumnsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ResizeRowsColumns_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ResizeRowsColumns_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ResizeRowsColumns_OutputMessage** response message, as follows:

1. If the value of **ColumnWidth** element in **ResizeRowColumnRange** (section [3.1.4.38.3.1](#)) is equal to -1, the following apply:
 - The value of **RowHeight** element, as specified in **ResizeRowColumnRange**, MUST be larger than or equal to 0.
 - The protocol server sets the row (2) height to the value of **RowHeight** element as specified in **ResizeRowColumnRange**.
2. If the value of **RowHeight** element in **ResizeRowColumnRange** is equal to -1, the following apply:
 - The value of **ColumnWidth** element, as specified in **ResizeRowColumnRange**, MUST be larger than or equal to 0.
 - The protocol server sets the column (2) height to the value of **ColumnWidth** element as specified in **ResizeRowColumnRange**.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<53>](#) be one of the values specified in section [2.2.2.1](#).

This operation is a **state changing** operation on the protocol server.

3.1.4.38.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ResizeRowsColumns_InputMessage	The request WSDL message for the ResizeRowsColumns WSDL operation .
ExcelServiceSoap_ResizeRowsColumns_OutputMessage	The response WSDL message for the ResizeRowsColumns WSDL operation .

3.1.4.38.1.1 ExcelServiceSoap_ResizeRowsColumns_InputMessage

The request **WSDL message** for the **ResizeRowsColumns WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ResizeRowsColumns
```

The **SOAP body** contains the **ResizeRowsColumns** element.

3.1.4.38.1.2 ExcelServiceSoap_ResizeRowsColumns_OutputMessage

The response **WSDL message** for the **ResizeRowsColumns WSDL operation**.

The **SOAP body** contains the **ResizeRowsColumnsResponse** element.

3.1.4.38.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ResizeRowsColumns	The input data for the ResizeRowsColumns WSDL operation .
ResizeRowsColumnsResponse	The result data for the ResizeRowsColumns WSDL operation .

3.1.4.38.2.1 ResizeRowsColumns

The **ResizeRowsColumns** element specifies the input data for the **ResizeRowsColumns WSDL operation**.

```
<xs:element name="ResizeRowsColumns" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="resizeRowColumnRange"
type="tns2:ResizeRowColumnRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```


parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

resizeRowColumnRange: The **range** of **rows (2)** and **columns (2)** to be resized and the new row (2) height and column (2) width as specified in section [3.1.4.38.3.1](#). MUST be present.

3.1.4.38.2 ResizeRowsColumnsResponse

The **ResizeRowsColumnsResponse** element specifies the result data for the **ResizeRowsColumns WSDL operation**.

```
<xs:element name="ResizeRowsColumnsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ResizeRowsColumnsResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ResizeRowsColumnsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.38.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ResizeRowColumnRange	The type specifies the height or width for the rows (2) or columns (2) to apply to a range as specified in section 2.2.4.35 .

3.1.4.38.3.1 ResizeRowColumnRange

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The type specifies the height or width for the **rows (2)** or **columns (2)** to apply to a **range** as specified in section [2.2.4.35](#).

```
<xs:complexType name="ResizeRowColumnRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:SheetRange">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ColumnWidth" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RowHeight" type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

ColumnWidth: The new column (2) width in pixels. MUST be larger than or equal to -1.

RowHeight: The new row (2) height in pixels. MUST be larger than or equal to -1.

3.1.4.38.4 Simple Types

None.

3.1.4.38.5 Attributes

None.

3.1.4.38.6 Groups

None.

3.1.4.38.7 Attribute Groups

None.

3.1.4.39 SaveWorkbook

This operation is used to save a **workbook** associated with an open **edit session**, to the same location from which it was opened.

The following is the **WSDL** port type specification of the **SaveWorkbook WSDL operation**.

```
<wsdl:operation name="SaveWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbook"
    message="tns2:ExcelServiceSoap_SaveWorkbook_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbookResponse"
    message="tns2:ExcelServiceSoap_SaveWorkbook_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_SaveWorkbook_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SaveWorkbook_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_SaveWorkbook_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <54> be one of the values specified in section 2.2.2.1 or any of the following values:

- **SavingUnsupportedInViewMode**
- **SavingWorkbookAccessDenied**
- **SavingWorkbookLockedOrCheckedOut**

3.1.4.39.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SaveWorkbook_InputMessage	The request WSDL message for the SaveWorkbook WSDL operation .

Message	Description
ExcelServiceSoap_SaveWorkbook_OutputMessage	The response WSDL message for the SaveWorkbook WSDL operation.

3.1.4.39.1.1 ExcelServiceSoap_SaveWorkbook_InputMessage

The request **WSDL message** for the **SaveWorkbook** **WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SaveWorkbook
```

The **SOAP body** contains the **SaveWorkbook** element.

3.1.4.39.1.2 ExcelServiceSoap_SaveWorkbook_OutputMessage

The response **WSDL message** for the **SaveWorkbook** **WSDL operation**.

The **SOAP body** contains the **SaveWorkbookResponse** element.

3.1.4.39.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SaveWorkbook	The input data for the SaveWorkbook WSDL operation .
SaveWorkbookResponse	The result data for the SaveWorkbook WSDL operation.

3.1.4.39.2.1 SaveWorkbook

The **SaveWorkbook** element specifies the input data for the **SaveWorkbook** **WSDL operation**.

```
<xs:element name="SaveWorkbook" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.39.2.2 SaveWorkbookResponse

The **SaveWorkbookResponse** element specifies the result data for the **SaveWorkbook** **WSDL operation**.

```

<xs:element name="SaveWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SaveWorkbookResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

SaveWorkbookResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.39.3 Complex Types

None.

3.1.4.39.4 Simple Types

None.

3.1.4.39.5 Attributes

None.

3.1.4.39.6 Groups

None.

3.1.4.39.7 Attribute Groups

None.

3.1.4.40 SaveWorkbookAs

This operation is used to save a **session (2)** to a specified location, and in a specified format.

The following is the **WSDL** port type specification of the **SaveWorkbookAs WSDL operation**.

```

<wsdl:operation name="SaveWorkbookAs" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input>
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAs"
    message="tns2:ExcelServiceSoap SaveWorkbookAs InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output>
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsResponse"
    message="tns2:ExcelServiceSoap_SaveWorkbookAs_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault>
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap SaveWorkbookAs ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_SaveWorkbookAs_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_SaveWorkbookAs_OutputMessage** response message, as follows:

1. If the following conditions are met, the session (2) specified in **parameter** is written to **location** in the format specified by **workbookType**:
 - **location** is valid.
 - The user has **rights** to write to **location**.
 - **location** does not correspond to an existing file, or **OverwriteExistingFile** is specified in **flags**.
2. If the previous conditions are not met, a **SOAP fault** is returned, as specified in section [2.2.2](#).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<55>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **SavingWorkbookAccessDenied**
- **SavingWorkbookFileNameExists**
- **SavingWorkbookInvalidFileName**
- **SavingWorkbookInvalidLocation**
- **SavingWorkbookInvalidPermissions**
- **SavingWorkbookLockedOrCheckedOut**
- **SavingWorkbookNotCheckedOut**
- **SavingWorkbookNotTrustedLocation**

3.1.4.40.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SaveWorkbookAs_InputMessage	The request WSDL message for the SaveWorkbookAs WSDL operation .
ExcelServiceSoap_SaveWorkbookAs_OutputMessage	The response WSDL message for the SaveWorkbookAs WSDL operation.

3.1.4.40.1.1 ExcelServiceSoap_SaveWorkbookAs_InputMessage

The request **WSDL message** for the **SaveWorkbookAs WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SaveWorkbookAs
```

The **SOAP body** contains the **SaveWorkbookAs** element.

3.1.4.40.1.2 ExcelServiceSoap_SaveWorkbookAs_OutputMessage

The response **WSDL message** for the **SaveWorkbookAs WSDL operation**.

The **SOAP body** contains the **SaveWorkbookAsResponse** element.

3.1.4.40.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SaveWorkbookAs	The input data for the SaveWorkbookAs WSDL operation .
SaveWorkbookAsResponse	The result data for the SaveWorkbookAs WSDL operation .

3.1.4.40.2.1 SaveWorkbookAs

The **SaveWorkbookAs** element specifies the input data for the **SaveWorkbookAs WSDL operation**.

```
<xs:element name="SaveWorkbookAs" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="overrideFileRep" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="workbookType" type="tns2:WorkbookType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="flags" type="tns2:SaveAsFlags"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

location: The location of the **workbook** file to write. MUST be present. If the specified value is not a **URI** as specified in [\[RFC2396\]](#), the protocol server MUST return an **ExcelServerMessage** as specified in the section [2.2.2](#) section, with the value of the **Id** element of the **ExcelServerMessage** set to **SavingWorkbookInvalidFileName**. The protocol server ignores the number sign (#) and fragment, as specified in [\[RFC3986\]](#).

overrideFileRep: MUST NOT be used.

workbookType: A **WorkbookType** as specified in section [2.2.5.43](#). MUST be present.

flags: A combination of 0 or more values of **SaveAsFlags** (section [3.1.4.40.4.1](#)). MUST be present.

3.1.4.40.2.2 SaveWorkbookAsResponse

The **SaveWorkbookAsResponse** element specifies the result data for the **SaveWorkbookAs WSDL operation**.

```
<xs:element name="SaveWorkbookAsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SaveWorkbookAsResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="savedWorkbookUri" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

SaveWorkbookAsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

savedWorkbookUri: The location to which the **workbook** was written. MUST be present. MUST be a valid **URI**.

3.1.4.40.3 Complex Types

None.

3.1.4.40.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
SaveAsFlags	An enumeration of flags that can be specified for the SaveWorkbookAs operation.

3.1.4.40.4.1 SaveAsFlags

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An enumeration of flags that can be specified for the **SaveWorkbookAs** operation.

```
<xs:simpleType name="SaveAsFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="OverwriteExistingFile"/>
        <xs:enumeration value="WarnWhenCrossingTrustedLocation"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **SaveAsFlags** simple type.

Value	Meaning
OverwriteExistingFile	If this flag is not set, then if the location specified in the SaveWorkbookAs operation corresponds to an existing file, the protocol server will not overwrite the existing file.
WarnWhenCrossingTrustedLocation	If the location specified in the SaveWorkbookAs operation is in a different trusted location than the trusted location from which the session (2) was opened, an alert MUST be returned to the protocol client.

3.1.4.40.5 Attributes

None.

3.1.4.40.6 Groups

None.

3.1.4.40.7 Attribute Groups

None.

3.1.4.41 SetCalculationOptions

This operation is used to set the **workbook calculation mode**.

The following is the **WSDL** port type specification of the **SetCalculationOptions WSDL operation**.

```
<wsdl:operation name="SetCalculationOptions" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetCalculationOptions"
    message="tns2:ExcelServiceSoap_SetCalculationOptions_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetCalculationOptionsResponse"
    message="tns2:ExcelServiceSoap_SetCalculationOptions_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetCalculationOptionsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_SetCalculationOptions_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SetCalculationOptions_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_SetCalculationOptions_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<56>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.41.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetCalculationOptions_InputMessage	The request WSDL message for the SetCalculationOptions WSDL operation .
ExcelServiceSoap_SetCalculationOptions_OutputMessage	The response WSDL message for the SetCalculationOptions WSDL operation .

3.1.4.41.1.1 ExcelServiceSoap_SetCalculationOptions_InputMessage

The request **WSDL message** for the **SetCalculationOptions WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetCalculationOptions
```

The **SOAP body** contains the **SetCalculationOptions** element.

3.1.4.41.1.2 ExcelServiceSoap_SetCalculationOptions_OutputMessage

The response **WSDL message** for the **SetCalculationOptions** **WSDL operation**.

The **SOAP body** contains the **SetCalculationOptionsResponse** element.

3.1.4.41.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SetCalculationOptions	The input data for the SetCalculationOptions WSDL operation .
SetCalculationOptionsResponse	The result data for the SetCalculationOptions WSDL operation .

3.1.4.41.2.1 SetCalculationOptions

The **SetCalculationOptions** element specifies the input data for the **SetCalculationOptions** **WSDL operation**.

```
<xs:element name="SetCalculationOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="calcType"
type="tns2:WorkbookCalculation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

calcType: The **calculation mode** value as specified in section [3.1.4.41.4.1](#).

3.1.4.41.2.2 SetCalculationOptionsResponse

The **SetCalculationOptionsResponse** element specifies the result data for the **SetCalculationOptions** **WSDL operation**.

```
<xs:element name="SetCalculationOptionsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetCalculationOptionsResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetCalculationOptionsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.41.3 Complex Types

None.

3.1.4.41.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
WorkbookCalculation	An enumeration of a set of options that specify how the protocol server calculates the workbook .

3.1.4.41.4.1 WorkbookCalculation

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **WorkbookCalculation** type is an enumeration of a set of options that specify how the protocol server **calculates** the **workbook**.

```
<xs:simpleType name="WorkbookCalculation" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="Manual"/>  
    <xs:enumeration value="Automatic"/>  
    <xs:enumeration value="Semiautomatic"/>  
  </xs:restriction>  
</xs:simpleType>
```

The following table specifies the allowable values for the **WorkbookCalculation** simple type.

Value	Meaning
Manual	manual calculation mode.
Automatic	automatic calculation mode.
Semiautomatic	automatic calculation mode, except for data tables .

3.1.4.41.5 Attributes

None.

3.1.4.41.6 Groups

None.

3.1.4.41.7 Attribute Groups

None.

3.1.4.42 SetParameters

This operation is used to set values of **workbook parameters** in a **workbook**.

The following is the **WSDL** port type specification of the **SetParameters WSDL operation**.

```
<wsdl:operation name="SetParameters" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetParameters"
    message="tns2:ExcelServiceSoap_SetParameters_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetParametersResponse"
    message="tns2:ExcelServiceSoap_SetParameters_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetParametersExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_SetParameters_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SetParameters_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_SetParameters_OutputMessage** response message.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<57>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **FormulaEditingNotEnabled**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **ParameterDoesNotExist**

- **SetParameterFailure**
- **UnattendedAccountNotConfigured**

3.1.4.42.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetParameters_InputMessage	The request WSDL message for the SetParameters WSDL operation .
ExcelServiceSoap_SetParameters_OutputMessage	The response WSDL message for the SetParameters WSDL operation .

3.1.4.42.1.1 ExcelServiceSoap_SetParameters_InputMessage

The request **WSDL message** for the **SetParameters WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetParameters
```

The **SOAP body** contains the **SetParameters** element.

3.1.4.42.1.2 ExcelServiceSoap_SetParameters_OutputMessage

The response **WSDL message** for the **SetParameters WSDL operation**.

The **SOAP body** contains the **SetParametersResponse** element.

3.1.4.42.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SetParameters	The input data for the SetParameters WSDL operation .
SetParametersResponse	The result data for the SetParameters WSDL operation .

3.1.4.42.2.1 SetParameters

The **SetParameters** element specifies the input data for the **SetParameters WSDL operation**.

```
<xs:element name="SetParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="workbookParameters"
type="tns2:ArrayOfWorkbookParameter"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

workbookParameters: The **workbook parameters** to be set in the **workbook** as specified in section [3.1.4.42.3.1](#). MUST be present.

3.1.4.42.2 SetParametersResponse

The **SetParametersResponse** element specifies the result data for the **SetParameters WSDL operation**.

```

<xs:element name="SetParametersResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetParametersResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

SetParametersResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.42.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfWorkbookParameter	An array of WorkbookParameter elements (section 3.1.4.42.3.2).
WorkbookParameter	Represent a value or a list of values to be set into workbook parameters in the workbook .

3.1.4.42.3.1 ArrayOfWorkbookParameter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfWorkbookParameter** complex type contains an array of **WorkbookParameter** elements (section [3.1.4.42.3.2](#)). The count of elements in the sequence MUST be less than or equal to 255.

```

<xs:complexType name="ArrayOfWorkbookParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="WorkbookParameter" nillable="true"
type="tns2:WorkbookParameter"/>
  </xs:sequence>
</xs:complexType>

```

WorkbookParameter: A **workbook parameter** as described in section 3.1.4.42.3.2.

3.1.4.42.3.2 WorkbookParameter

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **WorkbookParameter** complex type is used to represent a value or a list of values to be set into **workbook parameters** in the **workbook**.

```
<xs:complexType name="WorkbookParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Comment" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsPivotPageField" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSlicer" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RequiresConnection" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>
```

Comment: The length of the string MUST be 0 characters.

IsPivotPageField: MUST be set to **false**.

IsSlicer: MUST be set to **false**.

Name: The name of the workbook parameter. MUST be present. MUST NOT be empty. MUST be a value of the **Name** attribute of **CT_Parameter** as specified in [\[MS-EXSPXML3\]](#) section 2.3.2.

RequiresConnection: MUST be set to **false**.

Values: An array of string values to set in the workbook parameter as specified in section [2.2.4.11](#). The protocol server MUST ignore all the elements in **ArrayOfString**, if all the following conditions are satisfied:

- The **IsPivotPageField** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML3\]](#) section 2.3.2, is not present or it is present and its value is false.
- The **IsSlicer** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML3\]](#) section 2.3.2, is not present or it is present and its value is false.
- The **Values** element is not present or the number of elements in **ArrayOfString** is not equal to 1.

If the **IsPivotPageField** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML3\]](#) section 2.3.2, is present and its value is set to **true**, the following apply:

- If the **Values** element is not present, the protocol server will change the **PivotTable manual filter** in the workbook to the **default filter value**.
- If the **Values** element is present and there are no elements in **ArrayOfString**, the protocol server will change the PivotTable manual filter in the workbook to the default filter value.
- If the **Values** element is present and the number of elements in **ArrayOfString** is greater than or equal to 1, the protocol server will use the values as the PivotTable manual filter in the workbook.

If the **IsSlicer** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML3\]](#) section 2.3.2, is present and its value is set to **true**, the following apply:

- If the **Values** element is not present, the protocol server will change the **slicer** manual filter in the workbook to the default filter value.
- If the **Values** element is present and there are no elements in **ArrayOfString**, the protocol server will change the slicer manual filter in the workbook to the default filter value.
- If the **Values** element is present and the number of elements in **ArrayOfString** is greater than or equal to 1, the protocol server will use the values as the slicer manual filter in the workbook.

Each string element of **ArrayOfString** MUST NOT be longer than 1024 characters.

3.1.4.42.4 Simple Types

None.

3.1.4.42.5 Attributes

None.

3.1.4.42.6 Groups

None.

3.1.4.42.7 Attribute Groups

None.

3.1.4.43 SetRange

This operation is used to set values to a range of **worksheet cells** on a **workbook**.

The following is the **WSDL** port type specification of the **SetRange WSDL operation**.

```
<wsdl:operation name="SetRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRange" message="tns2:ExcelServiceSoap SetRange InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:output
      wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
      Service/ExcelServiceSoap/SetRangeResponse"
      message="tns2:ExcelServiceSoap_SetRange_OutputMessage"
      xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
      <wsdl:fault
        wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
        Service/ExcelServiceSoap/SetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
        message="tns2:ExcelServiceSoap_SetRange_ExcelServerMessageFault_FaultMessage"
        xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    </wsdl:output>
  </wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SetRange_InputMessage** request message and the protocol server responds with an **ExcelServiceSoap_SetRange_OutputMessage** response message as follows:

1. If **cellsArray** is not present, the protocol server MUST return an **ExcelServerMessage** as specified in the **SOAP fault** section. The **Id** element of the **ExcelServerMessage** MUST be **RangeDefinitionError**.
2. If the **SheetName** element inside **sheetRange** is empty, the protocol server MUST return an **ExcelServerMessage** as specified in the SOAP fault section. The **Id** element of the **ExcelServerMessage** MUST be **InvalidSheetName**.

3. If the user does not have the **Open Item permission** on the workbook, **cellsArray** SHOULD<58> contain only one item.
4. Each element inside the **cellsArray** element MUST be of type **ArrayOfAnyType** and be a **row (2)** of worksheet cells sent to the protocol server. The number of rows (2) in **cellsArray** MUST be equal to the number of rows (2) specified in the **sheetRange** element.
5. Each element inside each of the **ArrayOfAnyType** type nested inside **cellsArray** MUST be a single worksheet cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of **columns (2)** specified in the **sheetRange** element.
6. If the **values** element in the **cellsArray** contains **formulas** not recognized by the protocol server, then:
 - If the value of **ProtocolClientId** element in the **parameter** as defined in section [2.2.4.22](#) is set to "ms-ewa", the protocol server MUST set the text representation of the formulas into the cells.
 - If the value of **ProtocolClientId** element in the **parameter** as defined in section [2.2.4.22](#) is set to "ms-soap", the protocol server MUST return a SOAP fault as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** MUST be **FormulaParseFailed**.
- All worksheet cells in the **cellsArray** element MUST either be empty and with the xsi:nil attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**.
 - If the value is of type **string**, it MUST NOT be longer than 32767 characters.
 - If the protocol server does not support the value, it MUST return a SOAP fault.
 - If the protocol server does not support setting a value in the specified location, it MUST return a SOAP fault.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD<59> be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **CannotEditPivotTable**
- **DimensionMismatch**
- **EcsInvalidNamedObject**
- **FormulaEditingNotEnabled**
- **InvalidSheetName**
- **ObjectTypeNotSupported**
- **RangeDefinitionError**
- **RangeParseError**
- **SetRangeFailure**
- **SheetRangeMismatch**

3.1.4.43.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetRange_InputMessage	The request WSDL message for the SetRange WSDL operation .
ExcelServiceSoap_SetRange_OutputMessage	The response WSDL message for the SetRange WSDL operation .

3.1.4.43.1.1 ExcelServiceSoap_SetRange_InputMessage

The request **WSDL message** for the **SetRange WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetRange
```

The **SOAP body** contains the **SetRange** element.

3.1.4.43.1.2 ExcelServiceSoap_SetRange_OutputMessage

The response **WSDL message** for the **SetRange WSDL operation**.

The **SOAP body** contains the **SetRangeResponse** element.

3.1.4.43.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SetRange	The input data for the SetRange WSDL operation .
SetRangeResponse	The result data for the SetRange WSDL operation .

3.1.4.43.2.1 SetRange

The **SetRange** element specifies the input data for the **SetRange WSDL operation**.

```
<xs:element name="SetRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="activeCell" type="tns2:SheetCell"/>
      <xs:element minOccurs="0" maxOccurs="1" name="cellsArray"/>
      <xs:element minOccurs="0" maxOccurs="1" name="setCellRange" type="tns2:SheetRange"/>
      <xs:element minOccurs="1" maxOccurs="1" name="comboKey" type="tns2:ComboKeyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

activeCell: The **active cell** in the **range** to set. MUST be present. The **SheetName** element of the **SheetCell** (section [2.2.4.68](#)) complex type MUST be present and MUST NOT be empty.

cellsArray: The array of **cell values** to set. MUST be present.

setCellRange: The range to set. See section [2.2.4.35](#). MUST be present. The **SheetName** element of the **SheetRange** complex type MUST be present and MUST NOT be empty.

comboKey: The combination of keys associated with the operation as specified in section [3.1.4.43.4.1](#).

3.1.4.43.2.2 SetRangeResponse

The **SetRangeResponse** element specifies the result data for the **SetRange WSDL operation**.

```
<xs:element name="SetRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetRangeResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.43.3 Complex Types

None.

3.1.4.43.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
ComboKeyType	A combination of keys.

3.1.4.43.4.1 ComboKeyType

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

ComboKeyType is an enumeration of the different combinations of keys associated with setting values to a range of **worksheet cells** on a **workbook**.

```
<xs:simpleType name="ComboKeyType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="CTRL"/>
    <xs:enumeration value="CTRLSHIFT"/>
    <xs:enumeration value="COMBOKEYMAX"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ComboKeyType** simple type.

Value	Meaning
None	No keys are associated with the operation.
CTRL	The Control key is associated with the operation.
CTRLSHIFT	MUST NOT be used.
COMBOKEYMAX	MUST NOT be used.

3.1.4.43.4.2 SetCellMode

3.1.4.43.5 Attributes

None.

3.1.4.43.6 Groups

None.

3.1.4.43.7 Attribute Groups

None.

3.1.4.44 SetRangeA1

This operation is used to set values to a range of **worksheet cells** on a **workbook**.

The following is the **WSDL** port type specification of the **SetRangeA1 WSDL operation**.

```
<wsdl:operation name="SetRangeA1" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeA1" message="tns2:ExcelServiceSoap SetRangeA1 InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeA1Response"
    message="tns2:ExcelServiceSoap_SetRangeA1_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeA1ExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap SetRangeA1 ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SetRangeA1_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_SetRangeA1_OutputMessage** response message, as follows:

1. Each element inside the **SetRangeRequest** MUST be of type **RangeValuesA1** as specified in section [2.2.4.31](#). The number of elements MUST be equal to the number of **named ranges** that the protocol client tries to set values to. Each **RangeValuesA1** element specifies the **rangeName**, **SheetName** and the **Values** to be set into the workbook, as follows:

- If **rangeName** is empty, the protocol server MUST return an **ExcelServerMessage** as specified in the **SOAP fault** section. The **Id** element of the **ExcelServerMessage** MUST be **RangeParseError**.
 - If **sheetName** is empty, the protocol server MUST use the first worksheet on the workbook unless a worksheet can be determined from **rangeName**, in which case the worksheet, as determined from **rangeName**, MUST be used.
 - If a worksheet cannot be determined from **rangeName**, the protocol server MUST use **range** on the worksheet determined by **sheetName** to locate the range to set.
2. All worksheet cells in the **Values** element of **RangeValuesA1** MUST either be empty and with the **xsi:nil** attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**.
 - If the value is of type **string**, then it MUST NOT be longer than 32,767 characters.
 - If the protocol server does not support the value it MUST return a SOAP fault.
 - If the protocol server does not support setting a value in the specified location it MUST return a SOAP fault.
 3. If the **Values** element of **RangeValuesA1** contains **formulas** not recognized by the protocol server, the following apply:
 - If the value of **ProtocolClientId** element in the **parameter** as defined in **CommandParameter** (section [2.2.4.20](#)) is set to "ms-ewa", the protocol server MUST set the text representation of the formulas into the cells.
 - If the value of **ProtocolClientId** element in the **parameter** as defined in **CommandParameter** is set to "ms-soap", the protocol server MUST return a SOAP fault as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** MUST be **FormulaParseFailed**.
 4. If the user does not have **Open Item permission** on the workbook, the **Value** of **RangeValuesA1** SHOULD [<60>](#) contain only one worksheet cell.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<61>](#) be one of the values specified in [2.2.2.1](#) or any of the following values:

- **CannotEditPivotTable**
- **DimensionMismatch**
- **EcsInvalidNamedObject**
- **FormulaEditingNotEnabled**
- **InvalidSheetName**
- **ObjectTypeNotSupported**
- **RangeDefinitionError**
- **RangeParseError**

- **SetRangeFailure**
- **SheetRangeMismatch**

3.1.4.44.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetRangeA1_InputMessage	The request WSDL message for the SetRangeA1 WSDL operation .
ExcelServiceSoap_SetRangeA1_OutputMessage	The response WSDL message for the SetRangeA1 WSDL operation .

3.1.4.44.1.1 ExcelServiceSoap_SetRangeA1_InputMessage

The request **WSDL message** for the **SetRangeA1 WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetRangeA1
```

The **SOAP body** contains the **SetRangeA1** element.

3.1.4.44.1.2 ExcelServiceSoap_SetRangeA1_OutputMessage

The response **WSDL message** for the **SetRangeA1 WSDL operation**.

The **SOAP body** contains the **SetRangeA1Response** element.

3.1.4.44.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SetRangeA1	The input data for the SetRangeA1 WSDL operation .
SetRangeA1Response	The result data for the SetRangeA1 WSDL operation .

3.1.4.44.2.1 SetRangeA1

The **SetRangeA1** element specifies the input data for the **SetRangeA1 WSDL operation**.

```
<xs:element name="SetRangeA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="setRangeRequests"
type="tns2:ArrayOfRangeValuesA1"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

setRangeRequests: An array of **RangeValuesA1** elements that contains the values to be set into the **cells**.

3.1.4.44.2 SetRangeA1Response

The **SetRangeA1Response** element specifies the result data for the **SetRangeA1 WSDL operation**.

```

<xs:element name="SetRangeA1Response" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetRangeA1Result"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

SetRangeA1Result: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.44.3 Complex Types

None.

3.1.4.44.4 Simple Types

None.

3.1.4.44.5 Attributes

None.

3.1.4.44.6 Groups

None.

3.1.4.44.7 Attribute Groups

None.

3.1.4.45 SortFilterColumn

This operation is used to change the **sort order** of a **table** or **worksheet AutoFilter** in the **workbook**.

The following is the **WSDL** port type specification of the **SortFilterColumn WSDL operation**.

```

<wsdl:operation name="SortFilterColumn" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumn"

```

```

message="tns2:ExcelServiceSoap_SortFilterColumn_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumnResponse"
message="tns2:ExcelServiceSoap_SortFilterColumn_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumnExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_SortFilterColumn_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_SortFilterColumn_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_SortFilterColumn_OutputMessage** response message.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<62>](#) be one of the values specified in section 2.2.2.1.

3.1.4.45.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SortFilterColumn_InputMessage	The request WSDL message for the SortFilterColumn WSDL operation .
ExcelServiceSoap_SortFilterColumn_OutputMessage	The response WSDL message for the SortFilterColumn WSDL operation .

3.1.4.45.1.1 ExcelServiceSoap_SortFilterColumn_InputMessage

The request **WSDL message** for the **SortFilterColumn WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/SortFilterColumn

```

The **SOAP body** contains the **SortFilterColumn** element.

3.1.4.45.1.2 ExcelServiceSoap_SortFilterColumn_OutputMessage

The response **WSDL message** for the **SortFilterColumn WSDL operation**.

The **SOAP body** contains the **SortFilterColumnResponse** element.

3.1.4.45.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SortFilterColumn	The input data for the SortFilterColumn WSDL operation .
SortFilterColumnResponse	The result data for the SortFilterColumn WSDL operation .

3.1.4.45.2.1 SortFilterColumn

The **SortFilterColumn** element specifies the input data for the **SortFilterColumn WSDL operation**.

```
<xs:element name="SortFilterColumn" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns2:AutoFilterOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="sortType" type="tns2:SortType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The options to be used when sorting the **AutoFilter column** as specified in section [2.2.4.14](#). MUST be present. The **CriteriaType** element of AutoFilterOptions MUST be set to Nil, and the **Criteria** element MUST NOT be present.

sortType: The **sort order** to apply to the AutoFilter, as specified in section [3.1.4.45.4.1](#).

3.1.4.45.2.2 SortFilterColumnResponse

The **SortFilterColumnResponse** element specifies the result data for the **SortFilterColumn WSDL operation**.

```
<xs:element name="SortFilterColumnResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SortFilterColumnResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SortFilterColumnResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.45.3 Complex Types

None.

3.1.4.45.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
SortType	An enumeration of the different types of sort order than can be applied to an AutoFilter column .

3.1.4.45.4.1 SortType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An enumeration of the different types of **sort order** than can be applied to an **AutoFilter column**.

```
<xs:simpleType name="SortType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Ascending"/>
    <xs:enumeration value="Descending"/>
    <xs:enumeration value="Toggle"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **SortType** simple type.

Value	Meaning
None	MUST NOT be used.
Ascending	Specifies an ascending order .
Descending	Specifies a descending order .
Toggle	If the current sort order applied to the AutoFilter is ascending order, then this value specifies a descending order. Otherwise, it specifies an ascending order.

3.1.4.45.5 Attributes

None.

3.1.4.45.6 Groups

None.

3.1.4.45.7 Attribute Groups

None.

3.1.4.46 TogglePivotDrill

This operation is used to **expand** or **collapse** a **PivotTable** or **PivotChart member**.

The following is the **WSDL** port type specification of the **TogglePivotDrill WSDL operation**.

```
<wsdl:operation name="TogglePivotDrill" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
```

```

    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrill"
message="tns2:ExcelServiceSoap_TogglePivotDrill_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrillResponse"
message="tns2:ExcelServiceSoap_TogglePivotDrill_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrillExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_TogglePivotDrill_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_TogglePivotDrill_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_TogglePivotDrill_OutputMessage** response message, as follows:

1. The protocol client sends the PivotTable member to be expanded or collapsed in the **pivotOperationOptions** element (section [3.1.4.46.2.1](#)).
2. The protocol server expands the PivotTable member if it was collapsed. The protocol server collapses the PivotTable member if it was expanded.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<63>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**

- **UnattendedAccountNotConfigured**

3.1.4.46.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_TogglePivotDrill_InputMessage	The request WSDL message for the TogglePivotDrill WSDL operation .
ExcelServiceSoap_TogglePivotDrill_OutputMessage	The response WSDL message for the TogglePivotDrill WSDL operation .

3.1.4.46.1.1 ExcelServiceSoap_TogglePivotDrill_InputMessage

The request **WSDL message** for the **TogglePivotDrill WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/TogglePivotDrill
```

The **SOAP body** contains the **TogglePivotDrill** element.

3.1.4.46.1.2 ExcelServiceSoap_TogglePivotDrill_OutputMessage

The response **WSDL message** for the **TogglePivotDrill WSDL operation**.

The **SOAP body** contains the **TogglePivotDrillResponse** element.

3.1.4.46.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
TogglePivotDrill	The input data for the TogglePivotDrill WSDL operation .
TogglePivotDrillResponse	The result data for the TogglePivotDrill WSDL operation .

3.1.4.46.2.1 TogglePivotDrill

The **TogglePivotDrill** element specifies the input data for the **TogglePivotDrill WSDL operation**.

```
<xs:element name="TogglePivotDrill" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions" type="tns2:PivotOperationOptions"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or **PivotChart member** to be expanded or collapsed. MUST be present. The following element definitions MUST extend or override the standard behavior that is defined for the same elements in section [2.2.4.28](#):

- **FieldId:** MUST be present and empty.
- **Column:** The **column (2)** of the PivotTable member. MUST be the zero-based column (2) number of a **worksheet cell** of the PivotTable that has the **Drillable** attribute of the **CT_Cell** element ([\[MS-EXSPXML3\]](#) section 2.3.40) set to **true**. Valid only when the anchor is on a PivotTable.
- **Row:** The **row (2)** of the PivotTable member. MUST be the zero-based row (2) number of a worksheet cell of the PivotTable that has the **Drillable** attribute of the **CT_Cell** element ([\[MS-EXSPXML3\]](#) section 2.3.40) set to **true**. Valid only when the anchor is on a PivotTable.

3.1.4.46.2.2 TogglePivotDrillResponse

The **TogglePivotDrillResponse** element specifies the result data for the **TogglePivotDrill WSDL operation**.

```
<xs:element name="TogglePivotDrillResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="TogglePivotDrillResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

TogglePivotDrillResult: A **CommandResult** as defined in section [2.2.4.21](#). MUST be present.

3.1.4.46.3 Complex Types

None.

3.1.4.46.4 Simple Types

None.

3.1.4.46.5 Attributes

None.

3.1.4.46.6 Groups

None.

3.1.4.46.7 Attribute Groups

None.

3.1.4.47 ApplyPivot

This operation is used to modify a **PivotTable** or a **PivotChart**.

The following is the **WSDL** port type specification of the **ApplyPivot WSDL operation**.

```
<wsdl:operation name="ApplyPivot" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivot" message="tns2:ExcelServiceSoap_ApplyPivot_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotResponse"
    message="tns2:ExcelServiceSoap_ApplyPivot_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ApplyPivot_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyPivot_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivot_OutputMessage** response message, as follows:

1. The protocol client sends both information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element (section [3.1.4.47.2.1](#)) and **PivotTable field** information (including how that PivotTable field is changing) in the **pivotFieldApplyData** element (section [3.1.4.47.2.1](#)).
2. The protocol server applies the PivotTable field information to the PivotTable or PivotChart, and modifies it accordingly.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<64>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.13](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**

- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.47.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivot_InputMessage	The request WSDL message for the ApplyPivot WSDL operation .
ExcelServiceSoap_ApplyPivot_OutputMessage	The response WSDL message for the ApplyPivot WSDL operation .

3.1.4.47.1.1 ExcelServiceSoap_ApplyPivot_InputMessage

The request **WSDL message** for the **ApplyPivot WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivot
```

The **SOAP body** contains the **ApplyPivot** element.

3.1.4.47.1.2 ExcelServiceSoap_ApplyPivot_OutputMessage

The response **WSDL message** for the **ApplyPivot WSDL operation**.

The **SOAP body** contains the **ApplyPivotResponse** element.

3.1.4.47.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyPivot	The input data for the ApplyPivot WSDL operation .
ApplyPivotResponse	The result data for the ApplyPivot WSDL operation .

3.1.4.47.2.1 ApplyPivot

The **ApplyPivot** element specifies the input data for the **ApplyPivot WSDL operation**.

```

<xs:element name="ApplyPivot" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldApplyData"
type="tns2:PivotFieldApplyData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

pivotFieldApplyData: The **PivotTable field** information (including how it is changing) as specified in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

3.1.4.47.2.2 ApplyPivotResponse

The **ApplyPivotResponse** element specifies the result data for the **ApplyPivot WSDL operation**.

```

<xs:element name="ApplyPivotResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyPivotResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.47.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
PivotFieldApplyData	PivotTable field information to apply to a PivotTable or PivotChart .

3.1.4.47.3.1 PivotFieldApplyData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFieldApplyData** complex type specifies **PivotTable field** information (including how it is changing) to apply to a **PivotTable** or PivotChart.

```

<xs:complexType name="PivotFieldApplyData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListType" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldWellVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

```

<xs:element minOccurs="1" maxOccurs="1" name="SourceAxis" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="SourceAxisPosition" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="ItemType" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="ItemIndex" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="DestinationAxis" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="DestinationAxisPosition" type="xs:int"/>
</xs:sequence>
</xs:complexType>

```

FieldListType: The PivotTable field list type. MUST be one of the values specified in the following table.

Value	Meaning
1	Associated with the entire Pivot (PivotTable or PivotChart)
4	Associated with a particular entity within the Pivot (PivotTable or PivotChart)

FieldListVersion: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than -1. The protocol client MUST use one of the following values:

- -1, in which case the protocol server MUST bypass the version validation.
- The value obtained from the **FieldListVersion** element as specified in either the **PivotFieldListData** (section [3.1.4.52.3.1](#)) complex type or the **PivotFieldManagerData** section ([3.1.4.53.3.1](#)) complex type.

FieldWellVersion: A unique identifier for the state of the PivotTable or PivotChart on the protocol server. MUST be equal to or greater than -1. The protocol client MUST use one of the following values:

- -1, in which case the protocol server MUST bypass the version validation.
- The value obtained from the **FieldWellVersion** element as specified in the **PivotFieldManagerData** (section [3.1.4.53.3.1](#)) complex type.

SourceAxis: An identifier for the source axis of the PivotTable field. MUST be one of the values specified in the following table.

Value	Meaning
0	Null (adds the specified PivotTable field to the DestinationAxis)
1	Rows
2	Columns
4	Filter
8	Data

SourceAxisPosition: A **zero-based index** of the source axis position. MUST be present. If **SourceAxis** is **Null**, **SourceAxisPosition** MUST be ignored by the protocol server.

ItemType: The PivotTable field type as specified by the **TypeTag** element in the **PivotFieldListItem** (section 2.2.4.53) complex type. MUST be present.

ItemIndex: A PivotTable field index. If **SourceAxis** is **Null** (0), **ItemIndex** MUST be the **PivotCacheIndex** element as specified in the **PivotFieldListItem** (section 2.2.4.53) complex type. Otherwise, **ItemIndex** MUST be the **PivotTableIndex** element as specified in the **PivotFieldListItem** (section 2.2.4.53) complex type.

DestinationAxis: An identifier for the destination axis of the PivotTable field. MUST be one of the values specified in the following table.

Value	Meaning
-1	Default
0	Null (removes the specified PivotTable field from the SourceAxis)
1	Rows
2	Columns
4	Filter
8	Data

DestinationAxisPosition: A zero-based index of the destination axis position before the source axis is removed and the item is added before the indexed item. MUST be present. If **DestinationAxis** is **Default** or **Null**, **DestinationAxisPosition** MUST be ignored by the protocol server.

3.1.4.47.4 Simple Types

None.

3.1.4.47.5 Attributes

None.

3.1.4.47.6 Groups

None.

3.1.4.47.7 Attribute Groups

None.

3.1.4.48 ApplyPivotFieldManagerHiddenState

This operation is used to set the visibility of the **PivotTable** or **PivotChart** field list for the **workbook**.

The following is the **WSDL** port type specification of the **ApplyPivotFieldManagerHiddenState** **WSDL operation**.

```
<wsdl:operation name="ApplyPivotFieldManagerHiddenState"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
```

```

    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenState"
message="tns2:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateResponse"
message="tns2:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_ExcelServerMessageFault_Fault
tMessage" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage** response message, as follows:

1. The protocol client sends visibility information for the PivotTable or PivotChart field list in the **hidden** element.
2. The protocol server applies the visibility information to the workbook.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<65>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.48.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage	The request WSDL message for the ApplyPivotFieldManagerHiddenState WSDL operation .
ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage	The response WSDL message for the ApplyPivotFieldManagerHiddenState WSDL operation .

3.1.4.48.1.1 ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage

The request **WSDL message** for the **ApplyPivotFieldManagerHiddenState WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/ApplyPivotFieldManagerHiddenState

```

The **SOAP body** contains the **ApplyPivotFieldManagerHiddenState** element.

3.1.4.48.1.2 ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage

The response **WSDL message** for the **ApplyPivotFieldManagerHiddenState WSDL operation**.

The **SOAP body** contains the **ApplyPivotFieldManagerHiddenStateResponse** element.

3.1.4.48.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyPivotFieldManagerHiddenState	The input data for the ApplyPivotFieldManagerHiddenState WSDL operation .
ApplyPivotFieldManagerHiddenStateResponse	The result data for the ApplyPivotFieldManagerHiddenState WSDL operation .

3.1.4.48.2.1 ApplyPivotFieldManagerHiddenState

The **ApplyPivotFieldManagerHiddenState** element specifies the input data for the **ApplyPivotFieldManagerHiddenState WSDL operation**.

```
<xs:element name="ApplyPivotFieldManagerHiddenState"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="hidden" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

hidden: MUST be set to **true** to hide the **PivotTable** or **PivotChart** field list, MUST be **false** otherwise.

3.1.4.48.2.2 ApplyPivotFieldManagerHiddenStateResponse

The **ApplyPivotFieldManagerHiddenStateResponse** element specifies the result data for the **ApplyPivotFieldManagerHiddenState WSDL operation**.

```
<xs:element name="ApplyPivotFieldManagerHiddenStateResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotFieldManagerHiddenStateResult"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyPivotFieldManagerHiddenStateResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.48.3 Complex Types

None.

3.1.4.48.4 Simple Types

None.

3.1.4.48.5 Attributes

None.

3.1.4.48.6 Groups

None.

3.1.4.48.7 Attribute Groups

None.

3.1.4.49 ExpandPivotFieldListLevels

This operation is used to expand the levels on a **PivotTable** or **PivotChart**.

The following is the **WSDL** port type specification of the **ExpandPivotFieldListLevels WSDL operation**.

```
<wsdl:operation name="ExpandPivotFieldListLevels"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevels"
message="tns2:ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsResponse"
message="tns2:ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ExpandPivotFieldListLevels_ExcelServerMessageFault_FaultMessag
e" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, and it sends PivotTable or PivotChart type information in the **type** element.
2. The protocol server expands the levels on the PivotTable or PivotChart.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<66>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.13](#)).

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.49.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage	The request WSDL message for the ExpandPivotFieldListLevels WSDL operation .
ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage	The response WSDL message for the ExpandPivotFieldListLevels WSDL operation .

3.1.4.49.1.1 ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage

The request **WSDL message** for the **ExpandPivotFieldListLevels WSDL operation**.

The **SOAP action** value is:

The **SOAP body** contains the **ExpandPivotFieldListLevels** element.

3.1.4.49.1.2 ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage

The response **WSDL message** for the **ExpandPivotFieldListLevels WSDL operation**.

The **SOAP body** contains the **ExpandPivotFieldListLevelsResponse** element.

3.1.4.49.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ExpandPivotFieldListLevels	The input data for the ExpandPivotFieldListLevels WSDL operation .
ExpandPivotFieldListLevelsResponse	The result data for the ExpandPivotFieldListLevels WSDL operation .

3.1.4.49.2.1 ExpandPivotFieldListLevels

The **ExpandPivotFieldListLevels** element specifies the input data for the **ExpandPivotFieldListLevels WSDL operation**.

```
<xs:element name="ExpandPivotFieldListLevels" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

type: The **PivotTable field** list type as specified by the **FieldListType** element in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

3.1.4.49.2.2 ExpandPivotFieldListLevelsResponse

The **ExpandPivotFieldListLevelsResponse** element specifies the result data for the **ExpandPivotFieldListLevels WSDL operation**.

```
<xs:element name="ExpandPivotFieldListLevelsResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ExpandPivotFieldListLevelsResult"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ExpandPivotFieldListLevelsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.49.3 Complex Types

None.

3.1.4.49.4 Simple Types

None.

3.1.4.49.5 Attributes

None.

3.1.4.49.6 Groups

None.

3.1.4.49.7 Attribute Groups

None.

3.1.4.50 GenerateWorkbookFromHtml

This operation is used to create a **new workbook session** for a **workbook** containing **named objects** based on the input parameters.

The following is the **WSDL** port type specification of the **GenerateWorkbookFromHtml WSDL operation**.

```

<wsdl:operation name="GenerateWorkbookFromHtml"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GenerateWorkbookFromHtml"
    message="tns2:ExcelServiceSoap GenerateWorkbookFromHtml InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GenerateWorkbookFromHtmlResponse"
    message="tns2:ExcelServiceSoap GenerateWorkbookFromHtml OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GenerateWorkbookFromHtmlExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap GenerateWorkbookFromHtml_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage** response, message as follows:

1. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input is not 0 and does not include **WorkbookGenerationItems.Table**, the protocol server MUST return a **SOAP fault**, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<67>](#) be one of the values specified in section [2.2.2.1](#)
2. Else, the protocol server will first obtain a new workbook session and insert a **table** into the workbook
3. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input includes **WorkbookGenerationItems.Slicers**, then the protocol server MUST insert **slicers** for the table into the workbook.
4. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input includes **WorkbookGenerationItems.Chart**, then the protocol server SHOULD insert a chart into the workbook.
5. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input includes **WorkbookGenerationItems.ConditionalFormatting**, then the protocol server MUST provide additional formatting information for the previously inserted table in the workbook.

3.1.4.50.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage	The request WSDL message for the GenerateWorkbookFromHtml WSDL operation .
ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage	The response WSDL message for the GenerateWorkbookFromHtml WSDL operation .

3.1.4.50.1.1 ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage

The request **WSDL message** for the **GenerateWorkbookFromHtml WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GenerateWorkbookFromHtml
```

The **SOAP body** contains the **GenerateWorkbookFromHtml** element.

3.1.4.50.1.2 ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage

The response **WSDL message** for the **GenerateWorkbookFromHtml WSDL operation**.

The **SOAP body** contains the **GenerateWorkbookFromHtmlResponse** element.

3.1.4.50.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GenerateWorkbookFromHtml	The input data for the GenerateWorkbookFromHtml WSDL operation .
GenerateWorkbookFromHtmlResponse	The result data for the GenerateWorkbookFromHtml WSDL operation .

3.1.4.50.2.1 GenerateWorkbookFromHtml

The **GenerateWorkbookFromHtml** element specifies the input data for the **GenerateWorkbookFromHtml WSDL operation**.

```
<xs:element name="GenerateWorkbookFromHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="html" type="tns2:TableHtml"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns2:WorkbookGenerationOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="subscriberId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="url" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present

html: A **TableHtml** as specified in section [3.1.4.50.3.1](#). MUST be present.

options: A **WorkbookGenerationOptions**, as specified in section [3.1.4.50.3.9](#), specifying which **named objects** created by the protocol server for the **workbook**, as well as other session-specific information. MUST be present.

subscriberId: The **site identifier**. MUST be equal to the value of **RequestSiteId** passed in **parameter**. MUST be present

url: The **trusted location** of the **new workbook session**. MUST be present. If the specified value is not a **Uniform Resource Identifier (URI)**, as specified in [\[RFC2396\]](#), or a **Universal Naming Convention (UNC)**, the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.2](#), with the value of the **Id** element of the **ExcelServerMessage** set to "NewWorkbookInvalidLocation".

The protocol server ignores the number sign (#) and fragment, as specified in [\[RFC3986\]](#).

3.1.4.50.2.2 GenerateWorkbookFromHtmlResponse

The **GenerateWorkbookFromHtmlResponse** element specifies the result data for the **GenerateWorkbookFromHtml WSDL operation**.

```
<xs:element name="GenerateWorkbookFromHtmlResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
```

```

<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="1" name="GenerateWorkbookFromHtmlResult"
type="tns2:CommandResult"/>
  <xs:element minOccurs="0" maxOccurs="1" name="generateWorkbookResult"
type="tns2:GenerateWorkbookFromHtmlResult"/>
</xs:sequence>
</xs:complexType>
</xs:element>

```

GenerateWorkbookFromHtmlResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

generateWorkbookResult: A **GenerateWorkbookFromHtmlResult**, as specified in section [3.1.4.50.3.6](#), that contains the results of the operation. MUST be present

3.1.4.50.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfCellHtml	An array of CellHtml elements, as specified in section 3.1.4.50.3.5
ArrayOfGeneratedNamedObject	An array of GeneratedNamedObject elements, as specified in section 3.1.4.50.3.8
ArrayOfRowHtml	The ArrayOfRowHtml type is an array of RowHtml elements, as specified in section 3.1.4.50.3.3
CellHtml	The CellHtml type represents one cell of an HTML table
GeneratedNamedObject	The GeneratedNamedObject type represents a named object that has been created as part of GenerateWorkbookFromHtml in the workbook .
GenerateWorkbookFromHtmlResult	The GenerateWorkbookFromHtmlResult type represents the result of calling GenerateWorkbookFromHtml
RowHtml	The RowHtml type represents one row of an HTML table
TableHtml	The TableHtml complex type is used to represent the contents of an HTML table.
WorkbookGenerationOptions	The WorkbookGenerationOptions types represents options for controlling the execution of GenerateWorkbookFromHtml .

3.1.4.50.3.1 TableHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **TableHtml** complex type is used to represent the contents of an HTML table.

```

<xs:complexType name="TableHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Hd" type="tns2:ArrayOfRowHtml"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Bd" type="tns2:ArrayOfRowHtml"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Li" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

```
</xs:sequence>
</xs:complexType>
```

Hd: An **ArrayOfRowHtml**, as specified in section [3.1.4.50.3.2](#), that represents the header row(s) of the table. Can be null.

Bd: An **ArrayOfRowHtml**, as specified in section [3.1.4.50.3.2](#), that represents the body row(s) of the table. Can be null.

Li: A table logging information. MUST be ignored by the protocol server.

3.1.4.50.3.2 ArrayOfRowHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfRowHtml** type is an array of **RowHtml** elements, as specified in section [3.1.4.50.3.3](#)

```
<xs:complexType name="ArrayOfRowHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="RowHtml" nillable="true"
      type="tns2:RowHtml"/>
  </xs:sequence>
</xs:complexType>
```

RowHtml: A **RowHtml** element, as specified in section [3.1.4.50.3.3](#).

3.1.4.50.3.3 RowHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RowHtml** type represents one row of an HTML table

```
<xs:complexType name="RowHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Cs" type="tns2:ArrayOfCellHtml"/>
  </xs:sequence>
</xs:complexType>
```

Cs: An **ArrayOfCellHtml**, as specified in section [3.1.4.50.3.4](#) that represents the cells in the row.

3.1.4.50.3.4 ArrayOfCellHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **CellHtml** elements, as specified in section [3.1.4.50.3.5](#)

```
<xs:complexType name="ArrayOfCellHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="CellHtml" nillable="true"
      type="tns2:CellHtml"/>
  </xs:sequence>
</xs:complexType>
```

CellHtml: A **CellHtml** element, as specified in section 3.1.4.50.3.5.

3.1.4.50.3.5 CellHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CellHtml** type represents one cell of an HTML table

```
<xs:complexType name="CellHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="C" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="R" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="I" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="H" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

C: The cell's column span.

R: The cell's row span.

I: The text of the cell. Can be null.

H: The **hyperlink** of the cell. Can be null.

3.1.4.50.3.6 GenerateWorkbookFromHtmlResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **GenerateWorkbookFromHtmlResult** type represents the result of calling **GenerateWorkbookFromHtml**

```
<xs:complexType name="GenerateWorkbookFromHtmlResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="GeneratedObjects"
type="tns:ArrayOfGeneratedNamedObject"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RequestStartTime" type="xs:dateTime"/>
  </xs:sequence>
</xs:complexType>
```

WorkbookId: The **session identifier** of the **new workbook session**.

GeneratedObjects: An **ArrayOfGeneratedNamedObject** as specified in section [3.1.4.50.3.7](#) that represents all of the **named objects** created in the **workbook**.

RequestStartTime: The **timestamp** when the call to **GenerateWorkbookFromHtml** was started.

3.1.4.50.3.7 ArrayOfGeneratedNamedObject

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **GeneratedNamedObject** elements, as specified in section [3.1.4.50.3.8](#)

```

<xs:complexType name="ArrayOfGeneratedNamedObject"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="GeneratedNamedObject"
nillable="true" type="tns2:GeneratedNamedObject"/>
  </xs:sequence>
</xs:complexType>

```

GeneratedNamedObject: A **GeneratedNamedObject** element, as specified in section 3.1.4.50.3.8

3.1.4.50.3.8 GeneratedNamedObject

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **GeneratedNamedObject** type represents a **named object** that has been created as part of **GenerateWorkbookFromHtml** in the **workbook**.

```

<xs:complexType name="GeneratedNamedObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType"
type="tns2:NamedObjectType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

Name: The name of the named object.

SheetName: The name of the sheet that the named object is on.

NamedObjectType: The type of named object, as specified in section [2.2.5.22](#).

Width: The width of the named object, in pixels, at 96DPI.

Height: The height of the named object, in pixels, at 96DPI.

3.1.4.50.3.9 WorkbookGenerationOptions

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Options controlling the execution of **GenerateWorkbookFromHtml**.

```

<xs:complexType name="WorkbookGenerationOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Locale" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataCulture" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UICulture" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GenerateItems"
type="tns2:WorkbookGenerationItems"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DarkColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DarkColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LightColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LightColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AccentColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AccentColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontName" type="xs:string"/>
  </xs:sequence>

```

```

<xs:element minOccurs="1" maxOccurs="1" name="FontSize" type="xs:double"/>
<xs:element minOccurs="0" maxOccurs="1" name="Attribution" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="UserId" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="UserFriendlyName" type="xs:string"/>
</xs:sequence>
</xs:complexType>

```

WorkbookName: The file name to be associated with the newly created **new workbook session**.

Locale: MUST NOT be used.

DataCulture: Specifies the **data culture** that the protocol server SHOULD use when creating the new workbook session.

UICulture: Specifies the **UI culture** that the protocol server SHOULD use when creating the new workbook session.

GenerateItems: A **WorkbookGenerationItems** element, as specified in section [3.1.4.50.4.1](#), that specifies the control flags for **GenerateWorkbookFromHtml**.

DarkColor1: Specifies a color the protocol server SHOULD use in the new workbook session. If present, the format of the string MUST be "#RRGGBB", where RR is a two digit hexadecimal number representing the red value, GG is a two digit hexadecimal number representing the green value, and BB is a two digit hexadecimal number representing the blue value.

DarkColor2: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

LightColor1: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

LightColor2: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

AccentColor1: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

AccentColor2: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

FontName: Specifies the name of the font that the protocol server SHOULD use in the new workbook session.

FontSize: Specifies the size of the font in points that the protocol server SHOULD use in the new workbook session.

Attribution: Specifies the value for a cell in the new workbook session. The protocol server MUST use this value if it is present.

UserId: MUST not be used.

UserFriendlyName: The user display name. MUST be present.

3.1.4.50.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
WorkbookGenerationItems	Control flags for GenerateWorkbookFromHtml .

3.1.4.50.4.1 WorkbookGenerationItems

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Control flags for **GenerateWorkbookFromHtml**

```
<xs:simpleType name="WorkbookGenerationItems" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="Table"/>
        <xs:enumeration value="Slicers"/>
        <xs:enumeration value="Charts"/>
        <xs:enumeration value="ConditionalFormatting"/>
        <xs:enumeration value="All"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **WorkbookGenerationItems** simple type.

Value	Meaning
Table	The protocol server MUST insert a table into the session (2)
Slicers	The protocol server MUST insert slicers for the table into the session (2)
Charts	The protocol server SHOULD insert a chart into the session (2)
ConditionalFormatting	The protocol server MUST provide additional formatting for the previously inserted table in the session (2)
All	Equivalent to combining all of the preceding values.

3.1.4.50.5 Attributes

None.

3.1.4.50.6 Groups

None.

3.1.4.50.7 Attribute Groups

None.

3.1.4.51 GetBixAnalysis

This operation is used to get the set of analysis operations that could be applied to a **PivotTable** or a **PivotChart**.

The following is the **WSDL** port type specification of the **GetBixAnalysis WSDL operation**.

```
<wsdl:operation name="GetBixAnalysis" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetBixAnalysis"
    message="tns2:ExcelServiceSoap_GetBixAnalysis_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetBixAnalysisResponse"
    message="tns2:ExcelServiceSoap_GetBixAnalysis_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetBixAnalysisExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetBixAnalysis_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetBixAnalysis_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetBixAnalysis_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the PivotTable or PivotChart in the **options** element (section [3.1.4.51.2.1](#)).
2. The protocol server returns the **analysis** data (section [3.1.4.51.2.2](#)) associated with the PivotTable or PivotChart.

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<68>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**

- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**
- **RetryOutOfSync**
- **UnexpectedPivotError**

3.1.4.51.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetBixAnalysis_InputMessage	The request WSDL message for the GetBixAnalysis WSDL operation .
ExcelServiceSoap_GetBixAnalysis_OutputMessage	The response WSDL message for the GetBixAnalysis WSDL operation .

3.1.4.51.1.1 ExcelServiceSoap_GetBixAnalysis_InputMessage

The request **WSDL message** for the **GetBixAnalysis WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetBixAnalysis
```

The **SOAP body** contains the **GetBixAnalysis** element.

3.1.4.51.1.2 ExcelServiceSoap_GetBixAnalysis_OutputMessage

The response **WSDL message** for the **GetBixAnalysis WSDL operation**.

The **SOAP body** contains the **GetBixAnalysisResponse** element.

3.1.4.51.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetBixAnalysis	The input data for the GetBixAnalysis WSDL operation .
GetBixAnalysisResponse	The result data for the GetBixAnalysis WSDL operation .

3.1.4.51.2.1 GetBixAnalysis

The **GetBixAnalysis** element specifies the input data for the **GetBixAnalysis WSDL operation**.

```
<xs:element name="GetBixAnalysis" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

options: The **PivotTable** or **PivotChart** identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present.

3.1.4.51.2.2 GetBixAnalysisResponse

The **GetBixAnalysisResponse** element specifies the result data for the **GetBixAnalysis WSDL operation**.

```
<xs:element name="GetBixAnalysisResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetBixAnalysisResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="analysis" type="tns2:BixAnalysis"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetBixAnalysisResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

analysis: The set of analysis operations, as specified in **BixAnalysis** (section [3.1.4.51.3.1](#)). MUST be present.

3.1.4.51.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
BixAnalysis	Describes the set of possible analysis operations based on the selected cell in the PivotTable .
BixContext	Describes context information related to the selected cell in the PivotTable.
BixDrillContext	Describes the PivotTable drill-up and drill-down operation contexts.
BixDrillField	Describes a PivotCache level drill operation.

3.1.4.51.3.1 BixAnalysis

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **BixAnalysis** type is a container describing the set of possible analysis operations, based on the selected cell in the **PivotTable**.

```
<xs:complexType name="BixAnalysis" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillContext" type="tns2:BixDrillContext"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcludeHierarchies"
type="tns2:ArrayOfInt"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Context" type="tns2:BixContext"/>
  </xs:sequence>
</xs:complexType>
```

DrillContext: The **BixDrillContext** describes the set of drill analysis operations and context, as described in section ([3.1.4.51.3.2](#))

ExcludeHierarchies: An array of PivotCache **hierarchy** identifiers which are excluded from the analysis operations.

Context: The **BixContext** describes context information related to the selected cell in the PivotTable, as described in section ([3.1.4.51.3.4](#)).

3.1.4.51.3.2 BixDrillContext

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **BixDrillContext** describes drill-up and drill-down operation contexts.

```
<xs:complexType name="BixDrillContext" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillDown" type="tns2:BixDrillField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillUp" type="tns2:BixDrillField"/>
  </xs:sequence>
</xs:complexType>
```

DrillDown: Defines the drill-down operation, as defined by the **BixDrillField** data type (section [3.1.4.51.3.3](#)). When NULL, this drill operation is not defined.

DrillUp: Defines the drill-up operation, as defined by the **BixDrillField** data type (section [3.1.4.51.3.3](#)). When NULL, this drill operation is not defined.

3.1.4.51.3.3 BixDrillField

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Describes a PivotCache level drill operation for the PivotCache **hierarchy** defined by the **BixContext** data type (section [3.1.4.51.3.4](#))

```
<xs:complexType name="BixDrillField" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Id" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Caption: The PivotCache level caption.

Id: The unique PivotCache level identifier associated with the **BixContext HierarchyId** property (section 3.1.4.51.3.4).

3.1.4.51.3.4 BixContext

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

This complex type includes PivotCache properties associated with the cell in the **PivotTable**, defined by the **PivotOperationOptions** (section 2.2.4.28).

```
<xs:complexType name="BixContext" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DimensionCaption" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HierarchyCaption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HierarchyId" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

DimensionCaption: The PivotCache dimension caption to which the **hierarchy**, identified by the **HierarchyId**, belongs.

HierarchyCaption: The PivotCache hierarchy caption.

HierarchyId: The PivotCache hierarchy identifier.

3.1.4.51.4 Simple Types

None.

3.1.4.51.5 Attributes

None.

3.1.4.51.6 Groups

None.

3.1.4.51.7 Attribute Groups

None.

3.1.4.52 GetPivotFieldListData

This operation is used to get the **PivotTable fields** that are associated with a **PivotTable** or **PivotChart**.

The following is the **WSDL** port type specification of the **GetPivotFieldListData WSDL operation**.

```
<wsdl:operation name="GetPivotFieldListData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotFieldListData"
    message="tns2:ExcelServiceSoap_GetPivotFieldListData_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
```

```

Service/ExcelServiceSoap/GetPivotFieldListDataResponse"
message="tns2:ExcelServiceSoap GetPivotFieldListData OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldListDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap GetPivotFieldListData ExcelServerMessageFault FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetPivotFieldListData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotFieldListData_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, type information in the **type** element, version information in the **version** element, and **measure group** information in the **measureGroup** element.
2. The protocol server uses this information to get the PivotTable fields that are associated with the PivotTable or PivotChart.

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <69> be one of the values specified in section 2.2.2.1.

3.1.4.52.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotFieldListData_InputMessage	The request WSDL message for the GetPivotFieldListData WSDL operation .
ExcelServiceSoap_GetPivotFieldListData_OutputMessage	The response WSDL message for the GetPivotFieldListData WSDL operation .

3.1.4.52.1.1 ExcelServiceSoap_GetPivotFieldListData_InputMessage

The request **WSDL message** for the **GetPivotFieldListData WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetPivotFieldListData

```

The **SOAP body** contains the **GetPivotFieldListData** element.

3.1.4.52.1.2 ExcelServiceSoap_GetPivotFieldListData_OutputMessage

The response **WSDL message** for the **GetPivotFieldListData WSDL operation**.

The **SOAP body** contains the **GetPivotFieldListDataResponse** element.

3.1.4.52.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetPivotFieldListData	The input data for the GetPivotFieldListData WSDL operation .
GetPivotFieldListDataResponse	The result data for the GetPivotFieldListData WSDL operation .

3.1.4.52.2.1 GetPivotFieldListData

The **GetPivotFieldListData** element specifies the input data for the **GetPivotFieldListData WSDL operation**.

```
<xs:element name="GetPivotFieldListData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="relatedGroup" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="selectedTab" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

type: The **PivotTable field** list type as specified by the **FieldListType** element in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

version: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than -1. For a value of -1, the protocol server MUST bypass the version validation. Initially, the protocol client MUST use one of the following values:

- -1
- Value obtained from the **FieldListVersion** element as specified in either the **PivotFieldListData** (section [3.1.4.52.3.1](#)) complex type or the **PivotFieldManagerData** (section [3.1.4.53.3.1](#)) complex type.

relatedGroup: The related group identifier as specified by the **GroupId** element in the **PivotFieldListRelatedGroup** (section [3.1.4.52.3.3](#)) complex type. MUST be present. Initially, the protocol client MUST use one of the following values:

- -1
- Value from the **GroupId** that MUST be obtained from the **RelatedGroups** element as specified in the **PivotFieldListData** (section [3.1.4.52.3.1](#)) complex type.

selectedTab: The selected tab for the PivotTable or **PivotChart** field list. MUST be one of the values specified in the following table.

Value	Meaning
-1	Default tab
0	All tab
1	Active tab

3.1.4.52.2 GetPivotFieldListDataResponse

The **GetPivotFieldListDataResponse** element specifies the result data for the **GetPivotFieldListData** **WSDL operation**.

```
<xs:element name="GetPivotFieldListDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFieldListDataResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldListData"
type="tns2:PivotFieldListData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotFieldListDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

pivotFieldListData: The **PivotTable field** list information as specified in the **PivotFieldListData** section [3.1.4.52.3.1](#). MUST be present.

3.1.4.52.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfPivotFieldListRelatedGroup	An array of PivotFieldListRelatedGroup elements.
PivotFieldListData	A container for information about a PivotTable field list.
PivotFieldListRelatedGroup	A related group for use with a PivotTable or PivotChart.

3.1.4.52.3.1 PivotFieldListData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFieldListData** type is a container for information about a **PivotTable field** list.

```
<xs:complexType name="PivotFieldListData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="RelatedGroups"
type="tns2:ArrayOfPivotFieldListRelatedGroup"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FieldListItems"
type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListCacheId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectedTab" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsPpm" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowRelatedGroups" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowTabs" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

RelatedGroups: A list of all the related groups for use with a **PivotTable** or **PivotChart** field list as specified in the **ArrayOfPivotFieldListRelatedGroup** section [3.1.4.52.3.2](#). MUST be present.

FieldListItems: A list of all the PivotTable fields as specified in the **ArrayOfPivotFieldListItem** section [2.2.4.47](#). MUST be present.

FieldListCacheId: A unique identifier for the cache of the PivotTable fields on the protocol server. MUST be equal to or greater than 0.

FieldListVersion: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than 0.

SelectedTab: The selected tab for the PivotTable or **PivotChart** field list. MUST be one of the values specified in the following table.

Value	Meaning
0	All tab
1	Active tab

IsPpm: MUST be set to **true** when the PivotTable or **PivotChart** field list represents a PowerPivot model. MUST be **false** otherwise.

ShowRelatedGroups: MUST be set to **true** to visually show related groups for the PivotTable or **PivotChart** field list. MUST be **false** otherwise.

ShowTabs: MUST be set to **true** to visually show tabs for the PivotTable or **PivotChart** field list. MUST be **false** otherwise.

3.1.4.52.3.2 ArrayOfPivotFieldListRelatedGroup

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfPivotFieldListRelatedGroup** type is an array of **PivotFieldListRelatedGroup** elements (section [3.1.4.52.3.3](#)).

```

<xs:complexType name="ArrayOfPivotFieldListRelatedGroup"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PivotFieldListRelatedGroup"
nillable="true" type="tns2:PivotFieldListRelatedGroup"/>
  </xs:sequence>
</xs:complexType>

```


PivotFieldListRelatedGroup: A **PivotFieldListRelatedGroup** element as specified in section [3.1.4.52.3.3](#).

3.1.4.52.3.3 PivotFieldListRelatedGroup

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFieldListRelatedGroup** is used to specify a related group for use with a **PivotTable** or **PivotChart**.

```
<xs:complexType name="PivotFieldListRelatedGroup"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="GroupId" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="GroupName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

GroupId: A unique identifier for the **PivotTable** or **PivotChart** group name on the protocol server. MUST be equal to or greater than -1.

GroupName: The **PivotTable** or **PivotChart** group name. MUST be present. MUST NOT be empty.

3.1.4.52.4 Simple Types

None.

3.1.4.52.5 Attributes

None.

3.1.4.52.6 Groups

None.

3.1.4.52.7 Attribute Groups

None.

3.1.4.53 GetPivotFieldManagerData

This operation is used to get the **PivotTable fields** that are associated with a **PivotTable** or **PivotChart query**.

The following is the **WSDL** port type specification of the **GetPivotFieldManagerData WSDL operation**.

```
<wsdl:operation name="GetPivotFieldManagerData"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerData"
message="tns2:ExcelServiceSoap_GetPivotFieldManagerData_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataResponse"
```

```

message="tns2:ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotFieldManagerData_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetPivotFieldManagerData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, type information in the **type** element, and version information in the **version** element.
2. The protocol server uses this information to get the PivotTable fields that are associated with the PivotTable or PivotChart query.

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<70>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.53.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotFieldManagerData_InputMessage	The request WSDL message for the GetPivotFieldManagerData WSDL operation .
ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage	The response WSDL message for the GetPivotFieldManagerData WSDL operation .

3.1.4.53.1.1 ExcelServiceSoap_GetPivotFieldManagerData_InputMessage

The request **WSDL message** for the **GetPivotFieldManagerData WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetPivotFieldManagerData

```

The **SOAP body** contains the **GetPivotFieldManagerData** element.

3.1.4.53.1.2 ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage

The response **WSDL message** for the **GetPivotFieldManagerData WSDL operation**.

The **SOAP body** contains the **GetPivotFieldManagerDataResponse** element.

3.1.4.53.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetPivotFieldManagerData	The input data for the GetPivotFieldManagerData WSDL operation .
GetPivotFieldManagerDataResponse	The result data for the GetPivotFieldManagerData WSDL operation .

3.1.4.53.2.1 GetPivotFieldManagerData

The **GetPivotFieldManagerData** element specifies the input data for the **GetPivotFieldManagerData WSDL operation**.

```
<xs:element name="GetPivotFieldManagerData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

type: The **PivotTable field** list type as specified by the **FieldListType** element in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

version: A unique identifier for the state of the PivotTable on the protocol server. MUST be equal to or greater than -1. For a value of -1, the protocol server MUST bypasses the version validation. Initially, the protocol client MUST use one of the following values:

- -1
- Value obtained from the **FieldWellVersion** element as specified in the **PivotFieldManagerData** (section [3.1.4.53.3.1](#)) complex type.

3.1.4.53.2.2 GetPivotFieldManagerDataResponse

The **GetPivotFieldManagerDataResponse** element specifies the result data for the **GetPivotFieldManagerData WSDL operation**.

```
<xs:element name="GetPivotFieldManagerDataResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFieldManagerDataResult"
type="tns2:CommandResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldManagerData"
type="tns2:PivotFieldManagerData"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

GetPivotFieldManagerDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

pivotFieldManagerData: The **PivotTable** or **PivotChart** information as specified in the **PivotFieldManagerData** section [3.1.4.53.3.1](#). MUST be present.

3.1.4.53.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
PivotFieldManagerData	A container for information about a PivotTable or PivotChart .

3.1.4.53.3.1 PivotFieldManagerData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFieldManagerData** type is a container for information about a **PivotTable** or **PivotChart**.

```

<xs:complexType name="PivotFieldManagerData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataAxis"
type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterAxis"
type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ColumnAxis"
type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RowAxis"
type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldWellVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

DataAxis: A list of all the **PivotTable fields** on the data axis as specified in the **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)) complex type. MUST be present.

FilterAxis: A list of all the **PivotTable fields** on the filter axis as specified in **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)). MUST be present.

ColumnAxis: A list of all the **PivotTable fields** on the column axis as specified in **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)). MUST be present.

RowAxis: A list of all the **PivotTable fields** on the row axis as specified in **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)). MUST be present.

FieldWellVersion: A unique identifier for the state of the PivotTable or PivotChart on the protocol server. MUST be equal to or greater than 0.

FieldListVersion: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than 0.

3.1.4.53.4 Simple Types

None.

3.1.4.53.5 Attributes

None.

3.1.4.53.6 Groups

None.

3.1.4.53.7 Attribute Groups

None.

3.1.4.54 GetRangeImage

This operation is used to return an image of a **worksheet range**.

The following is the **WSDL** port type specification of the **GetRangeImage WSDL operation**.

```
<wsdl:operation name="GetRangeImage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeImage"
    message="tns2:ExcelServiceSoap_GetRangeImage_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeImageResponse"
    message="tns2:ExcelServiceSoap_GetRangeImage_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeImageExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetRangeImage_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetRangeImage_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeImage_OutputMessage** response message, as follows:

- The protocol server MUST return a range image as specified in the **getRangeImageInformation** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<71>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.54.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetRangeImage_InputMessage	The request WSDL message for the GetRangeImage WSDL operation .
ExcelServiceSoap_GetRangeImage_OutputMessage	The response WSDL message for the GetRangeImage WSDL operation.

3.1.4.54.1.1 ExcelServiceSoap_GetRangeImage_InputMessage

The request **WSDL message** for the **GetRangeImage WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetRangeImage
```

The **SOAP body** contains the **GetRangeImage** element.

3.1.4.54.1.2 ExcelServiceSoap_GetRangeImage_OutputMessage

The response **WSDL message** for the **GetRangeImage WSDL operation**.

The **SOAP body** contains the **GetRangeImageResponse** element.

3.1.4.54.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetRangeImage	The input data for the GetRangeImage WSDL operation .
GetRangeImageResponse	The result data for the GetRangeImage WSDL operation.

3.1.4.54.2.1 GetRangeImage

The **GetRangeImage** element specifies the input data for the **GetRangeImage WSDL operation**.

```
<xs:element name="GetRangeImage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="getRangeImageInformation"
type="tns2:GetRangeImageInformation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

getImageInformation: The information how the protocol server generates an image, as specified in the **GetRangeImageInformation** (section [3.1.4.54.3.1](#)). MUST be present.

3.1.4.54.2.2 GetRangeImageResponse

The **GetRangeImageResponse** element specifies the result data for the **GetRangeImage WSDL operation**.

```
<xs:element name="GetRangeImageResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeImageResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binaryRangeImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetRangeImageResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binaryRangeImage** field. MUST be the string "x-png".

binaryRangeImage: The image of the requested **range** content. MUST be present. MUST be in the format specified in [\[RFC2083\]](#).

3.1.4.54.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
GetRangeImageInformation	A container for information used to determine how the requested range image will be rendered.

3.1.4.54.3.1 GetRangeImageInformation

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **GetRangeImageInformation** type is a container for information used to determine how the requested **worksheet range** image renders.

```
<xs:complexType name="GetRangeImageInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="RangeId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width100" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height100" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowHeaders" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

```
<xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
</xs:sequence>
</xs:complexType>
```

RangeId: If present, the value is a worksheet range, a **Table** name, or a **PivotTable** name to generate an image for by protocol server.

Width: Width in pixels of the requested image. If the value is greater than zero, specifies a desired width in pixels for the requested range image. Provided this value is smaller than the expected width of the requested range, it will be used to scale the resulting image smaller. When scaling the resulting image, the original aspect ratio will be maintained. If both **Width** and **Height** are greater than zero, the returned image will be scaled based on the axis to be resized the most.

Height: Height in pixels of the requested image. If the value is greater than zero, specifies a desired height in pixels for the requested range image. Provided this value is smaller than the expected height of the requested range, it will be used to scale the resulting image smaller. When scaling the resulting image, the original aspect ratio will be maintained. If both **Width** and **Height** are greater than zero, the returned image will be scaled based on the axis to be resized the most.

Width100: The width in pixels used to limit the **LastColumn** of the range of the returned image. If the value is less than or equal to zero, the protocol server ignores it. The cumulative pixel width of all visible **columns (2)** starting with **FirstColumn** thru **LastColumn** will be compared with **Width100**. If the cumulative width of a column (2) exceeds **Width100**, then that column (2) will be treated as the **LastColumn**.

Height100: The height in pixels used to limit the **LastRow** of the range of the returned image. If the value is less than or equal to zero, the protocol server ignores it. The cumulative pixel height of all visible **rows (2)** starting with **FirstRow** thru **LastRow** will be compared with **Height100**. If the cumulative height of a row (2) exceeds **Height100**, then that row (2) will be treated as the **LastRow**.

ShowHeaders: MUST be 0 or 1.

SheetName: The name of the worksheet that the range is on as specified by the **FirstRow**, **LastRow**, **FirstColumn**, and **LastColumn** elements contained in this type. MUST be present if **RangeId** is not present and MUST NOT be empty. MUST NOT be longer than 31 characters.

FirstRow: Specifies starting row (2) of the range to be returned as an image. MUST be present.

LastRow: Specifies ending row (2) of the range to be returned as an image. MUST be present.

FirstColumn: Specifies starting column (2) of the range to be returned as an image. MUST be present.

LastColumn: Specified ending column (2) of the range to be returned as an image. MUST be present.

3.1.4.54.4 Simple Types

None.

3.1.4.54.5 Attributes

None.

3.1.4.54.6 Groups

None.

3.1.4.54.7 Attribute Groups

None.

3.1.4.55 GetScaledImage

This operation is used to return a chart image.

The following is the **WSDL** port type specification of the **GetScaledImage WSDL operation**.

```
<wsdl:operation name="GetScaledImage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetScaledImage"
    message="tns2:ExcelServiceSoap_GetScaledImage_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetScaledImageResponse"
    message="tns2:ExcelServiceSoap_GetScaledImage_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetScaledImageExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetScaledImage_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetScaledImage_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetScaledImage_OutputMessage** response message, as follows:

1. The protocol server MUST return a chart image as specified in the **imageId** element as follows:
 1. The chart image MUST have a width, in pixels, less than or equal to the value specified in the **width** element.
 2. The chart image MUST have a height, in pixels, less than or equal to the value specified in the **height** element.
 3. Either the height of the chart image, in pixels, MUST be equal to the value in the **height** element, or the width of the chart element, in pixels, MUST be equal to the value in the **width** element.
 4. If **ImageRenderingOptions.KeepAspectRatio** is true, the chart image MUST have the same aspect ratio as the chart image in the workbook.
ImageRenderingOptions.KeepAspectRatio MUST be specified.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<72>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.55.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetScaledImage_InputMessage	The request WSDL message for the GetScaledImage WSDL operation .

Message	Description
ExcelServiceSoap_GetScaledImage_OutputMessage	The response WSDL message for the GetScaledImage WSDL operation.

3.1.4.55.1.1 ExcelServiceSoap_GetScaledImage_InputMessage

The request **WSDL message** for the **GetScaledImage** **WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetScaledImage
```

The **SOAP body** contains the **GetScaledImage** element.

3.1.4.55.1.2 ExcelServiceSoap_GetScaledImage_OutputMessage

The response **WSDL message** for the **GetScaledImage** **WSDL operation**.

The **SOAP body** contains the **GetScaledImageResponse** element.

3.1.4.55.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetScaledImage	The input data for the GetScaledImage WSDL operation .
GetScaledImageResponse	The result data for the GetScaledImage WSDL operation.

3.1.4.55.2.1 GetScaledImage

The **GetScaledImage** element specifies the input data for the **GetScaledImage** **WSDL operation**.

```
<xs:element name="GetScaledImage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="width" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="height" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="renderingOptions"
type="tns2:ImageRenderingOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

imageId: The chart identifier. MUST be present. MUST NOT be empty. MUST be the value specified in **CT_Image** element ([\[MS-EXSPXML3\]](#) section 2.3.33).

width: The maximum allowed width, in pixels, of the chart image. Either the height of the chart image, in pixels, MUST be equal to the value in the **height** element, or the width of the chart element, in pixels, MUST be equal to the value in the **width** element.

height: The maximum allowed height, in pixels, of the chart image. Either the height of the chart image, in pixels, MUST be equal to the value in the **height** element, or the width of the chart element, in pixels, MUST be equal to the value in the **width** element.

renderingOptions: Specifies options that affect the style of the returned image. See section [2.2.5.21](#). MUST be present.

3.1.4.55.2 GetScaledImageResponse

The **GetScaledImageResponse** element specifies the result data for the **GetScaledImage** **WSDL operation**.

```
<xs:element name="GetScaledImageResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetScaledImageResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binaryChartImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetScaledImageResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binaryChartImage** field. MUST be either the string "x-png" or the string "jpeg".

binaryChartImage: The image of the chart image. MUST be present. If **imageFormatType** is "x-png", MUST be in the format specified in [\[RFC2083\]](#). If **imageFormatType** is "jpeg", MUST be in the format specified in [\[JFIF\]](#).

3.1.4.55.3 Complex Types

None.

3.1.4.55.4 Simple Types

None.

3.1.4.55.5 Attributes

None.

3.1.4.55.6 Groups

None.

3.1.4.55.7 Attribute Groups

None.

3.1.4.56 ProcessRestRequest

This operation performs different operations on the **workbook** depending on the type of the **RestRequest** object received and returns a corresponding **RestResult**.

The following is the **WSDL** port type specification of the **ProcessRestRequest WSDL operation**.

```
<wsdl:operation name="ProcessRestRequest" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ProcessRestRequest"
    message="tns2:ExcelServiceSoap_ProcessRestRequest_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ProcessRestRequestResponse"
    message="tns2:ExcelServiceSoap_ProcessRestRequest_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ProcessRestRequestExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ProcessRestRequest_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ProcessRestRequest_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ProcessRestRequest_OutputMessage** response, message as follows:

The protocol server runs several operations as described as follows. For each of these, the **CommandParameter** (section [2.2.4.20](#)) input is constructed as follows:

- The **ProtocolClientId** field of the **CommandParameter** will be set to ms-rest.
 - The **StateId** field of the **CommandParameter** will be set to -1.
 - The **RequestSiteId** field of the **CommandParameter** will be set to the **RequestSiteId** property of the **request** parameter.
 - The **WorkbookId** field of the **CommandParameter** will be set as follows:
 - For the **OpenWorkbook** operation (described in step 1.a), it will not be set.
 - For all other operations it will be set to the stored **session identifier**, which is obtained in step 1.
1. The protocol server will first obtain a session identifier as follows:
 1. If the **OpenWorkbookInParameters** field of the **request** parameter in the **ProcessRestRequest** input is specified:
 1. The protocol server will perform the **OpenWorkbook** operation as specified in section [3.1.4.30](#).
 2. The **inParameters** for the **OpenWorkbook** operation are specified by the **OpenWorkbookInParameters** of **request** parameter in the **ProcessRestRequest** input.
 3. The **OpenWorkbookOutParameters** field of the **result** in the **ProcessRestRequestResponse** will be set to the **outParameters** field of the **OpenWorkbookResponse**.

4. The **workbookId** field of the **OpenWorkbookResponse** will be used as the **WorkbookId** field of all **CommandParameter** objects used in the steps following this one.
2. If the **OpenWorkbookInParameters** field of the **request** parameter in the **ProcessRestRequest** input is not specified:
 1. The **SessionId** field of the **request** parameter in the **ProcessRestRequest** input MUST be a valid session identifier. The protocol server will set the **WorkbookId** field of all **CommandParameter** objects used in the steps following this one to the value of the **SessionId** field of the **request** parameter in the **ProcessRestRequest** input.
2. If the **ListOfCellsToSet** field of the **request** parameter in the **ProcessRestRequest** input is specified and its length is not zero, the protocol server will then perform the **SetRangeA1** operation as specified in section [3.1.4.44](#) as follows:
 1. The **parameter** parameter of the **SetRangeA1** input will be prepared as described previously.
 2. The **setRangeRequests** parameter of the **SetRangeA1** input will be set specified as the **ListOfCellsToSet** field of the **request** parameter in the **ProcessRestRequest** input.
3. The protocol server will then perform a different operation depending on the type of the **request** parameter in the **ProcessRestRequest** input as follows:
 1. **RestRequest** (section [3.1.4.56.3.1](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestResult** (section [3.1.4.56.3.2](#)).
 2. The protocol server will not perform any additional operations in this step.
 2. **RestChartPngRequest** (section [2.2.4.54](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestChartPngResult** (section [2.2.4.55](#)).
 2. The protocol server will perform the **GetChart** operation as specified in section [3.1.4.14](#).
 3. The **parameter** parameter of the **GetChart** input will be prepared as described previously.
 4. The **getChartInformation** parameter of the **GetChart** input will be specified with **Height** as -1, **Width** as -1, and **Name** equal to the **ChartName** field of the **request** parameter in the **ProcessRestRequest** input.
 5. The **result** field of the **ProcessRestRequestResponse** will have the **ImageFormatType** field set to the **imageFormatType** field of the **GetChartResponse** and the **ImageData** field set to the **binaryChartImage** field of the **GetChartResponse**.
 3. **RestRangePngRequest** (section [2.2.4.61](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestPngResult** (section [2.2.4.58](#)).
 2. The protocol server will perform the **GetRangeImage** operation as specified in section [3.1.4.54](#).
 3. The **parameter** parameter of the **GetRangeImage** input will be prepared as described previously.

4. The **getRangeImageInformation** parameter of the **GetRangeImage** input will be specified with **RangeId** as the **RangeName** field in the **request** parameter in the **ProcessRestRequest** input. **ShowHeaders** will be set to 1 if the **Nov** field of the **request** parameter in the **ProcessRestRequest** input is true and 0 otherwise.
 5. The **result** field of the **ProcessRestRequestResponse** will have the **ImageFormatType** field set to the **imageFormatType** field of the **GetRangeImageResponse** and the **ImageData** field set to the **binaryRangeImage** field of the **GetRangeImageResponse**.
4. **RestPublishedObjectsRequest** (section [2.2.4.59](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestPublishedObjectsResult** (section [2.2.4.60](#)).
 2. The protocol server will perform the **GetPublishedObjects** operation as specified in section [3.1.4.20](#).
 3. The **parameter** parameter of the **GetPublishedObjects** input will be prepared as described previously.
 4. The **options** parameter of the **GetPublishedObjects** input will be specified as the **Options** field in the **request** parameter in the **ProcessRestRequest** input.
 5. The **result** field of the **ProcessRestRequestResponse** will have the **PublishedObjects** field set to the **publishedObjects** field of the **GetPublishedObjectsResult**.
 5. **RestRangeValuesRequest** (section [2.2.4.62](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestRangeValuesResult** (section [2.2.4.63](#)).
 2. The protocol server will perform the **GetRangeValuesA1** operation as specified in section [3.1.4.24](#).
 3. The **parameter** parameter of the **GetRangeValuesA1** input will be prepared as described previously.
 4. The **rangeRequests** parameter of the **GetRangeValuesA1** input will be specified as an **ArrayOfRangeValuesA1** containing a single **RangeValuesA1** as follows:
 1. If the **NamedObjectType** field of the **request** parameter in the **ProcessRestRequest** input is specified, then the **RangeName** field of the **RangeValuesA1** object will be set to the **RangeReference** corresponding to the **published item** with the name given by the **Name** field of the **request** parameter in the **ProcessRestRequest** input.
 2. If the **NamedObjectType** field of the **request** parameter in the **ProcessRestRequest** input is not specified, then the **RangeName** field of the **RangeValuesA1** object will be set to the **Name** field of the **request** parameter in the **ProcessRestRequest** input. The **Name** field of the **request** parameter in the **ProcessRestRequest** input MUST follow the [RangeReference](#) specification, with the following exceptions: The protocol server MUST support the **R1C1 notation**. If the value is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#), with the value of the **Id** element of the **ExcelServerMessage** set to **EcsInvalidNamedObject**.
 5. The **formatting** parameter of the **GetRangeValuesA1** input will be specified as **CellDataFormat.Formatted**, **CellDataFormat.Unformatted**, and **CellDataFormat.Compound**.

6. The **result** field of the **ProcessRestRequestResponse** will have the **Values** field set to the **Values** field of the **RangeValuesA1** object constructed previously, once the operation has been processed.
6. **RestRangeXmlRequest** (section [2.2.4.64](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestRangeXmlResult** (section [2.2.4.65](#)).
 2. The protocol server will perform the **GetRange** operation as specified in section [3.1.4.21](#).
 3. The **parameter** parameter of the **GetRange** input will be prepared as described previously and modified as follows:
 1. The **StateId** field of the **CommandParameter** will be set to the **StateId** field of the **request** parameter in the **ProcessRestRequest** input.
 2. The **VisibleSheetRangeRequest** field of the **CommandParameter** will be set as new **VisibleSheetRange** created as follows:
 1. The **FirstRow**, **FirstColumn**, **VisibleRowsRequested**, **VisibleColumnsRequested**, **VisibleFirstRowOffset**, and **VisibleFirstColumnOffset** fields will be set to 0.
 2. If the **IsPrintRequest** field of the **request** parameter in the **ProcessRestRequest** input is **false**:
 1. The **RequestLimits** field of the **CommandParameter** will be set to a **RequestLimits** object with the **CellCount** field set to the protocol server setting for the maximum number of cells returned in a REST request.
 2. If the **NamedObjectView** field of the **request** parameter in the **ProcessRestRequest** input is **true**:
 - The **ObjectName** field of the **VisibleSheetRange** will be set to the **RangeName** field of the **request** parameter in the **ProcessRestRequest** input.
 - The **DisallowAutoNOV** field of the **VisibleSheetRange** will be set to **false**.
 3. If the **NamedObjectView** field of the **request** parameter in the **ProcessRestRequest** input is **false**:
 - The **ExcelRange** field of the **VisibleSheetRange** will be set to the **RangeName** field of the **request** parameter in the **ProcessRestRequest** input.
 - The **DisallowAutoNOV** field of the **VisibleSheetRange** will be set to **true**.
 3. If the **IsPrintRequest** field of the **request** parameter in the **ProcessRestRequest** input is **false**:
 1. The **RequestLimits** field of the **CommandParameter** will be set to a **RequestLimits** object with the **CellCount** field set to the protocol server setting for the maximum number of cells that can be printed.
 2. The **ObjectName** field of the **VisibleSheetRange** will be set to the **ObjectName** field of the **request** parameter in the **ProcessRestRequest** input.

3. The **ExcelRange** field of the **VisibleSheetRange** will be set to the **RangeName** field of the **request** parameter in the **ProcessRestRequest** input.
 4. The **DisallowAutoNOV** field of the **VisibleSheetRange** will be set to the **DisallowAutoNOV** field of the **request** parameter in the **ProcessRestRequest** input.
4. The **NeedAllBorderValues** field of the **VisibleSheetRange** will be set to true.
4. The **result** field of the **ProcessRestRequestResponse** will have the **CommandResult** field set to the **result** field of the **GetRangeResponse** and the **IsChromeRtl** field set to true if the UI culture of the **session (2)** associated with the **ProcessRestRequest** operation defaults to right-to-left text ordering.
7. **RestWorkbookRequest** (section [2.2.4.66](#)):
1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestWorkbookResult** (section [2.2.4.67](#)).
 2. The protocol server will perform the **GetWorkbook** operation as specified in section [3.1.4.29](#).
 3. The **parameter** parameter of the **GetWorkbook** input will be prepared as described previously.
 4. The **workbookType** parameter of the **GetWorkbook** input will be the **WorkbookType FullSnapshot** unless the **OpenWorkbook** operation was run in step 1.a and the **OpenWorkbookOutFlags** returned included **ViewOnly**, in which case the **WorkbookType PublishedItemsSnapshot** will be used.
 5. The **result** field of the **ProcessRestRequestResponse** will have the **WorkbookBits** field set to the **bits** field of the **GetWorkbookResponse**.
8. **RestODataRequest**: (section [2.2.4.56](#))
1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestODataResult** (section [2.2.4.57](#)).
9. **RestOpenWorkbookRequest** (section [2.2.4.75](#)):
1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestOpenWorkbookResult** (section [2.2.4.76](#)).
 2. The protocol server will not perform any additional operations in this step.
 3. The **result** field of the **ProcessRestRequestResponse** will have the **SessionId** field set to the session identifier determined in step 1.
4. If the **OpenWorkbook** operation was invoked in step 1.a and the type of the **request** parameter in the **ProcessRestRequest** input is not **RestOpenWorkbookRequest**, the protocol server will perform the **CloseWorkbook** operation as specified in section [3.1.4.8](#) as follows:
1. The **parameter** parameter of the **CloseWorkbook** input will be prepared as described previously.
 2. The **forceSync** parameter of the **CloseWorkbook** input will be set to false.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<73>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **RestBiff8Unsupported**
- Any of the values supported by these operations:
 - **OpenWorkbook** (section 3.1.4.30)
 - **SetRangeA1** (section 3.1.4.44)
 - **GetChart** (section 3.1.4.14)
 - **GetRangeImage** (section 3.1.4.54)
 - **GetPublishedObjects** (section 3.1.4.20)
 - **GetRangeValuesA1** (section 3.1.4.24)
 - **GetRange** (section 3.1.4.21)
 - **GetWorkbook** (section 3.1.4.29)

3.1.4.56.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ProcessRestRequest_InputMessage	The request WSDL message for the ProcessRestRequest WSDL operation .
ExcelServiceSoap_ProcessRestRequest_OutputMessage	The response WSDL message for the ProcessRestRequest WSDL operation.

3.1.4.56.1.1 ExcelServiceSoap_ProcessRestRequest_InputMessage

The request **WSDL message** for the **ProcessRestRequest WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ProcessRestRequest
```

The **SOAP body** contains the **ProcessRestRequest** element.

3.1.4.56.1.2 ExcelServiceSoap_ProcessRestRequest_OutputMessage

The response **WSDL message** for the **ProcessRestRequest WSDL operation**.

The **SOAP body** contains the **ProcessRestRequestResponse** element.

3.1.4.56.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ProcessRestRequest	The input data for the ProcessRestRequest WSDL operation .
ProcessRestRequestResponse	The result data for the ProcessRestRequest WSDL operation .

3.1.4.56.2.1 ProcessRestRequest

The **ProcessRestRequest** element specifies the input data for the **ProcessRestRequest WSDL operation**.

```
<xs:element name="ProcessRestRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="request" type="tns2:RestRequest"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

request: A **RestRequest** as specified in section [3.1.4.56.3.1](#). MUST be present.

3.1.4.56.2.2 ProcessRestRequestResponse

The **ProcessRestRequestResponse** element specifies the result data for the **ProcessRestRequest WSDL operation**.

```
<xs:element name="ProcessRestRequestResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ProcessRestRequestResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="result" type="tns2:RestResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ProcessRestRequestResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

result: A **RestResult** as specified in section [3.1.4.56.3.2](#). MUST be present.

3.1.4.56.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
RestRequest	Base type for parameters passed to the ProcessRestRequest operation.
RestResult	Base type for the result field of ProcessRestRequestResponse .

3.1.4.56.3.1 RestRequest

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Base type for parameters passed to the **ProcessRestRequest** operation

```
<xs:complexType name="RestRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="OpenWorkbookInParameters"
type="tns2:OpenWorkbookInParameters"/>
    <xs:element xmlns:q2="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
name="RequestSiteId" type="q2:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SessionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ListOfCellsToSet"
type="tns2:ArrayOfRangeValuesA1"/>
  </xs:sequence>
</xs:complexType>
```

OpenWorkbookInParameters: Parameters to use when calling the **OpenWorkbook** operation. Mutually exclusive with **SessionId**.

RequestSiteId: Value to use for the **RequestSiteId** in the **CommandParameter** for all operations performed by the **ProcessRestRequest** operation. MUST be specified.

SessionId: A **session identifier** to use for the **ProcessRestRequest** operation. Mutually exclusive with **OpenWorkbookInParameters**.

ListOfCellsToSet: If specified and of nonzero length, then the **SetRangeA1** operation will be performed using these values.

3.1.4.56.3.2 RestResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Base type for the **result** field of **ProcessRestRequestResponse**.

```
<xs:complexType name="RestResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="OpenWorkbookOutParameters"
type="tns2:OpenWorkbookOutParameters"/>
  </xs:sequence>
</xs:complexType>
```

OpenWorkbookOutParameters: Contains the **outParameters** from the **OpenWorkbookResponse** if the **OpenWorkbook** operation was executed during the **ProcessRestRequest** operation.

3.1.4.56.4 Simple Types

None.

3.1.4.56.5 Attributes

None.

3.1.4.56.6 Groups

None.

3.1.4.56.7 Attribute Groups

None.

3.1.4.57 AutoFit

This operation adjusts the heights of **rows (2)** or the widths of **columns (2)**, in a **workbook**, if necessary, to fit the contents in those rows (2) or columns (2).

The following is the **WSDL** port type specification of the **AutoFit WSDL operation**.

```
<wsdl:operation name="AutoFit" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/AutoFit" message="tns2:ExcelServiceSoap AutoFit InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/AutoFitResponse"
    message="tns2:ExcelServiceSoap_AutoFit_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/AutoFitExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap AutoFit ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_AutoFit_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_AutoFit_OutputMessage** response message, as follows:

- If the value of **isRow** is set to be true, the protocol server sets the heights of the rows (2), specified in **autoFitRange**, to fit the largest content in those rows (2).
- If the value of **isRow** is set to be false, the protocol server sets the widths of the columns (2), specified in **autoFitRange**, to fit the largest content in those columns (2).

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<74>](#) be one of the values specified in section 2.2.2.1.

3.1.4.57.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_AutoFit_InputMessage	The request WSDL message for the AutoFit WSDL operation .
ExcelServiceSoap_AutoFit_OutputMessage	The response WSDL message for the AutoFit WSDL operation .

3.1.4.57.1.1 ExcelServiceSoap_AutoFit_InputMessage

The request **WSDL message** for the **AutoFit WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/AutoFit
```

The **SOAP body** contains the **AutoFit** element.

3.1.4.57.1.2 ExcelServiceSoap_AutoFit_OutputMessage

The response **WSDL message** for the **AutoFit WSDL operation**.

The **SOAP body** contains the **AutoFitResponse** element.

3.1.4.57.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
AutoFit	The input data for the AutoFit WSDL operation .
AutoFitResponse	The result data for the AutoFit WSDL operation .

3.1.4.57.2.1 AutoFit

The **AutoFit** element specifies the input data for the **AutoFit WSDL operation**.

```
<xs:element name="AutoFit" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="isRow" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFitRange" type="tns2:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

isRow: Specifies whether the operation is performed on **rows (2)** or **columns (2)**.

autoFitRange: The **range** of rows (2) and columns (2) whose heights and widths respectively, need to be adjusted.

3.1.4.57.2.2 AutoFitResponse

The **AutoFitResponse** element specifies the result data for the **AutoFit WSDL operation**.

```
<xs:element name="AutoFitResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="AutoFitResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:sequence>
</xs:complexType>
</xs:element>
```

AutoFitResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.57.3 Complex Types

None.

3.1.4.57.4 Simple Types

None.

3.1.4.57.5 Attributes

None.

3.1.4.57.6 Groups

None.

3.1.4.57.7 Attribute Groups

None.

3.1.4.58 BixDrill

Applies a drill operation to the **PivotTable** and displays PivotCache **hierarchy** members at the defined level. This will result in a query.

The following is the **WSDL** port type specification of the **BixDrill WSDL operation**.

```
<wsdl:operation name="BixDrill" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/BixDrill" message="tns2:ExcelServiceSoap BixDrill InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/BixDrillResponse"
    message="tns2:ExcelServiceSoap_BixDrill_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/BixDrillExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_BixDrill_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_BixDrill_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_BixDrill_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the PivotTable/PivotChart in the **pivotOperationOptions** element, and **PivotTable field** information (including how it is changing) in the **pivotFieldApplyData** element.
2. The protocol server applies the PivotTable field information to the PivotTable/PivotChart.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<75>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**
- **RetryOutOfSync**
- **UnexpectedPivotError**

3.1.4.58.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_BixDrill_InputMessage	The request WSDL message for the BixDrill WSDL operation .
ExcelServiceSoap_BixDrill_OutputMessage	The response WSDL message for the BixDrill WSDL operation .

3.1.4.58.1.1 ExcelServiceSoap_BixDrill_InputMessage

The request **WSDL message** for the **BixDrill WSDL operation**.

The **SOAP action** value is:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/BixDrill

The **SOAP body** contains the **BixDrill** element.

3.1.4.58.1.2 ExcelServiceSoap_BixDrill_OutputMessage

The response **WSDL message** for the **BixDrill WSDL operation**.

The **SOAP body** contains the **BixDrillResponse** element.

3.1.4.58.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
BixDrill	The input data for the BixDrill WSDL operation .
BixDrillResponse	The result data for the BixDrill WSDL operation .

3.1.4.58.2.1 BixDrill

The **BixDrill** element specifies the input data for the **BixDrill WSDL operation**.

```
<xs:element name="BixDrill" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

options: The **PivotTable** or **PivotChart** identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present. The **HierarchyIndex** and **LevelIndex** options MUST be present.

3.1.4.58.2.2 BixDrillResponse

The **BixDrillResponse** element specifies the result data for the **BixDrill WSDL operation**.

```
<xs:element name="BixDrillResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="BixDrillResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

BixDrillResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.58.3 Complex Types

None.

3.1.4.58.4 Simple Types

None.

3.1.4.58.5 Attributes

None.

3.1.4.58.6 Groups

None.

3.1.4.58.7 Attribute Groups

None.

3.1.4.59 GetChartData

This operation returns information about the chart elements in a **PivotChart**.

The following is the **WSDL** port type specification of the **GetChartData WSDL operation**.

```
<wsdl:operation name="GetChartData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartData"
    message="tns2:ExcelServiceSoap_GetChartData_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartDataResponse"
    message="tns2:ExcelServiceSoap_GetChartData_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetChartData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetChartData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetChartData_OutputMessage** response message, as follows:

- The protocol server returns information about the chart elements in the PivotChart in **ChartData** (section [3.1.4.59.3.1](#)) in **ChartDataResult**. The PivotChart is uniquely identified by the combination of the **imageId** and the **versionId** sent by the protocol client.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<76>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.59.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetChartData_InputMessage	The request WSDL message for the GetChartData WSDL operation .
ExcelServiceSoap_GetChartData_OutputMessage	The response WSDL message for the GetChartData WSDL operation .

3.1.4.59.1.1 ExcelServiceSoap_GetChartData_InputMessage

The request **WSDL message** for the **GetChartData WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/Webservices/ExcelServerInternalService/ExcelServiceSoap/GetChartData
```

The **SOAP body** contains the **GetChartData** element.

3.1.4.59.1.2 ExcelServiceSoap_GetChartData_OutputMessage

The response **WSDL message** for the **GetChartData WSDL operation**.

The **SOAP body** contains the **GetChartDataResponse** element.

3.1.4.59.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetChartData	The input data for the GetChartData WSDL operation .
GetChartDataResponse	The result data for the GetChartData WSDL operation .

3.1.4.59.2.1 GetChartData

The **GetChartData** element specifies the input data for the **GetChartData WSDL operation**.

```
<xs:element name="GetChartData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ewaControlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="versionId" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="chartWidth" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="chartHeight" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

</xs:element>

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

ewaControlId: A unique identifier for the **Web Part**. MUST be ignored by the protocol server.

imageId: A unique identifier for the **PivotChart**. MUST be present. MUST NOT be empty. MUST be the value specified in **CT_Image** element ([\[MS-EXSPXML3\]](#) section 2.3.33).

versionId: A unique identifier for the PivotChart version.

chartWidth: Width in pixels of PivotChart. MUST be equal to or greater than 0.

chartHeight: Height in pixels of PivotChart. MUST be equal to or greater than 0.

3.1.4.59.2.2 GetChartDataResponse

The **GetChartDataResponse** element specifies the result data for the **GetChartData** **WSDL operation**.

```
<xs:element name="GetChartDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetChartDataResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="chartElementDataResult"
type="tns2:ChartData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetChartDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

chartElementDataResult: A **ChartData** (section [3.1.4.59.3.1](#)) that contains information about the elements in the **PivotChart**. MUST be present.

3.1.4.59.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfChartElement	An array of ChartElement elements.
ArrayOfCoordXY	An array of CoordXY elements.
ChartElement	A container for information about a chart element.
ChartData	A container for information about chart elements in the PivotChart .
CoordXY	The X and Y coordinates of single pixel on the outline of the chart element.

3.1.4.59.3.1 ChartElementData

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ChartElementData** type is a container for information about chart elements of a **PivotChart**.

```
<xs:complexType name="ChartElementData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ChartElementItems"
type="tns2:ArrayOfChartElement"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ImageIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SheetIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ContentHTML" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ImagemapId" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

ChartElementItems: A list of all the chart elements as specified in the **ArrayOfChartElement** (section [3.1.4.59.3.2](#)). MUST be present.

ImageIndex: The index of the PivotChart in the worksheet.

SheetIndex: The index of the worksheet in the workbook.

Version: An identifier for the current version of the PivotChart.

ContentHTML: MUST NOT be used.

ImagemapId: MUST NOT be used.

3.1.4.59.3.2 ArrayOfChartElement

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An array of **ChartElement** elements (section [3.1.4.59.3.3](#))

```
<xs:complexType name="ArrayOfChartElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ChartElement" nillable="true"
type="tns2:ChartElement"/>
  </xs:sequence>
</xs:complexType>
```

ChartElement: A **ChartElement** element (section [3.1.4.59.3.3](#)) which contains information about a chart element in the **PivotChart**.

3.1.4.59.3.3 ChartElement

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ChartElement** type is a container for information about a chart element.

```
<xs:complexType name="ChartElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns2:ChartElementType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CoordList" type="tns2:ArrayOfCoordXY"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CategoryIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SeriesIndex" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="ValueString" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

Type: The type of chart element as specified in section [3.1.4.59.4.1](#). MUST be present.

CoordList: A list of coordinates as specified in the **ArrayOfCoordXY** (section [3.1.4.59.3.4](#)). Specifies the outline of the chart element. MUST be present.

CategoryIndex: The index of the category associated with this chart element.

SeriesIndex: The index of the series associated with this chart element.

ValueString: The **caption** of the **ChartElement** member. MUST be present.

3.1.4.59.3.4 ArrayOfCoordXY

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **CoordXY** elements (section [3.1.4.59.3.5](#)).

```

<xs:complexType name="ArrayOfCoordXY" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="CoordXY" nillable="true"
type="tns2:CoordXY"/>
  </xs:sequence>
</xs:complexType>

```

CoordXY: A **CoordXY** element (section [3.1.4.59.3.5](#)).

3.1.4.59.3.5 CoordXY

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the X and Y coordinates of one pixel on the outline of the chart element.

```

<xs:complexType name="CoordXY" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="X" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Y" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

X: The X coordinate in **pixels**.

Y: The Y coordinate in pixels.

3.1.4.59.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
ChartElementType	An enumeration of the different types of chart element.

3.1.4.59.4.1 ChartElementType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ChartElementType** simple type is an enumeration that is used to specify the type of chart element.

```
<xs:simpleType name="ChartElementType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Unsupported"/>
    <xs:enumeration value="AxisLabel"/>
    <xs:enumeration value="Legend"/>
    <xs:enumeration value="DataPoint"/>
    <xs:enumeration value="ButtonPage"/>
    <xs:enumeration value="ButtonRow"/>
    <xs:enumeration value="ButtonCol"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ChartElementType** simple type.

Value	Meaning
Unsupported	MUST NOT be used.
AxisLabel	The chart element is an axis label.
Legend	The chart element is a legend label.
DataPoint	The chart element is a data point.
ButtonPage	The chart element is a filter button based on a hierarchy of an OLAP PivotChart, or a field of a native-mode PivotChart. For the linked PivotChart, the corresponding hierarchy or field MUST be in report filter area of a PivotTable .
ButtonRow	The chart element is a filter button based on a hierarchy of an OLAP PivotChart, or a field of a native-mode PivotChart, shown as a category of the chart. For the linked PivotChart, the corresponding hierarchy or field MUST be shown in row area of a PivotTable.
ButtonCol	The chart element is a filter button based on a hierarchy of an OLAP PivotChart, or a field of a native-mode PivotChart, shown as a series of the chart. For the linked PivotChart, the hierarchy or field MUST be shown in column area of a PivotTable.

3.1.4.59.5 Attributes

None.

3.1.4.59.6 Groups

None.

3.1.4.59.7 Attribute Groups

None.

3.1.4.60 GetTimeSlicerFilterState

This operation is used to return the time slicer state and formatting information for the time slicer visual components that are part of a time slicer.

The following is the **WSDL** port type specification of the **GetTimeSlicerFilterState WSDL operation**.

```
<wsdl:operation name="GetTimeSlicerFilterState"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterState"
message="tns2:ExcelServiceSoap GetTimeSlicerFilterState InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterStateResponse"
message="tns2:ExcelServiceSoap GetTimeSlicerFilterState OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterStateExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap GetTimeSlicerFilterState ExcelServerMessageFault FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage** response message, as follows:

The protocol server returns **TimeSlicerView** element (section [3.1.4.60.3.4](#)).

3.1.4.60.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage	The request WSDL message for the GetTimeSlicerFilterState WSDL operation .
ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage	The response WSDL message for the GetTimeSlicerFilterState WSDL operation .

3.1.4.60.1.1 ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage

The request **WSDL message** for the **GetTimeSlicerFilterState WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetTimeSlicerFilterState
```

The **SOAP body** contains the **GetTimeSlicerFilterState** element.

3.1.4.60.1.2 ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage

The response **WSDL message** for the **GetTimeSlicerFilterState WSDL operation**.

The **SOAP body** contains the **GetTimeSlicerFilterStateResponse** element.

3.1.4.60.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetTimeSlicerFilterState	The input data for the GetTimeSlicerFilterState WSDL operation .
GetTimeSlicerFilterStateResponse	The result data for the GetTimeSlicerFilterState WSDL operation .

3.1.4.60.2.1 GetTimeSlicerFilterState

The **GetTimeSlicerFilterState** element specifies the input data for the **GetTimeSlicerFilterState WSDL operation**.

```
<xs:element name="GetTimeSlicerFilterState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns2:SlicerOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The time slicer identification. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerClearItems:** MUST be ignored by the protocol server.

3.1.4.60.2.2 GetTimeSlicerFilterStateResponse

The **GetTimeSlicerFilterStateResponse** element specifies the result data for the **GetTimeSlicerFilterState WSDL operation**.

```
<xs:element name="GetTimeSlicerFilterStateResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerFilterStateResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns2:TimeSlicerFormatElementList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerView"
type="tns2:TimeSlicerView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```


GetTimeSlicerFilterStateResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

formatList: A **TimeSlicerFormatElementList** as specified in section [3.1.4.60.3.1](#). MUST be present.

timeSlicerView: A **TimeSlicerView** element as specified in section [3.1.4.60.3.4](#). MUST be present.

3.1.4.60.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfTimeSlicerFormatElement	An array of TimeSlicerFormatElement elements (section 3.1.4.60.3.3).
TimeDtr	Specifies the specific date for time slicer.
TimeSlicerFormatElement	A time slicer formatting specification.
TimeSlicerFormatElementList	Contains ArrayOfTimeSlicerFormatElement element (section 3.1.4.60.3.2).
TimeSlicerView	Specifies time slicer attributes such as display properties specific to the time slicer.

3.1.4.60.3.1 TimeSlicerFormatElementList

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A time slicer formatting specification.

```
<xs:complexType name="TimeSlicerFormatElementList"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="TimeSlicerFormatElements"
type="tns2:ArrayOfTimeSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
```

TimeSlicerFormatElements: An array of **TimeSlicerFormatElement** elements (section [3.1.4.60.3.3](#)).

3.1.4.60.3.2 ArrayOfTimeSlicerFormatElement

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **TimeSlicerFormatElement** elements (section [3.1.4.60.3.3](#)). The position of the **TimeSlicerFormatElement** in the array indicates which time slicer visual component the **TimeSlicerFormatElement** is applied to. The array MUST have 9 elements. The following table lists the index in the array and the corresponding time visual component to which the **TimeSlicerFormatElement** at that index is applied.

Index	Slicer visual component
0	Equivalent to the meaning of TseType TSEWHOLETABLE specified in [MS-XLSB] section 2.5.149
1	Equivalent to the meaning of TseType TSEHEADERROW specified in [MS-XLSB] section 2.5.149
2	Equivalent to the meaning of TseType TSETIMELINESELECTIONLABEL specified in [MS-XLSB] section 2.5.149
3	Equivalent to the meaning of TseType TSETIMELINETIMELEVEL specified in [MS-XLSB] section 2.5.149
4	Equivalent to the meaning of TseType TSETIMELINEPERIODLABEL1 specified in [MS-XLSB] section 2.5.149
5	Equivalent to the meaning of TseType TSETIMELINEPERIODLABEL2 specified in [MS-XLSB] section 2.5.149
6	Equivalent to the meaning of TseType TSETIMELINESELECTEDTIMEBLOCK specified in [MS-XLSB] section 2.5.149
7	Equivalent to the meaning of TseType TSETIMELINEUNSELECTEDTIMEBLOCK specified in [MS-XLSB] section 2.5.149
8	Equivalent to the meaning of TseType TSETIMELINESELECTEDTIMEBLOCKSPACE specified in [MS-XLSB] section 2.5.149

```
<xs:complexType name="ArrayOfTimeSlicerFormatElement"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeSlicerFormatElement"
nillable="true" type="tns2:TimeSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
```

TimeSlicerFormatElement: A **TimeSlicerFormatElement** element as specified in section 3.1.4.60.3.3.

3.1.4.60.3.3 TimeSlicerFormatElement

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A time slicer formatting specification. Contains a **SlicerFormatElement** element (section [2.2.4.37](#)) and a gradient fill angle.

```
<xs:complexType name="TimeSlicerFormatElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:SlicerFormatElement">
```

```

    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="FontHeight" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="GradientAngle" type="xs:double"/>
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

FontHeight: Specifies the height in pixels of the font specified by the **SlicerFontType** attribute of the **SlicerFormatElement** element (section 2.2.4.37).

GradientAngle: Specific direction used to showing gradient color. MUST be present.

3.1.4.60.3.4 TimeSlicerView

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies time slicer attributes such as display properties specific to the time slicer.

```

<xs:complexType name="TimeSlicerView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="CaptionHeight" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SpaceWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DayWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MonthWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="QuarterWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="YearWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectionLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplaySettings" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns2:PivotFilterType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionBegin" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayStart" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MaxDate" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinDate" type="tns2:TimeDtr"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayLabel" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BetweenSelectionEnd" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BetweenSelectionBegin" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="OlapSourced" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

CaptionHeight: Height, in **pixels**, for a caption.

SpaceWidth: Width, in pixels, for a space character.

DayWidth: Width, in pixels, for showing a day.

MonthWidth: Width, in pixels, for month name.

QuarterWidth: Width, in pixels, for a quarter name.

YearWidth: Width, in pixels, for a year name.

SelectionLevel: A time unit for the time slicer selection. All values, as specified in the following table, MUST be an element in the list exactly once.

Value	Meaning
1	Year
2	Quarter
3	Month
4	Day

DisplayLevel: A time unit for each tile in the time slicer. All values, as specified in the following table, MUST be an element in the list exactly once.

Value	Meaning
1	Year
2	Quarter
3	Month
4	Day

DisplaySettings: Properties for the time slicer, as specified in the following table.

Value	Meaning
0x01	Showing time slicer header
0x02	Showing selection description
0x04	Showing scroll bar

FilterType: A **PivotFilterType** element (section [2.2.5.24](#)) specifying a type of **PivotTable filter**.

SelectionEnd: A **TimeDtr** element (section [3.1.4.60.3.5](#)) specifying the ending time of the selection.

SelectionBegin: A **TimeDtr** element (section [3.1.4.60.3.5](#)) that specifies the beginning time of the selection.

DisplayStart: A **TimeDtr** element (section [3.1.4.60.3.5](#)) that specifies the beginning time of the display.

MaxDate: A **TimeDtr** element (section [3.1.4.60.3.5](#)) that specifies the maximum date for the time slicer.

MinDate: A **TimeDtr** element (section [3.1.4.60.3.5](#)) that specifies the minimum date for the time slicer.

Width: Time slicer width in pixels. MUST be equal to or greater than 0.

Height: Time slicer height in pixels. MUST be equal to or greater than 0.

DisplayLabel: The string that will be used to show the time slicer selection.

BetweenSelectionEnd: The ending date of the time slicer selection.

BetweenSelectionBegin: The starting date of the time slicer selection.

Name: The name of the time slicer.

Caption: The **caption** of the slicer.

OlapSourced: MUST be **true** if the data source for the time slicer is **Online Analytical Processing (OLAP)**. MUST be **false** otherwise.

3.1.4.60.3.5 TimeDtr

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specify a date.

```
<xs:complexType name="TimeDtr" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Year" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Day: Specify Day. MUST be greater than or equal to 1 and less than or equal to 31.

Month: Specify month. MUST be greater than or equal to 1 and less than or equal to 12.

Year: Specify year. MUST be greater than 0.

3.1.4.60.4 Simple Types

None.

3.1.4.60.5 Attributes

None.

3.1.4.60.6 Groups

None.

3.1.4.60.7 Attribute Groups

None.

3.1.4.61 ApplyPivotValueFieldSettings

This operation is used to modify a **PivotTable** or **PivotChart** by changing the aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts. The result is a **query**.

The following is the **WSDL** port type specification of the **ApplyPivotValueFieldSettings WSDL operation**.

```
<wsdl:operation name="ApplyPivotValueFieldSettings"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
```

```

    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettings"
message="tns2:ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsResponse"
message="tns2:ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivotValueFieldSettings_ExcelServerMessageFault_FaultMess
age" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, and it sends the PivotTable or PivotChart aggregation type in the **pivotValueFieldSettingsApplyData** element.
2. The protocol server applies the aggregation type to the PivotTable or PivotChart.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<77>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.13](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**

- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.61.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage	The request WSDL message for the ApplyPivotValueFieldSettings WSDL operation .
ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage	The response WSDL message for the ApplyPivotValueFieldSettings WSDL operation .

3.1.4.61.1.1 ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage

The request **WSDL message** for the **ApplyPivotValueFieldSettings WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivotValueFieldSettings
```

The **SOAP body** contains the **ApplyPivotValueFieldSettings** element.

3.1.4.61.1.2 ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage

The response **WSDL message** for the **ApplyPivotValueFieldSettings WSDL operation**.

The **SOAP body** contains the **ApplyPivotValueFieldSettingsResponse** element.

3.1.4.61.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyPivotValueFieldSettings	The input data for the ApplyPivotValueFieldSettings WSDL operation .
ApplyPivotValueFieldSettingsResponse	The result data for the ApplyPivotValueFieldSettings WSDL operation .

3.1.4.61.2.1 ApplyPivotValueFieldSettings

The **ApplyPivotValueFieldSettings** element specifies the input data for the **ApplyPivotValueFieldSettings WSDL operation**.

```

<xs:element name="ApplyPivotValueFieldSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotValueFieldSettingsApplyData"
type="tns2:PivotValueFieldSettingsApplyData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or **PivotChart** identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present.

pivotValueFieldSettingsApplyData: The **PivotTable** or **PivotChart** aggregation type as specified in the **PivotValueFieldSettingsApplyData** section [3.1.4.61.3.1](#). MUST be present.

3.1.4.61.2.2 ApplyPivotValueFieldSettingsResponse

The **ApplyPivotValueFieldSettingsResponse** element specifies the result data for the **ApplyPivotValueFieldSettings WSDL operation**.

```

<xs:element name="ApplyPivotValueFieldSettingsResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotValueFieldSettingsResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyPivotValueFieldSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.61.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
PivotValueFieldSettingsApplyData	Specifies a PivotTable or PivotChart aggregation type.

3.1.4.61.3.1 PivotValueFieldSettingsApplyData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies a **PivotTable** or **PivotChart** aggregation type.

```

<xs:complexType name="PivotValueFieldSettingsApplyData"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>

```



```

    <xs:element minOccurs="1" maxOccurs="1" name="Aggregation" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

Aggregation: A PivotTable or **PivotChart** aggregation type as specified by the **SelectedAggregation** parameter in the **PivotValueFieldSettingsInfo** section [3.1.4.63.3.1](#). MUST be present.

3.1.4.61.4 Simple Types

None.

3.1.4.61.5 Attributes

None.

3.1.4.61.6 Groups

None.

3.1.4.61.7 Attribute Groups

None.

3.1.4.62 ApplyTimeSlicerInteractivity

This operation is used to update the state of the time slicer.

The following is the **WSDL** port type specification of the **ApplyTimeSlicerInteractivity WSDL operation**.

```

<wsdl:operation name="ApplyTimeSlicerInteractivity"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
  Service/ExcelServiceSoap/ApplyTimeSlicerInteractivity"
    message="tns2:ExcelServiceSoap ApplyTimeSlicerInteractivity InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
  Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityResponse"
    message="tns2:ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
  Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ApplyTimeSlicerInteractivity_ExcelServerMessageFault_FaultMess
  age" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage** response message, as follows:

1. The protocol client specifies the following:
 1. Information identifying the time slicer in **SlicerOptions** (section [2.2.4.41](#)).
 2. The interactive type in **TimeSlicerInteractivityType** (section [3.1.4.62.4.1](#)).

3. The time slicer setting in **TimeSlicerSettings** (section [3.1.4.62.3.3](#)).
 4. The filter state in **TimeSlicerFilterState** (section [3.1.4.62.3.1](#)) that will be applied.
 5. The filter state in **TimeSlicerBetweenFilterState** (section [3.1.4.62.3.4](#)) that will be applied for the between date filter.
2. The protocol server updates the state of the time slicer based on this information specified by the protocol client.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD<78> be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.62.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage	The request WSDL message for the ApplyTimeSlicerInteractivity WSDL operation .
ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage	The response WSDL message for the ApplyTimeSlicerInteractivity WSDL operation .

3.1.4.62.1.1 ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage

The request **WSDL message** for the **ApplyTimeSlicerInteractivity WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyTimeSlicerInteractivity
```

The **SOAP body** contains the **ApplyTimeSlicerInteractivity** element.

3.1.4.62.1.2 ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage

The response **WSDL message** for the **ApplyTimeSlicerInteractivity WSDL operation**.

The **SOAP body** contains the **ApplyTimeSlicerInteractivityResponse** element.

3.1.4.62.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyTimeSlicerInteractivity	The input data for the ApplyTimeSlicerInteractivity WSDL operation .
ApplyTimeSlicerInteractivityResponse	The result data for the ApplyTimeSlicerInteractivity WSDL operation .

3.1.4.62.2.1 ApplyTimeSlicerInteractivity

The **ApplyTimeSlicerInteractivity** element specifies the input data for the **ApplyTimeSlicerInteractivity WSDL operation**.

```
<xs:element name="ApplyTimeSlicerInteractivity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedSlicerOptions"
type="tns2:SlicerOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="timeSlicerInteractivityType"
type="tns2:TimeSlicerInteractivityType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedFilterState"
type="tns2:TimeSlicerFilterState"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedBetweenFilterState"
type="tns2:TimeSlicerBetweenFilterState"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedTimeSlicerSettings"
type="tns2:TimeSlicerSettings"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sharedSlicerOptions: The time slicer identification. MUST be present. The following extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerItemsCount:** MUST be ignored.
- **SlicerClearItems:** When set to **true**, the protocol server MUST unselect all **slicer items** in the **slicer** before applying a selection. Otherwise, MUST be ignored by the protocol server

timeSlicerInteractivityType: The interactivity type to be applied on the time slicer.

sharedFilterState: The filter state to be applied on the time slicer. MUST be ignored if **sharedTimeSlicerSettings** is **UpdateDialogSelection**.

sharedBetweenFilterState: The filter state to be applied on the time slicer. MUST be ignored if **sharedTimeSlicerSettings** is not equal to **UpdateDialogSelection**.

sharedTimeSlicerSettings: Specifies the setting to be applied on the time slicer. MUST be present.

3.1.4.62.2 ApplyTimeSlicerInteractivityResponse

The **ApplyTimeSlicerInteractivityResponse** element specifies the result data for the **ApplyTimeSlicerInteractivity** **WSDL operation**.

```
<xs:element name="ApplyTimeSlicerInteractivityResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyTimeSlicerInteractivityResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyTimeSlicerInteractivityResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.62.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
DateTimeRecord	Specify a date.
TimeSlicerBetweenFilterState	Specifies greater than or equal to the starting date and less than or equal to the ending date of time slicer.
TimeSlicerFilterState	Specify selection of time slicer.
TimeSlicerSettings	Specify a date and level used by time slicer.

3.1.4.62.3.1 TimeSlicerFilterState

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specify the selection of time slicer.

```
<xs:complexType name="TimeSlicerFilterState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionBegin"
type="tns2:DateTimeRecord"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="tns2:DateTimeRecord"/>
  </xs:sequence>
</xs:complexType>
```

SelectionBegin: The starting date of the time slicer selection.

SelectionEnd: The ending date of the time slicer selection.

3.1.4.62.3.2 DateTimeRecord

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies a date.

```
<xs:complexType name="DateTimeRecord" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Year" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Year: Specifies a year. MUST be greater than 0.

Month: Specifies a month. MUST be greater than or equal to 1 and less than or equal to 12.

Day: Specifies a Day. MUST be greater than or equal to 1 and less than or equal to 31.

3.1.4.62.3.3 TimeSlicerSettings

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies a date and level used by time slicer.

```
<xs:complexType name="TimeSlicerSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayStart" type="tns2:DateTimeRecord"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Level" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

DisplayStart: Specify the starting date showing on time slicer. MUST be present.

Level: A time unit used by the time slicer.

Value	Meaning
1	Year
2	Quarter

Value	Meaning
3	Month
4	Day

3.1.4.62.3.4 TimeSlicerBetweenFilterState

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies greater than or equal to the starting date and less than or equal to the ending date for time slicer.

```
<xs:complexType name="TimeSlicerBetweenFilterState"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionBegin" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

SelectionBegin: The starting date of the time slicer selection.

SelectionEnd: The ending date of the time slicer selection.

3.1.4.62.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
TimeSlicerInteractivityType	The interactivity type to be applied on time slicer.

3.1.4.62.4.1 TimeSlicerInteractivityType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The interactivity type to be applied on time slicer.

```
<xs:simpleType name="TimeSlicerInteractivityType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="UpdateSelection"/>
    <xs:enumeration value="UpdateDisplayLevel"/>
    <xs:enumeration value="UpdateScrollPosition"/>
    <xs:enumeration value="UpdateDialogSelection"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **TimeSlicerInteractivityType** simple type.

Value	Meaning
UpdateSelection	Specifies selection changed interactivity.
UpdateDisplayLevel	Specifies display level changed interactivity.
UpdateScrollPosition	Specifies scroll position changed interactivity.
UpdateDialogSelection	Specifies greater than or equal to the starting date and less than or equal to the ending date for time slicer interactivity.

3.1.4.62.5 Attributes

None.

3.1.4.62.6 Groups

None.

3.1.4.62.7 Attribute Groups

None.

3.1.4.63 GetPivotValueFieldSettings

This operation is used to get a list of the **PivotTable** or **PivotChart** aggregation types and the selected aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts.

The following is the **WSDL** port type specification of the **GetPivotValueFieldSettings WSDL operation**.

```
<wsdl:operation name="GetPivotValueFieldSettings"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettings"
message="tns2:ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettingsResponse"
message="tns2:ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotValueFieldSettings_ExcelServerMessageFault_FaultMessag
e" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element.

- The protocol server uses this information to get a list of PivotTable or PivotChart aggregation types and the selected type that is associated with the PivotTable or PivotChart **query**.

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD<79> be one of the values specified in section [2.2.2.1](#).

3.1.4.63.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage	The request WSDL message for the GetPivotValueFieldSettings WSDL operation .
ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage	The response WSDL message for the GetPivotValueFieldSettings WSDL operation .

3.1.4.63.1.1 ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage

The request **WSDL message** for the **GetPivotValueFieldSettings WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotValueFieldSettings
```

The **SOAP body** contains the **GetPivotValueFieldSettings** element.

3.1.4.63.1.2 ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage

The response **WSDL message** for the **GetPivotValueFieldSettings WSDL operation**.

The **SOAP body** contains the **GetPivotValueFieldSettingsResponse** element.

3.1.4.63.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetPivotValueFieldSettings	The input data for the GetPivotValueFieldSettings WSDL operation .
GetPivotValueFieldSettingsResponse	The result data for the GetPivotValueFieldSettings WSDL operation .

3.1.4.63.2.1 GetPivotValueFieldSettings

The **GetPivotValueFieldSettings** element specifies the input data for the **GetPivotValueFieldSettings** **WSDL operation**.

```
<xs:element name="GetPivotValueFieldSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or **PivotChart** identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present.

3.1.4.63.2.2 GetPivotValueFieldSettingsResponse

The **GetPivotValueFieldSettingsResponse** element specifies the result data for the **GetPivotValueFieldSettings** **WSDL operation**.

```
<xs:element name="GetPivotValueFieldSettingsResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotValueFieldSettingsResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotValueFieldSettingsInfo"
type="tns2:PivotValueFieldSettingsInfo"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotValueFieldSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

pivotValueFieldSettingsInfo: Contains a list of the **PivotTable** or **PivotChart** aggregation types and the selected aggregation type as specified in the **PivotValueFieldSettingsInfo** section [3.1.4.63.3.1](#). MUST be present.

3.1.4.63.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
PivotValueFieldSettingsInfo	Specifies a list of the PivotTable or PivotChart aggregation types and the selected aggregation type.

3.1.4.63.3.1 PivotValueFieldSettingsInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies a list of the **PivotTable** or **PivotChart** aggregation types and the selected aggregation type.

```
<xs:complexType name="PivotValueFieldSettingsInfo"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AggregationTypes" type="tns:ArrayOfInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectedAggregation" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

AggregationTypes: A list of the PivotTable or **PivotChart** aggregation types. All values, as specified in the following table, **MUST** be an element in the list exactly once.

Value	Meaning
0	Sum
1	Count
2	Average
3	Max
4	Min
5	Product
6	Count numbers
7	Standard deviation
8	Standard deviation percentage
9	Variant
10	Variant percentage

SelectedAggregation: The selected PivotTable or **PivotChart** aggregation type. **MUST** be one of the values specified in the following table.

Value	Meaning
-1	None*
0	Sum
1	Count
2	Average
3	Max
4	Min
5	Product
6	Count numbers

Value	Meaning
7	Standard deviation
8	Standard deviation percentage
9	Variant
10	Variant percentage

* A **SelectedAggregation** value of **None** (-1) specifies no selection.

3.1.4.63.4 Simple Types

None.

3.1.4.63.5 Attributes

None.

3.1.4.63.6 Groups

None.

3.1.4.63.7 Attribute Groups

None.

3.1.4.64 GetTimeSlicerStrings

This operation is used to return the strings for the time slicer visual components that are part of the time slicer.

The following is the **WSDL** port type specification of the **GetTimeSlicerStrings WSDL operation**.

```
<wsdl:operation name="GetTimeSlicerStrings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetTimeSlicerStrings"
    message="tns2:ExcelServiceSoap_GetTimeSlicerStrings_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetTimeSlicerStringsResponse"
    message="tns2:ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetTimeSlicerStringsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetTimeSlicerStrings_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetTimeSlicerStrings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage** response message, as follows:

- The protocol server returns a **TimeSlicerStringTemplates** (section [3.1.4.64.3.1](#)) in the **timeSlicerStrings** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<80>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.64.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetTimeSlicerStrings_InputMessage	The request WSDL message for the GetTimeSlicerStrings WSDL operation .
ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage	The response WSDL message for the GetTimeSlicerStrings WSDL operation .

3.1.4.64.1.1 ExcelServiceSoap_GetTimeSlicerStrings_InputMessage

The request **WSDL message** for the **GetTimeSlicerStrings WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetTimeSlicerStrings
```

The **SOAP body** contains the **GetTimeSlicerStrings** element.

3.1.4.64.1.2 ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage

The response **WSDL message** for the **GetTimeSlicerStrings WSDL operation**.

The **SOAP body** contains the **GetTimeSlicerStringsResponse** element.

3.1.4.64.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetTimeSlicerStrings	The input data for the GetTimeSlicerStrings WSDL operation .
GetTimeSlicerStringsResponse	The result data for the GetTimeSlicerStrings WSDL operation .

3.1.4.64.2.1 GetTimeSlicerStrings

The **GetTimeSlicerStrings** element specifies the input data for the **GetTimeSlicerStrings WSDL operation**.

```
<xs:element name="GetTimeSlicerStrings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.64.2.2 GetTimeSlicerStringsResponse

The **GetTimeSlicerStringsResponse** element specifies the result data for the **GetTimeSlicerStrings WSDL operation**.

```

<xs:element name="GetTimeSlicerStringsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerStringsResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerStrings"
type="tns2:TimeSlicerStringTemplates"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetTimeSlicerStringsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

timeSlicerStrings: A **TimeSlicerStringTemplates** as specified in section [3.1.4.64.3.1](#) . MUST be present.

3.1.4.64.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
TimeSlicerStringTemplates	A container for string information related to a time slicer.

3.1.4.64.3.1 TimeSlicerStringTemplates

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A container for string information related to a time slicer.

```

<xs:complexType name="TimeSlicerStringTemplates" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DayToDayYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayToDayMonth" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthYearToMonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthToMonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterYearToQuarterYear"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterToQuarterYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterToYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearToYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayYearToDayYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Day" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

```

<xs:element minOccurs="0" maxOccurs="1" name="LevelDay" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="LevelMonth" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="LevelQuarter" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="LevelYear" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="QuarterNames" type="tns2:ArrayOfString"/>
<xs:element minOccurs="0" maxOccurs="1" name="MonthNamesShort"
type="tns2:ArrayOfString"/>
<xs:element minOccurs="0" maxOccurs="1" name="MonthNames" type="tns2:ArrayOfString"/>
</xs:sequence>
</xs:complexType>

```

DayToDayYear: Description of a time period template that begins in a specific month and day, and ends in a specific month and day in the same year. The template MUST have 5 place holders in the form of {0}, {1}, {2}, {3} and {4}. {0} is a place holder for the starting month. {1} is a place holder for the starting day. {2} is a place holder for the ending month. {3} is a place holder for the ending day. {4} is a place holder for the year.

DayToDayMonth: Description of a time period template that begins in a specific month and day, and ends in a specific day in the same month and year. The template MUST have 4 place holders in the form of {0}, {1}, {2} and {3}. {0} is a place holder for the starting month. {1} is a place holder for the starting day. {2} is a place holder for the ending day. {3} is a place holder for the year.

MonthYearToMonthYear: Description of a time period template that begins in a specific month and year, and ends in a specific month and year. The template MUST have 4 place holders in the form of {0}, {1}, {2} and {3}. {0} is a place holder for the starting month. {1} is a place holder for starting year. {2} is a place holder for the ending month. {3} is a place holder for the ending year.

MonthToMonthYear: Description of a time period template that that begins in a specific month, and ends in a specific month in the same year. The template MUST have 3 place holders in the form of {0}, {1} and {2}. {0} is a place holder for the starting month. {1} is a place holder for the ending month. {2} is a place holder for the year.

MonthYear: Description of a time period template for a specific month and year. The template MUST have 2 place holders in the form of {0} and {1}. {0} is a place holder for the month. {1} is a place holder for the year.

QuarterYearToQuarterYear: Description of a time period template that begins in a specific quarter and year, and ends in specific quarter and year. The template MUST have 4 place holders in the form of {0}, {1}, {2} and {3}. {0} is a place holder for the starting quarter. {1} is a place holder for starting year. {2} is a place holder for the ending quarter. {3} is a place holder for the ending year.

QuarterToQuarterYear: Description of a time period template that begins in a specific quarter, and ends in a specific quarter in the same year. The template MUST have 3 place holders in the form of {0}, {1} and {2}. {0} is a place holder for the starting quarter. {1} is a place holder for the ending quarter. {2} is a place holder for the year.

QuarterToYear: Description of a time period template for a specific quarter and year. The template MUST have 2 place holders in the form of {0} and {1}. {0} is a place holder for the quarter. {1} is a place holder for the year.

YearToYear: Description of a time period template that begins in a specific year and ends in a specific year. The template MUST have 2 place holders in the form of {0} and {1}. {0} is a place holder for the starting year. {1} is a place holder for the ending year.

DayYearToDayYear: Description of a time period template that begins in a specific month, day and year, and ends in a specific month, day and year. The template MUST have 6 place holders in the form of {0}, {1}, {2}, {3}, {4} and {5}. {0} is a place holder for the starting month. {1} is a place holder for the starting day. {2} is a place holder for the starting year. {3} is a place holder for the ending month. {4} is a place holder for the ending day. {5} is a place holder for the ending year.

Day: Description of a time period template for specific month, day and year. The template MUST have 3 place holders in the form of {0}, {1} and {2}. {0} is a place holder for the month. {1} is a place holder for the day. {2} is a place holder for the year.

LevelDay: Description for the day level selection.

LevelMonth: Description for the month level selection.

LevelQuarter: Description for the quarter level selection.

LevelYear: Description for the year level selection.

QuarterNames: An array of the names of the quarters in the year.

MonthNamesShort: An array of the short names of the months in the year.

MonthNames: An array of the names of the months in the year.

3.1.4.64.4 Simple Types

None.

3.1.4.64.5 Attributes

None.

3.1.4.64.6 Groups

None.

3.1.4.64.7 Attribute Groups

None.

3.1.4.65 UpdateSlicer

This operation is used to update the state of the **slicer items** that are part of a **slicer**.

The following is the **WSDL** port type specification of the **UpdateSlicer WSDL operation**.

```
<wsdl:operation name="UpdateSlicer" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/UpdateSlicer"
    message="tns2:ExcelServiceSoap_UpdateSlicer_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/UpdateSlicerResponse"
    message="tns2:ExcelServiceSoap_UpdateSlicer_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/UpdateSlicerExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_UpdateSlicer_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_UpdateSlicer_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_UpdateSlicer_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the slicer in the **slicerOptions** element.
2. The protocol server updates the state of the slicer items in the slicer.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<81>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.65.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_UpdateSlicer_InputMessage	The request WSDL message for the UpdateSlicer WSDL operation .
ExcelServiceSoap_UpdateSlicer_OutputMessage	The response WSDL message for the UpdateSlicer WSDL operation .

3.1.4.65.1.1 ExcelServiceSoap_UpdateSlicer_InputMessage

The request **WSDL message** for the **UpdateSlicer WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/UpdateSlicer
```

The **SOAP body** contains the **UpdateSlicer** element.

3.1.4.65.1.2 ExcelServiceSoap_UpdateSlicer_OutputMessage

The response **WSDL message** for the **UpdateSlicer WSDL operation**.

The **SOAP body** contains the **UpdateSlicerResponse** element.

3.1.4.65.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
UpdateSlicer	The input data for the UpdateSlicer WSDL operation .
UpdateSlicerResponse	The result data for the UpdateSlicer WSDL operation .

3.1.4.65.2.1 UpdateSlicer

The **UpdateSlicer** element specifies the input data for the **UpdateSlicer WSDL operation**.

```
<xs:element name="UpdateSlicer" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns2:SlicerOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The **slicer** identification as specified in section [2.2.4.41](#). MUST be present.

3.1.4.65.2.2 UpdateSlicerResponse

The **UpdateSlicerResponse** element specifies the result data for the **UpdateSlicer WSDL operation**.

```
<xs:element name="UpdateSlicerResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateSlicerResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

UpdateSlicerResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.65.3 Complex Types

None.

3.1.4.65.4 Simple Types

None.

3.1.4.65.5 Attributes

None.

3.1.4.65.6 Groups

None.

3.1.4.65.7 Attribute Groups

None.

3.1.4.66 DdaAddBinding

Adds a new or modifies an existing **Office Web Extension** binding.

The following is the **WSDL** port type specification of the **DdaAddBinding WSDL operation**.

```
<wsdl:operation name="DdaAddBinding" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaAddBinding"
    message="tns2:ExcelServiceSoap DdaAddBinding InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaAddBindingResponse"
    message="tns2:ExcelServiceSoap_DdaAddBinding_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaAddBindingExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap DdaAddBinding ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaAddBinding_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaAddBinding_OutputMessage** response message, as follows:

1. The protocol client sends binding information for the new or existing binding.
2. The protocol server adds a binding if it does not exist or, if it does, updates the binding information and returns the new binding information.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<82>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaBindingInvalidSelection**
- **DdaBindingInvalidOperation**
- **DdaBindingUnknownType**
- **DdaBindingInvalidRef**
- **DdaBindingNamedItemNotFound**
- **DdaBindingMultipleNamedItemFound**
- **DdaBindingInvalidNamedItemForBindingType**

3.1.4.66.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaAddBinding_InputMessage	The request WSDL message for the DdaAddBinding WSDL operation .
ExcelServiceSoap_DdaAddBinding_OutputMessage	The response WSDL message for the DdaAddBinding WSDL operation .

3.1.4.66.1.1 ExcelServiceSoap_DdaAddBinding_InputMessage

The request **WSDL message** for the **DdaAddBinding WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaAddBinding
```

The **SOAP body** contains the **DdaAddBinding** element.

3.1.4.66.1.2 ExcelServiceSoap_DdaAddBinding_OutputMessage

The response **WSDL message** for the **DdaAddBinding WSDL operation**.

The **SOAP body** contains the **DdaAddBindingResponse** element.

3.1.4.66.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaAddBinding	The input data for the DdaAddBinding WSDL operation .
DdaAddBindingResponse	The result data for the DdaAddBinding WSDL operation .

3.1.4.66.2.1 DdaAddBinding

The **DdaAddBinding** element specifies the input data for the **DdaAddBinding WSDL operation**.

```
<xs:element name="DdaAddBinding" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="bindingType" type="tns2:DdaBindingType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="options"
type="tns2:DdaAddBindingOption"/>
      <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

bindingId: String that specifies the Office Web Extension defined name for a binding.

bindingType: **DdaBindingType** for the type of binding to add or modify.

options: A **DdaAddBindingOption** value.

currentSheetName: The **worksheet** name of the sheet currently visible to the user.

formula: A **range** which describes the binding's **cells**. This field MUST follow the **RangeReference** (section [2.2.5.25](#)) specification.

3.1.4.66.2 DdaAddBindingResponse

The **DdaAddBindingResponse** element specifies the result data for the **DdaAddBinding WSDL operation**.

```
<xs:element name="DdaAddBindingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaAddBindingResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binding" type="tns2:BindingMetadata"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaAddBindingResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

binding: A **BindingMetadata** item that represents the new or modified binding.

3.1.4.66.3 Complex Types

None.

3.1.4.66.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
DdaAddBindingOption	Optional behaviors when adding or modifying a binding.

3.1.4.66.4.1 DdaAddBindingOption

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Optional behaviors when adding or modifying a binding.

```
<xs:simpleType name="DdaAddBindingOption" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="FromNamedItem"/>
    <xs:enumeration value="FromNamedItem_FailOnCollision"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **DdaAddBindingOption** simple type.

Value	Meaning
None	Formula parameter specifies a range.
FromNamedItem	Formula parameter specifies an existing named item.
FromNamedItem_FailOnCollision	Formula parameter specifies an existing named item and will fail if an identically named item appears in an overlapping scope.

3.1.4.66.5 Attributes

None.

3.1.4.66.6 Groups

None.

3.1.4.66.7 Attribute Groups

None.

3.1.4.67 DdaGetAllBindings

Returns a list of **BindingMetadata** items associated with the given **Office Web Extension**.

The following is the **WSDL** port type specification of the **DdaGetAllBindings WSDL operation**.

```
<wsdl:operation name="DdaGetAllBindings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetAllBindings"
    message="tns2:ExcelServiceSoap_DdaGetAllBindings_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetAllBindingsResponse"
    message="tns2:ExcelServiceSoap_DdaGetAllBindings_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetAllBindingsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_DdaGetAllBindings_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaGetAllBindings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetAllBindings_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the Office Web Extension.
2. The protocol server returns all of the binding information associated with the Office Web Extension.

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<83>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.67.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetAllBindings_InputMessage	The request WSDL message for the DdaGetAllBindings WSDL operation .
ExcelServiceSoap_DdaGetAllBindings_OutputMessage	The response WSDL message for the DdaGetAllBindings WSDL operation.

3.1.4.67.1.1 ExcelServiceSoap_DdaGetAllBindings_InputMessage

The request **WSDL message** for the **DdaGetAllBindings WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaGetAllBindings
```

The **SOAP body** contains the **DdaGetAllBindings** element.

3.1.4.67.1.2 ExcelServiceSoap_DdaGetAllBindings_OutputMessage

The response **WSDL message** for the **DdaGetAllBindings WSDL operation**.

The **SOAP body** contains the **DdaGetAllBindingsResponse** element.

3.1.4.67.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaGetAllBindings	The input data for the DdaGetAllBindings WSDL operation .
DdaGetAllBindingsResponse	The result data for the DdaGetAllBindings WSDL operation.

3.1.4.67.2.1 DdaGetAllBindings

The **DdaGetAllBindings** element specifies the input data for the **DdaGetAllBindings WSDL operation**.

```
<xs:element name="DdaGetAllBindings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

3.1.4.67.2.2 DdaGetAllBindingsResponse

The **DdaGetAllBindingsResponse** element specifies the result data for the **DdaGetAllBindings WSDL operation**.

```

<xs:element name="DdaGetAllBindingsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetAllBindingsResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindings"
type="tns2:ArrayOfBindingMetadata"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

DdaGetAllBindingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

bindings: Unordered list of **BindingMetadata** items.

3.1.4.67.3 Complex Types

None.

3.1.4.67.4 Simple Types

None.

3.1.4.67.5 Attributes

None.

3.1.4.67.6 Groups

None.

3.1.4.67.7 Attribute Groups

None.

3.1.4.68 DdaGetBinding

Returns **BindingMetadata** for a single binding associated with an **Office Web Extension**.

The following is the **WSDL** port type specification of the **DdaGetBinding WSDL operation**.

```

<wsdl:operation name="DdaGetBinding" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">

```

```

    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBinding"
message="tns2:ExcelServiceSoap_DdaGetBinding_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingResponse"
message="tns2:ExcelServiceSoap_DdaGetBinding_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaGetBinding_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaGetBinding_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetBinding_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the Office Web Extension and a single binding name.
2. The protocol server returns the binding information with the given name if one is associated with the Office Web Extension.

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<84>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaBindingNotFound**

3.1.4.68.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetBinding_InputMessage	The request WSDL message for the DdaGetBinding WSDL operation .
ExcelServiceSoap_DdaGetBinding_OutputMessage	The response WSDL message for the DdaGetBinding WSDL operation .

3.1.4.68.1.1 ExcelServiceSoap_DdaGetBinding_InputMessage

The request **WSDL message** for the **DdaGetBinding WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/DdaGetBinding

```


The **SOAP body** contains the **DdaGetBinding** element.

3.1.4.68.1.2 ExcelServiceSoap_DdaGetBinding_OutputMessage

The response **WSDL message** for the **DdaGetBinding WSDL operation**.

The **SOAP body** contains the **DdaGetBindingResponse** element.

3.1.4.68.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaGetBinding	The input data for the DdaGetBinding WSDL operation .
DdaGetBindingResponse	The result data for the DdaGetBinding WSDL operation .

3.1.4.68.2.1 DdaGetBinding

The **DdaGetBinding** element specifies the input data for the **DdaGetBinding WSDL operation**.

```
<xs:element name="DdaGetBinding" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

bindingId: String that specifies the Office Web Extension defined name for a binding.

3.1.4.68.2.2 DdaGetBindingResponse

The **DdaGetBindingResponse** element specifies the result data for the **DdaGetBinding WSDL operation**.

```
<xs:element name="DdaGetBindingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetBindingResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binding" type="tns2:BindingMetadata"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaGetBindingResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

binding: A **BindingMetadata** item. MUST be present.

3.1.4.68.3 Complex Types

None.

3.1.4.68.4 Simple Types

None.

3.1.4.68.5 Attributes

None.

3.1.4.68.6 Groups

None.

3.1.4.68.7 Attribute Groups

None.

3.1.4.69 DdaGetBindingData

Returns **worksheet cell contents** associated with a binding and **Office Web Extension**.

The following is the **WSDL** port type specification of the **DdaGetBindingData WSDL operation**.

```
<wsdl:operation name="DdaGetBindingData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetBindingData"
    message="tns2:ExcelServiceSoap_DdaGetBindingData_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetBindingDataResponse"
    message="tns2:ExcelServiceSoap_DdaGetBindingData_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetBindingDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_DdaGetBindingData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaGetBindingData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetindingData_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension, a binding name, and an optional sub-range.
2. The protocol server returns cell contents for the binding within the given sub-range. The sub-range **MUST** be fully contained within the binding range. Each element inside the **bindingData** element **MUST** be of type **ArrayOfAnyType** and is a row of cell contents returned from the protocol server. The number of rows **MUST** be less than or equal to the number of rows requested.
3. The result can be filtered to omit values from hidden cells depending on **filterType** in the request. If **filterType** is **DdaFilterType.OnlyVisible** and the requested range contains hidden **cells** then those rows and columns **MUST NOT** be in the result.

4. The result MUST contain either all formatted values or unformatted cell values depending on **valueFormat** in the request. If **valueFormat** is **DdaValueType.Formatted** then all values returned in **bindingData** MUST be of type **string**. If **valueFormat** is **DdaValueType.Unformatted** then values returned in **bindingData** MUST be one of the following types: **boolean**, **double**, **string** or **CellError** (section [3.1.4.34.4.2](#)).

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<85>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaUnsupportedCoercionType**
- **DdaReadCoercionBindingMismatch**
- **DdaReadInvalidRowColCount**
- **DdaReadInvalidRowColOffset**
- **DdaReadBeyondDataLimits**
- **DdaBindingUnknownType**
- **DdaBindingInvalidRef**

3.1.4.69.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetBindingData_InputMessage	The request WSDL message for the DdaGetBindingData WSDL operation .
ExcelServiceSoap_DdaGetBindingData_OutputMessage	The response WSDL message for the DdaGetBindingData WSDL operation .

3.1.4.69.1.1 ExcelServiceSoap_DdaGetBindingData_InputMessage

The request **WSDL message** for the **DdaGetBindingData WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaGetBindingData
```

The **SOAP body** contains the **DdaGetBindingData** element.

3.1.4.69.1.2 ExcelServiceSoap_DdaGetBindingData_OutputMessage

The response **WSDL message** for the **DdaGetBindingData WSDL operation**.

The **SOAP body** contains the **DdaGetBindingDataResponse** element.

3.1.4.69.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaGetBindingData	The input data for the DdaGetBindingData WSDL operation .
DdaGetBindingDataResponse	The result data for the DdaGetBindingData WSDL operation .

3.1.4.69.2.1 DdaGetBindingData

The **DdaGetBindingData** element specifies the input data for the **DdaGetBindingData WSDL operation**.

```
<xs:element name="DdaGetBindingData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="coerceType" type="tns2:DdaCoerceType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns2:DdaValueType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns2:DdaFilterType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startRow" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startCol" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="rowCount" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="colCount" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: A string that is a unique ID for the **Office Web Extension**.

bindingId: A string that specifies the Office Web Extension defined name for a binding.

coerceType: A **DdaCoerceType** to apply to the **BindingData** result.

valueFormat: **DdaValueType** to specify which type of format to fetch from all cells.

filterType: **DdaFilterType** to specify from which cells data MUST be fetched.

startRow: Start row of sub-**range** to set within the binding. MUST be present.

startCol: Start column of sub-range to set within the binding. MUST be present.

rowCount: Count of rows in sub-range to set within the binding. MUST be present.

colCount: Count of columns in sub-range to set within the binding. MUST be present.

currentSheetName: The **worksheet** name of the sheet currently visible to the user.

3.1.4.69.2.2 DdaGetBindingDataResponse

The **DdaGetBindingDataResponse** element specifies the result data for the **DdaGetBindingData WSDL operation**.

```

<xs:element name="DdaGetBindingDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetBindingDataResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingData" type="tns2:BindingData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

DdaGetBindingDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

bindingData: The **worksheet cell contents** returned from the protocol server. MUST be present.

3.1.4.69.3 Complex Types

None.

3.1.4.69.4 Simple Types

None.

3.1.4.69.5 Attributes

None.

3.1.4.69.6 Groups

None.

3.1.4.69.7 Attribute Groups

None.

3.1.4.70 DdaGetSelectedData

Returns **worksheet cell contents** associated with the given **range**.

The following is the **WSDL** port type specification of the **DdaGetSelectedData WSDL operation**.

```

<wsdl:operation name="DdaGetSelectedData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedData"
message="tns2:ExcelServiceSoap_DdaGetSelectedData_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedDataResponse"
message="tns2:ExcelServiceSoap_DdaGetSelectedData_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaGetSelectedData_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaGetSelectedData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetSelectedData_OutputMessage** response message, as follows:

1. The protocol client sends the identifying the **Office Web Extension**, a range string that describes the selected range, a filter, and value format options.
2. The protocol server will parse the range string to a range on a worksheet and return the cell contents in that range. Each element inside the **selectedData** element MUST be of type **ArrayOfAnyType** and is a row of cell returned from the protocol server. The number of rows MUST be less than or equal to the number of rows requested.
3. The result can be filtered to omit values from hidden cells depending on **filterType** in the request. If **filterType** is **DdaFilterType.OnlyVisible** and the requested range contains hidden cells, then those rows and columns MUST NOT be in the result.
4. The result MUST contain either all formatted values or unformatted cell contents depending on **valueFormat** in the request. If **valueFormat** is **DdaValueType.Formatted** then all values returned in **selectedData** MUST be of type **string**. If **valueFormat** is **DdaValueType.Unformatted** then values returned in **selectedData** MUST be one of the following types: **boolean**, **double**, **string** or **CellError** (section [3.1.4.34.4.2](#)).

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<86>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaUnsupportedCoercionType**
- **DdaReadCoercionSelectionMismatch**
- **DdaReadBeyondDataLimits**

3.1.4.70.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetSelectedData_InputMessage	The request WSDL message for the DdaGetSelectedData WSDL operation .
ExcelServiceSoap_DdaGetSelectedData_OutputMessage	The response WSDL message for the DdaGetSelectedData WSDL operation .

3.1.4.70.1.1 ExcelServiceSoap_DdaGetSelectedData_InputMessage

The request **WSDL message** for the **DdaGetSelectedData WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaGetSelectedData
```

The **SOAP body** contains the **DdaGetSelectedData** element.

3.1.4.70.1.2 ExcelServiceSoap_DdaGetSelectedData_OutputMessage

The response **WSDL message** for the **DdaGetSelectedData WSDL operation**.

The **SOAP body** contains the **DdaGetSelectedDataResponse** element.

3.1.4.70.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaGetSelectedData	The input data for the DdaGetSelectedData WSDL operation .
DdaGetSelectedDataResponse	The result data for the DdaGetSelectedData WSDL operation .

3.1.4.70.2.1 DdaGetSelectedData

The **DdaGetSelectedData** element specifies the input data for the **DdaGetSelectedData WSDL operation**.

```
<xs:element name="DdaGetSelectedData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="coerceType" type="tns2:DdaCoerceType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns2:DdaValueType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns2:DdaFilterType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: A string that is a unique ID for the **Office Web Extension**.

coerceType: A **DdaCoerceType** to apply to the **BindingData** result.

valueFormat: **DdaValueType** to specify which type of format to fetch from all cells.

filterType: **DdaFilterType** to specify from which **cell contents** MUST be fetched.

currentSheetName: The **worksheet** name of the sheet currently visible to the user.

formula: A **range** from which the cell contents MUST be fetched. This field MUST follow the **RangeReference** (section [2.2.5.25](#)) specification.

3.1.4.70.2.2 DdaGetSelectedDataResponse

The **DdaGetSelectedDataResponse** element specifies the result data for the **DdaGetSelectedData WSDL operation**.

```
<xs:element name="DdaGetSelectedDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetSelectedDataResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="selectedData" type="tns2:BindingData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

DdaGetSelectedDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

selectedData: The **worksheet cell contents** returned from the protocol server. MUST be present.

3.1.4.70.3 Complex Types

None.

3.1.4.70.4 Simple Types

None.

3.1.4.70.5 Attributes

None.

3.1.4.70.6 Groups

None.

3.1.4.70.7 Attribute Groups

None.

3.1.4.71 DdaLoadSettings

Returns settings associated with the given **Office Web Extension**.

The following is the **WSDL** port type specification of the **DdaLoadSettings WSDL operation**.

```

<wsdl:operation name="DdaLoadSettings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettings"
message="tns2:ExcelServiceSoap DdaLoadSettings InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettingsResponse"
message="tns2:ExcelServiceSoap DdaLoadSettings OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaLoadSettings_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```


The protocol client sends an **ExcelServiceSoap_DdaLoadSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaLoadSettings_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension.
2. The protocol server returns the full list of settings associated with the Office Web Extension.

This operation is not a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD<87> be one of the values specified in section [2.2.2.1](#)

3.1.4.71.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaLoadSettings_InputMessage	The request WSDL message for the DdaLoadSettings WSDL operation .
ExcelServiceSoap_DdaLoadSettings_OutputMessage	The response WSDL message for the DdaLoadSettings WSDL operation.

3.1.4.71.1.1 ExcelServiceSoap_DdaLoadSettings_InputMessage

The request **WSDL message** for the **DdaLoadSettings WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaLoadSettings
```

The **SOAP body** contains the **DdaLoadSettings** element.

3.1.4.71.1.2 ExcelServiceSoap_DdaLoadSettings_OutputMessage

The response **WSDL message** for the **DdaLoadSettings WSDL operation**.

The **SOAP body** contains the **DdaLoadSettingsResponse** element.

3.1.4.71.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaLoadSettings	The input data for the DdaLoadSettings WSDL operation .
DdaLoadSettingsResponse	The result data for the DdaLoadSettings WSDL operation.

3.1.4.71.2.1 DdaLoadSettings

The **DdaLoadSettings** element specifies the input data for the **DdaLoadSettings WSDL operation**.

```
<xs:element name="DdaLoadSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

3.1.4.71.2.2 DdaLoadSettingsResponse

The **DdaLoadSettingsResponse** element specifies the result data for the **DdaLoadSettings WSDL operation**.

```
<xs:element name="DdaLoadSettingsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaLoadSettingsResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="settings" type="tns2:DdaSettings"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaLoadSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

settings: List of strings in key/value pairs associated with the given **Office Web Extension**.

3.1.4.71.3 Complex Types

None.

3.1.4.71.4 Simple Types

None.

3.1.4.71.5 Attributes

None.

3.1.4.71.6 Groups

None.

3.1.4.71.7 Attribute Groups

None.

3.1.4.72 DdaReleaseBinding

Removes the binding specified by name from the given **Office Web Extension**.

The following is the **WSDL** port type specification of the **DdaReleaseBinding WSDL operation**.

```
<wsdl:operation name="DdaReleaseBinding" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaReleaseBinding"
    message="tns2:ExcelServiceSoap_DdaReleaseBinding_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaReleaseBindingResponse"
    message="tns2:ExcelServiceSoap_DdaReleaseBinding_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaReleaseBindingExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_DdaReleaseBinding_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaReleaseBinding_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaReleaseBinding_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the Office Web Extension and a single binding name.
2. The protocol server deletes the binding from the **workbook**.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<88>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaBindingNotFound**
- **DdaBindingUnknownType**

3.1.4.72.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaReleaseBinding_InputMessage	The request WSDL message for the DdaReleaseBinding WSDL operation .
ExcelServiceSoap_DdaReleaseBinding_OutputMessage	The response WSDL message for the DdaReleaseBinding WSDL operation .

3.1.4.72.1.1 ExcelServiceSoap_DdaReleaseBinding_InputMessage

The request **WSDL message** for the **DdaReleaseBinding WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaReleaseBinding
```

The **SOAP body** contains the **DdaReleaseBinding** element.

3.1.4.72.1.2 ExcelServiceSoap_DdaReleaseBinding_OutputMessage

The response **WSDL message** for the **DdaReleaseBinding WSDL operation**.

The **SOAP body** contains the **DdaReleaseBindingResponse** element.

3.1.4.72.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaReleaseBinding	The input data for the DdaReleaseBinding WSDL operation .
DdaReleaseBindingResponse	The result data for the DdaReleaseBinding WSDL operation .

3.1.4.72.2.1 DdaReleaseBinding

The **DdaReleaseBinding** element specifies the input data for the **DdaReleaseBinding WSDL operation**.

```
<xs:element name="DdaReleaseBinding" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

bindingId: String that specifies the Office Web Extension defined name for a binding.

3.1.4.72.2.2 DdaReleaseBindingResponse

The **DdaReleaseBindingResponse** element specifies the result data for the **DdaReleaseBinding WSDL operation**.

```
<xs:element name="DdaReleaseBindingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="DdaReleaseBindingResult"
type="tns2:CommandResult"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

DdaReleaseBindingResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.72.3 Complex Types

None.

3.1.4.72.4 Simple Types

None.

3.1.4.72.5 Attributes

None.

3.1.4.72.6 Groups

None.

3.1.4.72.7 Attribute Groups

None.

3.1.4.73 DdaSaveSettings

Replaces all existing settings on the **Office Web Extension** with the given settings.

The following is the **WSDL** port type specification of the **DdaSaveSettings WSDL operation**.

```

<wsdl:operation name="DdaSaveSettings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettings"
message="tns2:ExcelServiceSoap_DdaSaveSettings_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettingsResponse"
message="tns2:ExcelServiceSoap_DdaSaveSettings_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaSaveSettings_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaSaveSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaSaveSettings_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension and a list of settings to associate with the extension.

- If **overwriteIfStale** is false, the protocol server compares the client version number with the server version number and MUST fail if they are not equal. If true, the protocol server replaces the list of settings with the given list and increments the settings version number.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<89>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- DdaStaleSettings**

3.1.4.73.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaSaveSettings_InputMessage	The request WSDL message for the DdaSaveSettings WSDL operation .
ExcelServiceSoap_DdaSaveSettings_OutputMessage	The response WSDL message for the DdaSaveSettings WSDL operation .

3.1.4.73.1.1 ExcelServiceSoap_DdaSaveSettings_InputMessage

The request **WSDL message** for the **DdaSaveSettings WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaSaveSettings
```

The **SOAP body** contains the **DdaSaveSettings** element.

3.1.4.73.1.2 ExcelServiceSoap_DdaSaveSettings_OutputMessage

The response **WSDL message** for the **DdaSaveSettings WSDL operation**.

The **SOAP body** contains the **DdaSaveSettingsResponse** element.

3.1.4.73.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaSaveSettings	The input data for the DdaSaveSettings WSDL operation .
DdaSaveSettingsResponse	The result data for the DdaSaveSettings WSDL operation .

3.1.4.73.2.1 DdaSaveSettings

The **DdaSaveSettings** element specifies the input data for the **DdaSaveSettings WSDL operation**.

```
<xs:element name="DdaSaveSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="settings" type="tns2:DdaSettings"/>
      <xs:element minOccurs="1" maxOccurs="1" name="overwriteIfStale" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

settings: List of strings in key/value pairs that replace the existing list of settings.

overwriteIfStale: If true, the client version number in the new settings is ignored; if false, this method MUST fail if the client version number is not equal to the server version number.

3.1.4.73.2 DdaSaveSettingsResponse

The **DdaSaveSettingsResponse** element specifies the result data for the **DdaSaveSettings WSDL operation**.

```
<xs:element name="DdaSaveSettingsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaSaveSettingsResult"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaSaveSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.73.3 Complex Types

None.

3.1.4.73.4 Simple Types

None.

3.1.4.73.5 Attributes

None.

3.1.4.73.6 Groups

None.

3.1.4.73.7 Attribute Groups

None.

3.1.4.74 DdaSetBindingData

Sets **worksheet cell contents** associated with a binding on the given **Office Web Extension**.

The following is the **WSDL** port type specification of the **DdaSetBindingData WSDL operation**.

```
<wsdl:operation name="DdaSetBindingData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetBindingData"
    message="tns2:ExcelServiceSoap_DdaSetBindingData_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetBindingDataResponse"
    message="tns2:ExcelServiceSoap_DdaSetBindingData_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetBindingDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_DdaSetBindingData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaSetBindingData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaSetBindingData_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension, a binding name, a matrix of cell contents, and optional location within the binding to set the cell contents.
2. The protocol server sets the cell contents within the binding range starting at the given location.
3. Each element inside the **data** element MUST be of type **ArrayOfAnyType** and be a row of worksheet **cells** sent to the protocol server. The number of rows in **data** MUST be equal to the number of rows in the specified binding element minus the value of **startRow**.
4. Each element inside each of the **ArrayOfAnyType** type nested inside **data** MUST be a single worksheet cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of columns in the specified binding minus the value of **startCol**.
5. All worksheet cells in the **data** element MUST either be empty and with the `xsi:nil` attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**. If the value is of type **string**, it MUST NOT be longer than 32767 characters. If the protocol server does not support the value, it MUST fail. If the protocol server does not support setting a value in the specified location, it MUST fail.
6. If location or the cell contents extends beyond the binding range then the operation MUST fail.
7. If any of the changed cells are hidden and the user has only view access then the operation MUST fail.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<90>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaUnsupportedCoercionType**
- **DdaWriteDataOverlap**

- **DdaWriteDataOverflow**
- **DdaWriteInvalidRowColOffset**
- **DdaWriteCoercionDataMismatch**
- **DdaWriteDataBeyondLimits**
- **DdaBindingInvalidRef**
- **DdaBindingUnknownType**

3.1.4.74.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaSetBindingData_InputMessage	The request WSDL message for the DdaSetBindingData WSDL operation .
ExcelServiceSoap_DdaSetBindingData_OutputMessage	The response WSDL message for the DdaSetBindingData WSDL operation .

3.1.4.74.1.1 ExcelServiceSoap_DdaSetBindingData_InputMessage

The request **WSDL message** for the **DdaSetBindingData WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaSetBindingData
```

The **SOAP body** contains the **DdaSetBindingData** element.

3.1.4.74.1.2 ExcelServiceSoap_DdaSetBindingData_OutputMessage

The response **WSDL message** for the **DdaSetBindingData WSDL operation**.

The **SOAP body** contains the **DdaSetBindingDataResponse** element.

3.1.4.74.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaSetBindingData	The input data for the DdaSetBindingData WSDL operation .
DdaSetBindingDataResponse	The result data for the DdaSetBindingData WSDL operation .

3.1.4.74.2.1 DdaSetBindingData

The **DdaSetBindingData** element specifies the input data for the **DdaSetBindingData WSDL operation**.

```
<xs:element name="DdaSetBindingData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startRow" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startCol" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingData" type="tns2:BindingData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

bindingId: String that specifies the Office Web Extension defined name for a binding.

startRow: Optional row to offset from the start of the binding to set **cell contents**.

startCol: Optional column to offset from the start of the binding to set cell contents.

currentSheetName: The **worksheet** name of the sheet currently visible to the user.

bindingData: The worksheet cell contents to set into the bound content. MUST be present.

3.1.4.74.2 DdaSetBindingDataResponse

The **DdaSetBindingDataResponse** element specifies the result data for the **DdaSetBindingData WSDL operation**.

```
<xs:element name="DdaSetBindingDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaSetBindingDataResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaSetBindingDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.74.3 Complex Types

None.

3.1.4.74.4 Simple Types

None.

3.1.4.74.5 Attributes

None.

3.1.4.74.6 Groups

None.

3.1.4.74.7 Attribute Groups

None.

3.1.4.75 DdaSetSelectedData

Sets **worksheet cell contents** associated with the given **range**.

The following is the **WSDL** port type specification of the **DdaSetSelectedData WSDL operation**.

```
<wsdl:operation name="DdaSetSelectedData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetSelectedData"
    message="tns2:ExcelServiceSoap DdaSetSelectedData InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetSelectedDataResponse"
    message="tns2:ExcelServiceSoap DdaSetSelectedData OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetSelectedDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap DdaSetSelectedData ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaSetSelectedData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaSetSelectedData_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension, a matrix of cell contents, and a range string that describes the selected range.
2. The protocol server parses the string to a range on a worksheet and sets the cell contents in that range.
3. Each element inside the **data** element MUST be of type **ArrayOfAnyType** and be a row of worksheet cell data sent to the protocol server. The number of rows in **data** MUST be equal to the number of rows in the specified binding element minus the value of the row index of the first cell in the selected data.
4. Each element inside each of the **ArrayOfAnyType** type nested inside **data** MUST be a single worksheet cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of columns in the specified binding minus the value of the column index of the first cell in the selected data.
5. All worksheet cells in the **data** element MUST either be empty and with the **xsi:nil** attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**. If the value is of type **string**, it MUST NOT be longer than 32767 characters. If the protocol server does not support the value, it MUST fail. If the protocol server does not support setting a value in the specified location, it MUST fail.
6. If the given cell matrix does not exactly match the selected range then this method MUST fail.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<91>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaUnsupportedCoercionType**
- **DdaWriteSelectionShapeAndDataMismatch**
- **DdaWriteDataOverlap**
- **DdaWriteDataOverflow**
- **DdaWriteInvalidRowColOffset**
- **DdaWriteCoercionDataMismatch**
- **DdaWriteCoercionSelectionMismatch**

3.1.4.75.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaSetSelectedData_InputMessage	The request WSDL message for the DdaSetSelectedData WSDL operation .
ExcelServiceSoap_DdaSetSelectedData_OutputMessage	The response WSDL message for the DdaSetSelectedData WSDL operation.

3.1.4.75.1.1 ExcelServiceSoap_DdaSetSelectedData_InputMessage

The request **WSDL message** for the **DdaSetSelectedData WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaSetSelectedData
```

The **SOAP body** contains the **DdaSetSelectedData** element.

3.1.4.75.1.2 ExcelServiceSoap_DdaSetSelectedData_OutputMessage

The response **WSDL message** for the **DdaSetSelectedData WSDL operation**.

The **SOAP body** contains the **DdaSetSelectedDataResponse** element.

3.1.4.75.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaSetSelectedData	The input data for the DdaSetSelectedData WSDL operation .

Element	Description
DdaSetSelectedDataResponse	The result data for the DdaSetSelectedData WSDL operation.

3.1.4.75.2.1 DdaSetSelectedData

The **DdaSetSelectedData** element specifies the input data for the **DdaSetSelectedData** **WSDL operation**.

```
<xs:element name="DdaSetSelectedData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingData" type="tns2:BindingData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**.

currentSheetName: The **worksheet** name of the sheet currently visible to the user.

formula: A **range** which describes the **cells** to set. This field MUST follow the **RangeReference** (section [2.2.5.25](#)) specification.

bindingData: The worksheet **cell contents** to set into the range specified by the formula parameter. MUST be present.

3.1.4.75.2.2 DdaSetSelectedDataResponse

The **DdaSetSelectedDataResponse** element specifies the result data for the **DdaSetSelectedData** **WSDL operation**.

```
<xs:element name="DdaSetSelectedDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaSetSelectedDataResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaSetSelectedDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.75.3 Complex Types

None.

3.1.4.75.4 Simple Types

None.

3.1.4.75.5 Attributes

None.

3.1.4.75.6 Groups

None.

3.1.4.75.7 Attribute Groups

None.

3.1.4.76 GetRangeEmbeddingInfo

MUST NOT be used.

The following is the **WSDL** port type specification of the **GetRangeEmbeddingInfo WSDL operation**.

```
<wsdl:operation name="GetRangeEmbeddingInfo" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeEmbeddingInfo"
    message="tns2:ExcelServiceSoap_GetRangeEmbeddingInfo_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeEmbeddingInfoResponse"
    message="tns2:ExcelServiceSoap_GetRangeEmbeddingInfo_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeEmbeddingInfoExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetRangeEmbeddingInfo_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

3.1.4.76.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetRangeEmbeddingInfo_InputMessage	The request WSDL message for the GetRangeEmbeddingInfo WSDL operation .
ExcelServiceSoap_GetRangeEmbeddingInfo_OutputMessage	The response WSDL message for the GetRangeEmbeddingInfo WSDL operation .

3.1.4.76.1.1 ExcelServiceSoap_GetRangeEmbeddingInfo_InputMessage

The request **WSDL message** for the **GetRangeEmbeddingInfo WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetRangeEmbeddingInfo
```

The **SOAP body** contains the **GetRangeEmbeddingInfo** element.

3.1.4.76.1.2 ExcelServiceSoap_GetRangeEmbeddingInfo_OutputMessage

The response **WSDL message** for the **GetRangeEmbeddingInfo WSDL operation**.

The **SOAP body** contains the **GetRangeEmbeddingInfoResponse** element.

3.1.4.76.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetRangeEmbeddingInfo	The input data for the GetRangeEmbeddingInfo WSDL operation .
GetRangeEmbeddingInfoResponse	The result data for the GetRangeEmbeddingInfo WSDL operation .

3.1.4.76.2.1 GetRangeEmbeddingInfo

The **GetRangeEmbeddingInfo** element specifies the input data for the **GetRangeEmbeddingInfo WSDL operation**.

```
<xs:element name="GetRangeEmbeddingInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="range" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: MUST NOT be used.

range: MUST NOT be used.

3.1.4.76.2.2 GetRangeEmbeddingInfoResponse

The **GetRangeEmbeddingInfoResponse** element specifies the result data for the **GetRangeEmbeddingInfo WSDL operation**.

```
<xs:element name="GetRangeEmbeddingInfoResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeEmbeddingInfoResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeInfo"
type="tns2:RangeEmbeddingInfo"/>
    </xs:sequence>
  </xs:complexType>
```

</xs:element>

GetRangeEmbeddingInfoResult: MUST NOT be used.

rangeInfo: MUST NOT be used.

3.1.4.76.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
RangeEmbeddingInfo	MUST NOT be used.

3.1.4.76.3.1 RangeEmbeddingInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

MUST NOT be used.

```
<xs:complexType name="RangeEmbeddingInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="RangeIsValid" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParsedRange" type="tns2:SheetRange"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

RangeIsValid: MUST NOT be used.

ParsedRange: MUST NOT be used.

Width: MUST NOT be used.

Height: MUST NOT be used.

3.1.4.76.4 Simple Types

None.

3.1.4.76.5 Attributes

None.

3.1.4.76.6 Groups

None.

3.1.4.76.7 Attribute Groups

None.

3.1.4.77 SaveWorkbookForEditing

This operation is used to save a **workbook** associated with an open **view session**, to the same location from which it was opened.

The following is the **WSDL** port type specification of the **SaveWorkbookForEditing WSDL operation**.

```
<wsdl:operation name="SaveWorkbookForEditing" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbookForEditing"
    message="tns2:ExcelServiceSoap_SaveWorkbookForEditing_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbookForEditingResponse"
    message="tns2:ExcelServiceSoap_SaveWorkbookForEditing_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbookForEditingExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_SaveWorkbookForEditing_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SaveWorkbookForEditing_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_SaveWorkbookForEditing_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<92>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **EditModeWorkbookCheckedOutRequired**
- **EditModeWorkbookCheckedOutToLocalDrafts**
- **EditModeCannotAcquireLockUnknownUser**
- **EditModeCannotEditNonSharePointWorkbook**
- **EditModeSessionExists**
- **ScratchPadChangesLost**
- **EditModeCannotAcquireLock**
- **NewerWorkbookExists**
- **FileOpenNotFound**
- **UnsupportedFeatureEditWarning**
- **UnsupportedFeaturesSaveCopy**

3.1.4.77.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SaveWorkbookForEditing_InputMessage	The request WSDL message for the SaveWorkbookForEditing WSDL operation .
ExcelServiceSoap_SaveWorkbookForEditing_OutputMessage	The response WSDL message for the SaveWorkbookForEditing WSDL operation .

3.1.4.77.1.1 ExcelServiceSoap_SaveWorkbookForEditing_InputMessage

The request **WSDL message** for the **SaveWorkbookForEditing WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SaveWorkbookForEditing
```

The **SOAP body** contains the **SaveWorkbookForEditing** element.

3.1.4.77.1.2 ExcelServiceSoap_SaveWorkbookForEditing_OutputMessage

The response **WSDL message** for the **SaveWorkbookForEditing WSDL operation**.

The **SOAP body** contains the **SaveWorkbookForEditingResponse** element.

3.1.4.77.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
SaveWorkbookForEditing	The input data for the SaveWorkbookForEditing WSDL operation .
SaveWorkbookForEditingResponse	The result data for the SaveWorkbookForEditing WSDL operation .

3.1.4.77.2.1 SaveWorkbookForEditing

The **SaveWorkbookForEditing** element specifies the input data for the **SaveWorkbookForEditing WSDL operation**.

```
<xs:element name="SaveWorkbookForEditing" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.77.2 SaveWorkbookForEditingResponse

The **SaveWorkbookForEditingResponse** element specifies the result data for the **SaveWorkbookForEditing** **WSDL operation**.

```
<xs:element name="SaveWorkbookForEditingResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SaveWorkbookForEditingResult"
        type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="editUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SaveWorkbookForEditingResult: A **CommandResult** as specified in section [2.2.4.21](#). **MUST** be present.

editUrl: A **URI** to a web page that provides an editing experience for the **workbook file**. Can be null.

3.1.4.77.3 Complex Types

None.

3.1.4.77.4 Simple Types

None.

3.1.4.77.5 Attributes

None.

3.1.4.77.6 Groups

None.

3.1.4.77.7 Attribute Groups

None.

3.1.4.78 ConnectAndGetPivotMenu

This operation is used to return information about a **PivotTable area**.

The following is the **WSDL** port type specification of the **ConnectAndGetPivotMenu** **WSDL operation**.

```
<wsdl:operation name="ConnectAndGetPivotMenu" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ConnectAndGetPivotMenu"
    message="tns2:ExcelServiceSoap_ConnectAndGetPivotMenu_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ConnectAndGetPivotMenuResponse"/>
```

```

message="tns2:ExcelServiceSoap_ConnectAndGetPivotMenu_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotMenuExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotMenu_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ConnectAndGetPivotMenu_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ConnectAndGetPivotMenu_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the PivotTable area in the **pivotOperationOptions** element.
2. The protocol server returns the PivotTable area information in the **pivotMenu** element.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<93>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.78.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ConnectAndGetPivotMenu_InputMessage	The request WSDL message for the ConnectAndGetPivotMenu WSDL operation .
ExcelServiceSoap_ConnectAndGetPivotMenu_OutputMessage	The response WSDL message for the ConnectAndGetPivotMenu WSDL operation .

3.1.4.78.1.1 ExcelServiceSoap_ConnectAndGetPivotMenu_InputMessage

The request **WSDL message** for the **ConnectAndGetPivotMenu WSDL operation**.

The **SOAP action** value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/ConnectAndGetPivotMenu

```

The **SOAP body** contains the **ConnectAndGetPivotMenu** element.

3.1.4.78.1.2 ExcelServiceSoap_ConnectAndGetPivotMenu_OutputMessage

The response **WSDL message** for the **ConnectAndGetPivotMenu WSDL operation**.

The **SOAP body** contains the **ConnectAndGetPivotMenuResponse** element.

3.1.4.78.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ConnectAndGetPivotMenu	The input data for the ConnectAndGetPivotMenu WSDL operation .
ConnectAndGetPivotMenuResponse	The result data for the ConnectAndGetPivotMenu WSDL operation .

3.1.4.78.2.1 ConnectAndGetPivotMenu

The **ConnectAndGetPivotMenu** element specifies the input data for the **ConnectAndGetPivotMenu WSDL operation**.

```
<xs:element name="ConnectAndGetPivotMenu" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element **MUST** be present.

pivotOperationOptions: The **PivotTable area** location, the **PivotTable** anchor information, or the **PivotChart** anchor information. This element **MUST** be present. The following behavior **MUST** extend or override the standard behavior that is specified in section [2.2.4.28](#):

- The value of the **SourceIndex** element **MUST** be greater than or equal to 0.

The **FieldId** element **MUST NOT** be present.

3.1.4.78.2.2 ConnectAndGetPivotMenuResponse

The **ConnectAndGetPivotMenuResponse** element specifies the result data for the **ConnectAndGetPivotMenu WSDL operation**.

```
<xs:element name="ConnectAndGetPivotMenuResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ConnectAndGetPivotMenuResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotMenu" type="tns2:PivotMenu"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ConnectAndGetPivotMenuResult: A **CommandResult** as specified in section [2.2.4.21](#). This element **MUST** be present.

pivotMenu: The information about the **PivotTable** or **PivotChart** anchor information as specified in section [2.2.4.101](#). This element **MUST** be present.

3.1.4.78.3 Complex Types

None.

3.1.4.78.4 Simple Types

None.

3.1.4.78.5 Attributes

None.

3.1.4.78.6 Groups

None.

3.1.4.78.7 Attribute Groups

None.

3.1.4.79 DdaAddRowsColumns

Adds the given set of data as rows or columns to a table binding.

The following is the **WSDL** port type specification of the **DdaAddRowsColumns WSDL operation**.

```
<wsdl:operation name="DdaAddRowsColumns" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaAddRowsColumns"
    message="tns2:ExcelServiceSoap_DdaAddRowsColumns_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaAddRowsColumnsResponse"
    message="tns2:ExcelServiceSoap_DdaAddRowsColumns_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaAddRowsColumnsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap DdaAddRowsColumns ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaAddRowsColumns_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaAddRowsColumns_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the **Office Web Extension**, a binding name, a Boolean value whether to add rows or columns, and a matrix of **cell contents**.
2. The protocol server appends a number of rows or columns to the table based on the provided input data, then sets the cell contents within the new rows or columns.
3. Each element inside the **data** element MUST be of type **ArrayOfAnyType** and be a row of **worksheet cells** sent to the protocol server.
4. Each element inside each of the **ArrayOfAnyType** type nested inside **data** MUST be a single worksheet cell.

- All worksheet cells in the **data** element MUST either be empty and with the `xsi:nil` attribute set to true, or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**. If the value is of type **string**, it MUST NOT be longer than 32767 characters. If the protocol server does not support the value, it MUST fail. If the protocol server does not support setting a value in the specified location, it MUST fail.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<94>](#) be one of the values specified in section 2.2.2.1 or any of the following values:

- DdaBindingNotFound**
- DdaBindingUnknownType**
- DdaBindingInvalidRef**
- DdaWriteSelectionShapeAndDataMismatch**
- DdaWriteDataOverlap**
- DdaWriteTableHasNoHeaders**

3.1.4.79.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaAddRowsColumns_InputMessage	The request WSDL message for the DdaAddRowsColumns WSDL operation .
ExcelServiceSoap_DdaAddRowsColumns_OutputMessage	The response WSDL message for the DdaAddRowsColumns WSDL operation .

3.1.4.79.1.1 ExcelServiceSoap_DdaAddRowsColumns_InputMessage

The request **WSDL message** for the **DdaAddRowsColumns WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaAddRowsColumns
```

The **SOAP body** contains the **DdaAddRowsColumns** element.

3.1.4.79.1.2 ExcelServiceSoap_DdaAddRowsColumns_OutputMessage

The response **WSDL message** for the **DdaAddRowsColumns WSDL operation**.

The **SOAP body** contains the **DdaAddRowsColumnsResponse** element.

3.1.4.79.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaAddRowsColumns	The input data for the DdaAddRowsColumns WSDL operation .
DdaAddRowsColumnsResponse	The result data for the DdaAddRowsColumns WSDL operation .

3.1.4.79.2.1 DdaAddRowsColumns

The **DdaAddRowsColumns** element specifies the input data for the **DdaAddRowsColumns WSDL operation**.

```
<xs:element name="DdaAddRowsColumns" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="isRow" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingData" type="tns2:BindingData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**. MUST be present.

bindingId: String that specifies the Office Web Extension defined name for a binding. MUST be present.

isRow: Boolean value set to true if rows need to be appended or false if columns need to be appended. MUST be present.

currentSheetName: The **worksheet** name of the sheet currently visible to the user.

bindingData: The worksheet **cell contents** to set into the bound content. MUST be present.

3.1.4.79.2.2 DdaAddRowsColumnsResponse

The **DdaAddRowsColumnsResponse** element specifies the result data for the **DdaAddRowsColumns WSDL operation**.

```
<xs:element name="DdaAddRowsColumnsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaAddRowsColumnsResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaAddRowsColumnsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.79.3 Complex Types

None.

3.1.4.79.4 Simple Types

None.

3.1.4.79.5 Attributes

None.

3.1.4.79.6 Groups

None.

3.1.4.79.7 Attribute Groups

None.

3.1.4.80 DdaDeleteAllDataValues

Removes all non-header data from the given table binding.

The following is the **WSDL** port type specification of the **DdaDeleteAllDataValues WSDL operation**.

```
<wsdl:operation name="DdaDeleteAllDataValues" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaDeleteAllDataValues"
    message="tns2:ExcelServiceSoap_DdaDeleteAllDataValues_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaDeleteAllDataValuesResponse"
    message="tns2:ExcelServiceSoap_DdaDeleteAllDataValues_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaDeleteAllDataValuesExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_DdaDeleteAllDataValues_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaDeleteAllDataValues_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaDeleteAllDataValues_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the **Office Web Extension** and a binding name.
2. The protocol server deletes all non-header rows from the table.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<95>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DdaBindingNotFound**

- **DdaBindingUnknownType**
- **DdaBindingInvalidRef**
- **DdaWriteDataOverlap**

3.1.4.80.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaDeleteAllDataValues_InputMessage	The request WSDL message for the DdaDeleteAllDataValues WSDL operation .
ExcelServiceSoap_DdaDeleteAllDataValues_OutputMessage	The response WSDL message for the DdaDeleteAllDataValues WSDL operation .

3.1.4.80.1.1 ExcelServiceSoap_DdaDeleteAllDataValues_InputMessage

The request **WSDL message** for the **DdaDeleteAllDataValues WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaDeleteAllDataValues
```

The **SOAP body** contains the **DdaDeleteAllDataValues** element.

3.1.4.80.1.2 ExcelServiceSoap_DdaDeleteAllDataValues_OutputMessage

The response **WSDL message** for the **DdaDeleteAllDataValues WSDL operation**.

The **SOAP body** contains the **DdaDeleteAllDataValuesResponse** element.

3.1.4.80.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
DdaDeleteAllDataValues	The input data for the DdaDeleteAllDataValues WSDL operation .
DdaDeleteAllDataValuesResponse	The result data for the DdaDeleteAllDataValues WSDL operation .

3.1.4.80.2.1 DdaDeleteAllDataValues

The **DdaDeleteAllDataValues** element specifies the input data for the **DdaDeleteAllDataValues WSDL operation**.

```
<xs:element name="DdaDeleteAllDataValues" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the **Office Web Extension**. MUST be present.

bindingId: String that specifies the Office Web Extension defined name for a binding. MUST be present.

currentSheetName: The **worksheet** name of the sheet currently visible to the user.

3.1.4.80.2.2 DdaDeleteAllDataValuesResponse

The **DdaDeleteAllDataValuesResponse** element specifies the result data for the **DdaDeleteAllDataValues WSDL operation**.

```

<xs:element name="DdaDeleteAllDataValuesResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaDeleteAllDataValuesResult"
        type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

DdaDeleteAllDataValuesResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

3.1.4.80.3 Complex Types

None.

3.1.4.80.4 Simple Types

None.

3.1.4.80.5 Attributes

None.

3.1.4.80.6 Groups

None.

3.1.4.80.7 Attribute Groups

None.

3.1.4.81 EnsureWorkbookModel

Loads a workbook data model and returns information about the model.

The following is the **WSDL** port type specification of the **EnsureWorkbookModel WSDL operation**.

```
<wsdl:operation name="EnsureWorkbookModel" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/EnsureWorkbookModel"
    message="tns2:ExcelServiceSoap_EnsureWorkbookModel_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/EnsureWorkbookModelResponse"
    message="tns2:ExcelServiceSoap_EnsureWorkbookModel_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/EnsureWorkbookModelExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_EnsureWorkbookModel_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_EnsureWorkbookModel_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_EnsureWorkbookModel_OutputMessage** response message, as follows:

1. The protocol server loads the workbook data model and returns information about the data model in the **dataSource**, **catalog**, **sessionTimeout** and **version** elements in **EnsureWorkbookModelResponse**.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<96>](#) be one of the values specified in section 2.2.2.1.

3.1.4.81.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_EnsureWorkbookModel_InputMessage	The request WSDL message for the EnsureWorkbookModel WSDL operation .
ExcelServiceSoap_EnsureWorkbookModel_OutputMessage	The response WSDL message for the EnsureWorkbookModel WSDL operation.

3.1.4.81.1.1 ExcelServiceSoap_EnsureWorkbookModel_InputMessage

The request **WSDL message** for the **EnsureWorkbookModel WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/EnsureWorkbookModel
```

The **SOAP body** contains the **EnsureWorkbookModel** element.

3.1.4.81.1.2 ExcelServiceSoap_EnsureWorkbookModel_OutputMessage

The response **WSDL message** for the **EnsureWorkbookModel WSDL operation**.

The **SOAP body** contains the **EnsureWorkbookModelResponse** element.

3.1.4.81.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
EnsureWorkbookModel	The input data for the EnsureWorkbookModel WSDL operation .
EnsureWorkbookModelResponse	The result data for the EnsureWorkbookModel WSDL operation .

3.1.4.81.2.1 EnsureWorkbookModel

The **EnsureWorkbookModel** element specifies the input data for the **EnsureWorkbookModel WSDL operation**.

```
<xs:element name="EnsureWorkbookModel" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

3.1.4.81.2.2 EnsureWorkbookModelResponse

The **EnsureWorkbookModelResponse** element specifies the result data for the **EnsureWorkbookModel WSDL operation**.

```
<xs:element name="EnsureWorkbookModelResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="EnsureWorkbookModelResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="catalog" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="sessionTimeout" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

EnsureWorkbookModelResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

dataSource: The server name where the data model was loaded.

catalog: The database on the server where the data model was loaded.

sessionTimeout: Session timeout as specified in section [3.1.2.1](#).

version: Version of the data model.

3.1.4.81.3 Complex Types

None.

3.1.4.81.4 Simple Types

None.

3.1.4.81.5 Attributes

None.

3.1.4.81.6 Groups

None.

3.1.4.81.7 Attribute Groups

None.

3.1.4.82 ValidatePrint

Verifies that the print options information specified by the protocol client can be used to generate a print-friendly view of the **workbook**'s contents. In the event that validation fails, the protocol server will attempt to modify the print options so that a print-friendly view can be generated or the protocol server will return an error.

The following is the **WSDL** port type specification of the **ValidatePrint WSDL operation**.

```
<wsdl:operation name="ValidatePrint" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ValidatePrint"
    message="tns2:ExcelServiceSoap_ValidatePrint_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ValidatePrintResponse"
    message="tns2:ExcelServiceSoap ValidatePrint OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ValidatePrintExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap ValidatePrint ExcelServerMessageFault FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ValidatePrint_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ValidatePrint_OutputMessage** response message, as follows:

1. The protocol client sends print options information that identifies which part(s) of the workbook contents will be printed. The protocol client sets the values of the various print options as follows:

1. The protocol client only specifies the **UsedRange** field of the input message if ALL of the following are **true**:
 1. the current **session (2)** is in **named object view** mode;
 2. the current active **named object** is NOT a chart;

If all of the above are **true**, the **UsedRange** field of the input message is set to the **reference (2)** of the currently active **named range**.
 2. The protocol client only specifies the **SelectedRange** field of the input message if all of the following are **true**:
 1. the current session (2) is NOT in named object view mode and the **active sheet** is a **worksheet**;
 2. no chart or image is currently **selected**;
 3. The protocol client ONLY specifies the **ObjectId** field of the input message if any of the following are **true**:
 1. the current session (2) is NOT in named object view mode and the active sheet is a **chart sheet**;
 2. the current session (2) is in named object view mode and the current active named object is a chart;
 4. The protocol client ONLY specifies the **SheetName** field of the input message if all of the following are **true**:
 1. the current active sheet is NOT a chart sheet;
 2. if the current session (2) is in named object view mode, the current active named object is NOT a chart;
 5. The protocol client sets the **UsedRangeTooBig** field to **false**;
 6. The protocol client sets the **Type**, **SessionId**, **Title** and **UseSelection** fields as specified in section [3.1.4.82.3.1](#);
2. The protocol server validates the values specified in the print options as follows:
 1. If the protocol client does NOT specify the **UsedRange** field in the input message:
 1. If the protocol client specifies the **SheetName** field in the input message, the protocol server determines the actual used range of the sheet identified by the **SheetName** field and sets the value of the **UsedRange** field of the output message to the reference (2) of the computed used range;
 2. If the protocol client does NOT specify the **SheetName** field in the input message, the protocol server assigns a default value to the **UsedRange** field of the output message, as specified by the protocol server settings;
 2. If the protocol client specifies the **SelectedRange** field in the input message:
 1. If the protocol client does NOT specify the **UsedRange** field in the input message, the protocol server computes the used range as described above. Otherwise, the protocol server uses the **range** represented by the **UsedRange** specified in the input message as the used range;

2. If the range represented by the **SelectedRange** field in the input message is NOT completely bounded by the used range computed by the protocol server (as described above), the protocol server modifies the **SelectedRange** field in the output message such that it represents a range that is completely bounded by the used range computed by the protocol server;
3. If the number of **cells** in the range represented by the modified **SelectedRange** field of the output message exceeds the maximum number of cells that the protocol server supports for printing, the protocol server sets the **Id** element of the **ExcelServerMessage** to **EwrUsedRangeTooBig** and returns a SOAP fault as specified in section 2.2.2;
3. The protocol server sets the **UsedRangeTooBig** field to **true** if any of the following are **true**, otherwise the protocol server sets the **UsedRangeTooBig** to **false**:
 1. The protocol client specified the **UsedRange** field in the input message and the number of cells in the range represented by the **UsedRange** field in the input message is exceeds the maximum number of cells that the protocol server supports for printing;
 2. The protocol client did NOT specify the **UsedRange** field in the input message, and the number of cells in the used range computed by the protocol (as described above) exceeds the maximum number of cells that the protocol server supports for printing;
4. All other values of the **printOptions** field of the input message are returned unmodified in the **outPrintOptions** field of the output message;

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD<97> be one of the values specified in section 2.2.2.1 or any of the following values:

- **EwrPrintSelectionTooBig**

3.1.4.82.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ValidatePrint_InputMessage	The request WSDL message for the ValidatePrint WSDL operation .
ExcelServiceSoap_ValidatePrint_OutputMessage	The response WSDL message for the ValidatePrint WSDL operation .

3.1.4.82.1.1 ExcelServiceSoap_ValidatePrint_InputMessage

The request **WSDL message** for the **ValidatePrint WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ValidatePrint
```

The **SOAP body** contains the **ValidatePrint** element.

3.1.4.82.1.2 ExcelServiceSoap_ValidatePrint_OutputMessage

The response **WSDL message** for the **ValidatePrint WSDL operation**.

The **SOAP body** contains the **ValidatePrintResponse** element.

3.1.4.82.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ValidatePrint	The input data for the ValidatePrint WSDL operation .
ValidatePrintResponse	The result data for the ValidatePrint WSDL operation .

3.1.4.82.2.1 ValidatePrint

The **ValidatePrint** element specifies the input data for the **ValidatePrint WSDL operation**.

```
<xs:element name="ValidatePrint" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="printOptions" type="tns2:PrintOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

printOptions: A set of options that identify which part(s) of the **workbook**'s contents will be printed as described in section [3.1.4.82.3.1](#).

3.1.4.82.2.2 ValidatePrintResponse

The **ValidatePrintResponse** element specifies the result data for the **ValidatePrint WSDL operation**.

```
<xs:element name="ValidatePrintResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ValidatePrintResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="outPrintOptions"
type="tns2:PrintOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ValidatePrintResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

outPrintOptions: A set of options that identify which part(s) of the **workbook**'s contents will be printed, as specified in section [3.1.4.82.3.1](#). The values of these options are validated as described in section [3.1.4.82.2.1](#).

3.1.4.82.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
PrintOptions	A set of options that identify which part(s) of a workbook's contents will be printed.

3.1.4.82.3.1 PrintOptions

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A set of options that identify which part(s) of a **workbook's** contents will be printed.

```
<xs:complexType name="PrintOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SessionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Title" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ObjectId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectedRange" type="tns2:SheetRange"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UsedRange" type="tns2:SheetRange"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UseSelection" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UsedRangeTooBig" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

Type: The type of object that will be printed, as specified in the table below:

Value	Object Type
0	Chart sheet
1	Named object
2	Range

This element **MUST** be present.

SessionId: The **session identifier** of the current **session (2)**.

Title: The title of the control (for example, a browser window) which will display the print view of the workbook's contents. This element **MUST** be present.

SheetName: The name of the **sheet** containing the range which will be printed.

ObjectId: The identifier of the named object or chart sheet which will be printed.

SelectedRange: The currently **selected** range.

UsedRange: Either the range of the currently active **named range** or the used range of the specified **worksheet**.

UseSelection: **MUST** not be used.

UsedRangeTooBig: Indicates whether the number of cells in the range which will be printed exceeds the maximum number of cells that the protocol server supports for printing.

3.1.4.82.4 Simple Types

None.

3.1.4.82.5 Attributes

None.

3.1.4.82.6 Groups

None.

3.1.4.82.7 Attribute Groups

None.

3.1.4.83 ApplyToRange

Performs different operations on a specified **range** based on the value of the **id** parameter.

The following is the **WSDL** port type specification of the **ApplyToRange WSDL operation**.

```
<wsdl:operation name="ApplyToRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyToRange"
    message="tns2:ExcelServiceSoap_ApplyToRange_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyToRangeResponse"
    message="tns2:ExcelServiceSoap_ApplyToRange_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyToRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_ApplyToRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyToRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyToRange_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the operation that will to be performed in the **id** parameter and the range to which the operation will be applied to as specified by the **range** parameter.
2. Based on the operation the protocol client requested:
 1. If the protocol client requested the **merge** operation, the protocol server creates a **merged cell** from the **cells** contained in the specified range.
 2. If the protocol client requested the **clear** operation, the protocol server deletes the **cell contents** of the cells in the specified range.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<98>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **CannotEditPivotTable**
- **CannotMergeCellsInTable**
- **MergeCellsLoseData**

3.1.4.83.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyToRange_InputMessage	The request WSDL message for the ApplyToRange WSDL operation .
ExcelServiceSoap_ApplyToRange_OutputMessage	The response WSDL message for the ApplyToRange WSDL operation .

3.1.4.83.1.1 ExcelServiceSoap_ApplyToRange_InputMessage

The request **WSDL message** for the **ApplyToRange WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyToRange
```

The **SOAP body** contains the **ApplyToRange** element.

3.1.4.83.1.2 ExcelServiceSoap_ApplyToRange_OutputMessage

The response **WSDL message** for the **ApplyToRange WSDL operation**.

The **SOAP body** contains the **ApplyToRangeResponse** element.

3.1.4.83.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
ApplyToRange	The input data for the ApplyToRange WSDL operation .
ApplyToRangeResponse	The result data for the ApplyToRange WSDL operation .

3.1.4.83.2.1 ApplyToRange

The **ApplyToRange** element specifies the input data for the **ApplyToRange WSDL operation**.

```

<xs:element name="ApplyToRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="id" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="range" type="tns2:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

id: The identifier of the requested operation, as specified in the table below:

Value	Operation
1	Clear cells
2	Merge cells

range: The **range** to which to apply the operation. This element MUST be present.

3.1.4.83.2 ApplyToRangeResponse

The **ApplyToRangeResponse** element specifies the result data for the **ApplyToRange WSDL operation**.

```

<xs:element name="ApplyToRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyToRangeResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyToRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

3.1.4.83.3 Complex Types

None.

3.1.4.83.4 Simple Types

None.

3.1.4.83.5 Attributes

None.

3.1.4.83.6 Groups

None.

3.1.4.83.7 Attribute Groups

None.

3.1.4.84 GetFunctionList

Returns a list of all the **functions** that are available to the users in the current **session (2)**.

The following is the **WSDL** port type specification of the **GetFunctionList WSDL operation**.

```
<wsdl:operation name="GetFunctionList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetFunctionList"
    message="tns2:ExcelServiceSoap_GetFunctionList_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetFunctionListResponse"
    message="tns2:ExcelServiceSoap_GetFunctionList_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetFunctionListExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetFunctionList_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetFunctionList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetFunctionList_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the current session (2).
2. The protocol server returns a list of all available built-in functions in the **functionInfos** element. If **user-defined functions (UDFs)** are enabled, as specified by the protocol server settings, the list will also include all available user-defined functions (UDFs).

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<99>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **OperationNotSupportedInViewOnly**

3.1.4.84.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetFunctionList_InputMessage	The request WSDL message for the GetFunctionList WSDL operation .
ExcelServiceSoap_GetFunctionList_OutputMessage	The response WSDL message for the GetFunctionList WSDL operation.

3.1.4.84.1.1 ExcelServiceSoap_GetFunctionList_InputMessage

The request **WSDL message** for the **GetFunctionList WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetFunctionList
```

The **SOAP body** contains the **GetFunctionList** element.

3.1.4.84.1.2 ExcelServiceSoap_GetFunctionList_OutputMessage

The response **WSDL message** for the **GetFunctionList WSDL operation**.

The **SOAP body** contains the **GetFunctionListResponse** element.

3.1.4.84.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetFunctionList	The input data for the GetFunctionList WSDL operation .
GetFunctionListResponse	The result data for the GetFunctionList WSDL operation .

3.1.4.84.2.1 GetFunctionList

The **GetFunctionList** element specifies the input data for the **GetFunctionList WSDL operation**.

```
<xs:element name="GetFunctionList" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

3.1.4.84.2.2 GetFunctionListResponse

The **GetFunctionListResponse** element specifies the result data for the **GetFunctionList WSDL operation**.

```
<xs:element name="GetFunctionListResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="GetFunctionListResult" type="tns2:CommandResult"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="functionInfos" type="tns2:ArrayOfFunctionInfo"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

GetFunctionListResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

functionInfos: The list of available **functions**, as specified in section [3.1.4.84.3.1](#).

3.1.4.84.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfFunctionInfo	An array of FunctionInfo elements (section 3.1.4.84.3.2).
FunctionInfo	Contains information about a function available to the user, as specified in section 3.1.4.84.3.2 .

3.1.4.84.3.1 ArrayOfFunctionInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **FunctionInfo** elements (section [3.1.4.84.3.2](#)).

```
<xs:complexType name="ArrayOfFunctionInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="FunctionInfo" nillable="true"
type="tns2:FunctionInfo"/>
  </xs:sequence>
</xs:complexType>
```

FunctionInfo: A **FunctionInfo** element as specified in section [3.1.4.84.3.2](#).

3.1.4.84.3.2 FunctionInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **FunctionInfo** complex type contains information about a **function** which is available to the user.

```
<xs:complexType name="FunctionInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="NameData" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="NameUI" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Help" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Params" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="GroupUI" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsCompatibility" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HelpId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsCommonlyUsed" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

NameData: The name of the function, in the language of the **data culture** (or **fallback data culture**) of the current **session (2)**. This element MUST be present.

NameUI: The name of the function, in the language of the **UI culture** (or **fallback UI culture**) of the current session (2). This element **MUST** be present.

Help: A description of the computation that the function performs, in the language of the UI culture (or fallback UI culture). This element **MUST** be present.

Params: A list of the parameters that the function accepts, in the order that they appear in the function definition. The list is formatted following the formatting style of the data culture (or fallback data culture) of the current session (2). This element **MUST** be present.

GroupUI: The name of the category that the function belongs to, in the language of the UI culture (or the fallback UI culture). For more information about function categories, see [\[MSFT-ExcelFunctions\]](#).

IsCompatibility: Indicates whether the function belongs to a set of functions which have been replaced with newer, more accurate functions. For more information about compatibility functions, see [\[MSFT-CompatFunctions\]](#).

HelpId: An identifier denoting the help content for this function. This element **MUST** be present.

IsCommonlyUsed: Indicates whether the function belongs to a set of commonly used functions, as determined by the protocol server.

3.1.4.84.4 Simple Types

None.

3.1.4.84.5 Attributes

None.

3.1.4.84.6 Groups

None.

3.1.4.84.7 Attribute Groups

None.

3.1.4.85 GetWorkbookConnections

Returns a list of names of **data connection (2)** in the workbook.

The following is the **WSDL** port type specification of the **GetWorkbookConnections WSDL operation**.

```
<wsdl:operation name="GetWorkbookConnections" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbookConnections"
    message="tns2:ExcelServiceSoap_GetWorkbookConnections_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbookConnectionsResponse"
    message="tns2:ExcelServiceSoap_GetWorkbookConnections_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbookConnectionsExcelServerMessageFault"
    name="ExcelServerMessageFault"/>
```

```
message="tns2:ExcelServiceSoap_GetWorkbookConnections_ExcelServerMessageFault_FaultMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetWorkbookConnections_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetWorkbookConnections_OutputMessage** response message, as follows:

- The protocol server returns data connection (2) names in the **connections** elements.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<100>](#) be one of the values specified in section 2.2.2.1

3.1.4.85.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetWorkbookConnections_InputMessage	The request WSDL message for the GetWorkbookConnections WSDL operation .
ExcelServiceSoap_GetWorkbookConnections_OutputMessage	The response WSDL message for the GetWorkbookConnections WSDL operation .

3.1.4.85.1.1 ExcelServiceSoap_GetWorkbookConnections_InputMessage

The request **WSDL message** for the **GetWorkbookConnections WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetWorkbookConnections
```

The **SOAP body** contains the **GetWorkbookConnections** element.

3.1.4.85.1.2 ExcelServiceSoap_GetWorkbookConnections_OutputMessage

The response **WSDL message** for the **GetWorkbookConnections WSDL operation**.

The **SOAP body** contains the **GetWorkbookConnectionsResponse** element.

3.1.4.85.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetWorkbookConnections	The input data for the GetWorkbookConnections WSDL operation .
GetWorkbookConnectionsResponse	The result data for the GetWorkbookConnections WSDL operation .

3.1.4.85.2.1 GetWorkbookConnections

The **GetWorkbookConnections** element specifies the input data for the **GetWorkbookConnections WSDL operation**.

```
<xs:element name="GetWorkbookConnections" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

3.1.4.85.2.2 GetWorkbookConnectionsResponse

The **GetWorkbookConnectionsResponse** element specifies the result data for the **GetWorkbookConnections WSDL operation**.

```
<xs:element name="GetWorkbookConnectionsResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetWorkbookConnectionsResult"
        type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="connections" type="tns2:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetWorkbookConnectionsResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

connections: List of **data connection (2)** names.

3.1.4.85.3 Complex Types

None.

3.1.4.85.4 Simple Types

None.

3.1.4.85.5 Attributes

None.

3.1.4.85.6 Groups

None.

3.1.4.85.7 Attribute Groups

None.

3.1.4.86 PasteRange

Applies the **cell contents**, **cell values** or **cell formatting** of the **cells** contained in a specified **source range** to the cells contained in a specified **destination** range, after the user has performed a **cut** or **copy** operation.

The following is the **WSDL** port type specification of the **PasteRange WSDL operation**.

```
<wsdl:operation name="PasteRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/PasteRange" message="tns2:ExcelServiceSoap_PasteRange_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/PasteRangeResponse"
    message="tns2:ExcelServiceSoap_PasteRange_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/PasteRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_PasteRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_PasteRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_PasteRange_OutputMessage** response message, as follows:

1. The protocol client sends information identifying whether the user performed a **cut** or a **copy** operation prior to the **PasteRange** operation and which part of the content in the **source** range will be applied to the **destination** range.
2. If the range specified in the **destination** field of the input message does NOT have the same number of **columns (2)** or **rows (2)** as the range specified in the **source** field of the input message, the protocol server modifies the **destination** range such that it contains the same number of columns (2) and rows (2) as the **source** range, but does NOT change the **reference** of the top-left cell of the **destination** range (top-right cell, respectively, if the **active sheet** is in **right-to-left reading order**)
3. The protocol server applies the content of the cells in the **source** range to the cells in the modified **destination** range as follows:
 1. If the **Copy** flag of the **types** field in the input message is set:
 1. If the **Paste** flag of the **types** field in the input message is set, the protocol server applies the cell contents and the cell formatting of the cells in the **source** range to the cells in the **destination** range;
 2. If the **Values** flag of the **types** field in the input message is set, the protocol server applies the only cell values of the cells in the **source** range to the cells in the **destination** range;
 3. If the **Formatting** flag of the **types** field in the input message is set, the protocol server applies only the cell formatting of the cells in the **source** range to the cells in the **destination** range;
 4. If the **Formulas** flag of the **types** field in the input message is set, the protocol server applies only the cell contents (that is, excluding cell formatting) of the cells in the **source** range to the cells in the **destination** range;

2. If the **Cut** flag of the **types** field in the input message is set:
 1. If the **Paste** flag of the **types** field in the input message is set, the protocol server applies the cell contents and the cell formatting of the cells in the **source** range to the cells in the **destination** range. In addition to that, the protocol server removes the cell contents and the cell formatting from the cells in the **source** range;
 2. If the **Values, Formatting** or **Formulas** flag is set in the **types** field of the input message, the protocol server takes no action;

Note, that in the process described above, the range of cells whose contents get modified might be different than the range specified in the **destination** field of the input message.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<101>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **FormulaEditingNotEnabled**
- **SetRangeFailure**
- **ObjectTypeNotSupported**
- **InvalidSheetName**
- **RangeParseError**
- **SpecifiedRangeNotFound**
- **RangeDefinitionError**
- **DiscontiguousRangeNotSupported**
- **RangeRequestAreaExceeded**
- **SheetRangeMismatch**
- **OperationNotSupportedInViewOnly**

3.1.4.86.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_PasteRange_InputMessage	The request WSDL message for the PasteRange WSDL operation .
ExcelServiceSoap_PasteRange_OutputMessage	The response WSDL message for the PasteRange WSDL operation .

3.1.4.86.1.1 ExcelServiceSoap_PasteRange_InputMessage

The request **WSDL message** for the **PasteRange WSDL operation**.

The **SOAP action** value is:

The **SOAP body** contains the **PasteRange** element.

3.1.4.86.1.2 ExcelServiceSoap_PasteRange_OutputMessage

The response **WSDL message** for the **PasteRange WSDL operation**.

The **SOAP body** contains the **PasteRangeResponse** element.

3.1.4.86.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
PasteRange	The input data for the PasteRange WSDL operation .
PasteRangeResponse	The result data for the PasteRange WSDL operation .

3.1.4.86.2.1 PasteRange

The **PasteRange** element specifies the input data for the **PasteRange WSDL operation**.

```
<xs:element name="PasteRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="source" type="tns2:SheetRange"/>
      <xs:element minOccurs="0" maxOccurs="1" name="destination" type="tns2:SheetRange"/>
      <xs:element minOccurs="1" maxOccurs="1" name="types" type="tns2:PasteTypes"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

source: The **range** of **cells**, whose **cell contents**, **cell values** or **cell formatting** will be used to modify the cells in the **destination** range, as specified in section [3.1.4.86](#). This element MUST be present.

destination: The range of cells whose cell contents, cell values or cell formatting will be modified, as specified in section 3.1.4.86. This element MUST be present.

types: Identifies the type of operation – **cut** or **copy** – that the user performed prior to the **PasteRange** operation and the type of content from the cells in the **source** range which will be applied to the cells in the **destination** range, as specified in section [3.1.4.86.4.1](#).

3.1.4.86.2.2 PasteRangeResponse

The **PasteRangeResponse** element specifies the result data for the **PasteRange WSDL operation**.

```
<xs:element name="PasteRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="PasteRangeResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

PasteRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). This element **MUST** be present.

3.1.4.86.3 Complex Types

None.

3.1.4.86.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

Simple type	Description
PasteTypes	An enumeration of the different types of content that can be applied during a PasteRange operation and the different types of operations that a user can perform prior to the PasteRange operation.

3.1.4.86.4.1 PasteTypes

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An enumeration of the different types of content that can be applied during a **PasteRange** operation and the different types of operations that a user can perform prior to the **PasteRange** operation.

```

<xs:simpleType name="PasteTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Cut"/>
        <xs:enumeration value="Copy"/>
        <xs:enumeration value="Paste"/>
        <xs:enumeration value="Values"/>
        <xs:enumeration value="Formatting"/>
        <xs:enumeration value="Formulas"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **PasteTypes** simple type.

Value	Meaning
None	MUST not be used.
Cut	Indicates that the user has performed a copy operation prior to the PasteRange operation.

Value	Meaning
	This flag MUST NOT be set if the Copy flag is set.
Copy	Indicates that the user has performed a cut operation prior to the PasteRange operation. This flag MUST NOT be set if the Cut flag is set.
Paste	Indicates that both the cell contents and the cell formatting of the cells in the source range will be applied to the cells in the destination range. This flag MUST NOT be set if the Values, Formatting or Formulas flag is set.
Values	Indicates that only the cell values of the cells in the source range will be applied to cells in the destination range. This flag MUST NOT be set if the Paste, Formatting or Formulas flag is set.
Formatting	Indicates that only the cell formatting of the cells in the source range will be applied to cells in the destination range. This flag MUST NOT be set if the Paste, Values or Formulas flag is set.
Formulas	Indicates that only the cell contents (that is, excluding cell formatting) of the cells in the source range will be applied to cells in the destination range. This flag MUST NOT be set if the Paste, Values or Formatting flag is set.

3.1.4.86.5 Attributes

None.

3.1.4.86.6 Groups

None.

3.1.4.86.7 Attribute Groups

None.

3.1.4.87 PasteString

Parses a specified string and uses its parts to set the **cell contents** of a specified **range of cells**.

The following is the **WSDL** port type specification of the **PasteString WSDL operation**.

```
<wsdl:operation name="PasteString" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/PasteString"
    message="tns2:ExcelServiceSoap_PasteString_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/PasteStringResponse"
    message="tns2:ExcelServiceSoap_PasteString_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/PasteStringExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_PasteString_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```


The protocol client sends an **ExcelServiceSoap_PasteString_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_PasteString_OutputMessage** response message, as follows:

1. The protocol client sends information about the string and the range of cells which will have their cell contents modified (in the **source** field and **destination** field of the input message, respectively).
2. The protocol server uses the top-left cell of the range specified in the **destination** field of the input message (or the top-right cell, if the **active sheet** is in **right-to-left reading order**) as the **current** cell for data input. The protocol server then proceeds to set the cell contents of cells in the specified range as follows:
 1. The protocol server scans the string in the **source** field of the input message for the following delimiting characters:
 1. The **Tab** character
 2. The **New Line** character
 2. If the protocol server does NOT encounter any of the delimiting characters listed above, the entire string from the **source** field of the input message is set as the cell contents of the **current** cell for data input.
 3. If the protocol server encounters one of the delimiting characters listed above, the protocol server sets the cell contents of the **current** cell for data input to the part of the **source** string starting from and excluding the previously encountered delimiting character (or the beginning of the string) up to and excluding the current delimiting character. Additionally:
 1. If the current delimiting character is the **Tab** character, the protocol server changes the **current** cell for data input to be the **adjacent cell** to the right (or to the left if the active sheet is in right-to-left reading order) of the cell whose cell contents were just modified;
 2. If the current delimiting character is the **New Line** character, the protocol server changes the **current** cell for data input to be the cell located in the intersection of the first **column (2)** of the range in the **destination** field and the **row (2)** immediately below the row (2) of the cell whose cell contents were just modified;
 4. The protocol server continues parsing the string in the **source** field of the input message until it reaches the end of the string;

Note, that in the process described above, the range of cells whose cell contents get modified might be different than the range specified in the **destination** field of the input message.

This operation is a **state changing** operation on the protocol server.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<102>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **FormulaEditingNotEnabled**
- **SetRangeFailure**
- **ObjectTypeNotSupported**
- **InvalidSheetName**
- **RangeParseError**
- **SpecifiedRangeNotFound**

- **RangeDefinitionError**
- **DiscontiguousRangeNotSupported**
- **RangeRequestAreaExceeded**
- **SheetRangeMismatch**
- **OperationNotSupportedInViewOnly**
- **PasteDataLimitHit**

3.1.4.87.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_PasteString_InputMessage	The request WSDL message for the PasteString WSDL operation .
ExcelServiceSoap_PasteString_OutputMessage	The response WSDL message for the PasteString WSDL operation .

3.1.4.87.1.1 ExcelServiceSoap_PasteString_InputMessage

The request **WSDL message** for the **PasteString WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/PasteString
```

The **SOAP body** contains the **PasteString** element.

3.1.4.87.1.2 ExcelServiceSoap_PasteString_OutputMessage

The response **WSDL message** for the **PasteString WSDL operation**.

The **SOAP body** contains the **PasteStringResponse** element.

3.1.4.87.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
PasteString	The input data for the PasteString WSDL operation .
PasteStringResponse	The result data for the PasteString WSDL operation .

3.1.4.87.2.1 PasteString

The **PasteString** element specifies the input data for the **PasteString WSDL operation**.

```
<xs:element name="PasteString" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="source" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="destination" type="tns2:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

source: The string which will be parsed and used as the new **cell contents** of the **cells** in the specified **range**.

destination: The range of cells, whose cell contents will be modified, as described in section [3.1.4.87](#). This element MUST be present.

3.1.4.87.2.2 PasteStringResponse

The **PasteStringResponse** element specifies the result data for the **PasteString WSDL operation**.

```
<xs:element name="PasteStringResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="PasteStringResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

PasteStringResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

3.1.4.87.3 Complex Types

None.

3.1.4.87.4 Simple Types

None.

3.1.4.87.5 Attributes

None.

3.1.4.87.6 Groups

None.

3.1.4.87.7 Attribute Groups

None.

3.1.4.88 GetPublishedSheetNames

This operation returns a list of the **published sheets** in a **workbook**.

The following is the **WSDL** port type specification of the **GetPublishedSheetNames WSDL operation**.

```
<wsdl:operation name="GetPublishedSheetNames" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPublishedSheetNames"
    message="tns2:ExcelServiceSoap_GetPublishedSheetNames_InputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPublishedSheetNamesResponse"
    message="tns2:ExcelServiceSoap_GetPublishedSheetNames_OutputMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
    wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPublishedSheetNamesExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns2:ExcelServiceSoap_GetPublishedSheetNames_ExcelServerMessageFault_FaultMessage"
    xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPublishedSheetNames_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetPublishedSheetNames_OutputMessage**.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<103>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.88.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPublishedSheetNames_InputMessage	The request WSDL message for the GetPublishedSheetNames WSDL operation .
ExcelServiceSoap_GetPublishedSheetNames_OutputMessage	The response WSDL message for the GetPublishedSheetNames WSDL operation .

3.1.4.88.1.1 ExcelServiceSoap_GetPublishedSheetNames_InputMessage

The request **WSDL message** for the **GetPublishedSheetNames WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPublishedSheetNames
```

The **SOAP body** contains the **GetPublishedSheetNames** element.

3.1.4.88.1.2 ExcelServiceSoap_GetPublishedSheetNames_OutputMessage

The response **WSDL message** for the **GetPublishedSheetNames WSDL operation**.

The **SOAP body** contains the **GetPublishedSheetNamesResponse** element.

3.1.4.88.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetPublishedSheetNames	The input data for the GetPublishedSheetNames WSDL operation .
GetPublishedSheetNamesResponse	The result data for the GetPublishedSheetNames WSDL operation .

3.1.4.88.2.1 GetPublishedSheetNames

The **GetPublishedSheetNames** element specifies the input data for the **GetPublishedSheetNames WSDL operation**.

```
<xs:element name="GetPublishedSheetNames" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.88.2.2 GetPublishedSheetNamesResponse

The **GetPublishedSheetNamesResponse** element specifies the result data for the **GetPublishedSheetNames WSDL operation**.

```
<xs:element name="GetPublishedSheetNamesResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPublishedSheetNamesResult"
        type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetNames"
        type="tns2:ArrayOfSheetName"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPublishedSheetNamesResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

sheetNames: An array of **SheetName** elements, as specified in section [2.2.4.106](#). MUST be present.

3.1.4.88.3 Complex Types

None.

3.1.4.88.4 Simple Types

None.

3.1.4.88.5 Attributes

None.

3.1.4.88.6 Groups

None.

3.1.4.88.7 Attribute Groups

None.

3.1.4.89 GetInteractiveReportBootstrapData

This operation returns information about the **interactive report** in the workbook.

The following is the **WSDL** port type specification of the **GetInteractiveReportBootstrapData WSDL operation**.

```
<wsdl:operation name="GetInteractiveReportBootstrapData"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetInteractiveReportBootstrapData"
message="tns2:ExcelServiceSoap_GetInteractiveReportBootstrapData_InputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetInteractiveReportBootstrapDataResponse"
message="tns2:ExcelServiceSoap_GetInteractiveReportBootstrapData_OutputMessage"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetInteractiveReportBootstrapDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetInteractiveReportBootstrapData_ExcelServerMessageFault_Fault
tMessage" xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"/>
</wsdl:operation>
```

The protocol client sends an

ExcelServiceSoap_GetInteractiveReportBootstrapData_InputMessage request message, and the protocol server responds with an **ExcelServiceSoap_GetInteractiveReportBootstrapData_OutputMessage** response message, as follows:

- If the protocol client specifies the **connectionsOnly** as true, the protocol server **MUST** only return information regarding the **data connections (2)** used by the interactive report in the workbook.
- If the protocol client specifies the **connectionOnly** as false, the protocol server **MUST** return all available information regarding the interactive report contained in the workbook.

In the event of an application error on the protocol server during this operation, a **SOAP fault** is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<104>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.89.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetInteractiveReportBootstrapData_InputMessage	The request WSDL message for the GetInteractiveReportBootstrapData WSDL operation .
ExcelServiceSoap_GetInteractiveReportBootstrapData_OutputMessage	The response WSDL message for the GetInteractiveReportBootstrapData WSDL operation .

3.1.4.89.1.1 ExcelServiceSoap_GetInteractiveReportBootstrapData_InputMessage

The request **WSDL message** for the **GetInteractiveReportBootstrapData WSDL operation**.

The **SOAP action** value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetInteractiveReportBootstrapData
```

The **SOAP body** contains the **GetInteractiveReportBootstrapData** element.

3.1.4.89.1.2 ExcelServiceSoap_GetInteractiveReportBootstrapData_OutputMessage

The response **WSDL message** for the **GetInteractiveReportBootstrapData WSDL operation**.

The **SOAP body** contains the **GetInteractiveReportBootstrapDataResponse** element.

3.1.4.89.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

Element	Description
GetInteractiveReportBootstrapData	The input data for the GetInteractiveReportBootstrapData WSDL operation .
GetInteractiveReportBootstrapDataResponse	The result data for the GetInteractiveReportBootstrapData WSDL operation .

3.1.4.89.2.1 GetInteractiveReportBootstrapData

The **GetInteractiveReportBootstrapData** element specifies the input data for the **GetInteractiveReportBootstrapData WSDL operation**.

```

<xs:element name="GetInteractiveReportBootstrapData"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clientSessionId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="connectionsOnly" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

clientSessionId: A **session identifier** to use for the **GetInteractiveReportBootstrapData** operation.

connectionsOnly: A flag which specifies whether the protocol server returns only **data connection (2)** information for the **interactive report**.

3.1.4.89.2.2 GetInteractiveReportBootstrapDataResponse

The **GetInteractiveReportBootstrapDataResponse** element specifies the result data for the **GetInteractiveReportBootstrapData WSDL operation**.

```

<xs:element name="GetInteractiveReportBootstrapDataResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetInteractiveReportBootstrapDataResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="interactiveReportInfo"
type="tns2:InteractiveReportInfo"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetInteractiveReportBootstrapDataResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

interactiveReportInfo: Information about the **interactive report** contained in the workbook.

3.1.4.89.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

Complex type	Description
InteractiveReportInfo	Information about the interactive report contained in the workbook.

3.1.4.89.3.1 InteractiveReportInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Information about the **interactive report** contained in the workbook.


```
<xs:complexType name="InteractiveReportInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataConnectionsInfo"
type="tns2:DataConnectionsInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ReportData" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

DataConnectionsInfo: Information about the **data connections (2)** used by the interactive report.

ReportData: A string describing the behavior and rendering of the interactive report.

3.1.4.89.4 Simple Types

None.

3.1.4.89.5 Attributes

None.

3.1.4.89.6 Groups

None.

3.1.4.89.7 Attribute Groups

None.

3.1.5 Timer Events

3.1.5.1 Session Timeout

The **Session Timeout** event MAY [<105>](#) complete a request for a timed out time **sessions (2)** with a **SOAP fault**, as specified in section [2.2.2](#), with the value of the **Id** element of the **ExcelServerMessage** set to **InvalidOrTimedOutSession**.

3.1.5.2 Request Timeout

The **Request Timeout** event SHOULD [<106>](#) complete a request by the protocol server with a **SOAP fault**, as specified in section [2.2.2](#), with the value of the **Id** element of the **ExcelServerMessage** set to **MaxRequestDurationExceeded**.

3.1.6 Other Local Events

None.

4 Protocol Examples

4.1 Filtering and sorting a list and returning XML

This example shows how this protocol is used to open a **view session**. It demonstrates how this protocol is used to **filter** a **list** in a **workbook** and to fetch the representation of the workbook in XML format as specified in [\[MS-EXSPXML3\]](#). It also demonstrates how this protocol is used to **sort** the list.

This example assumes that a workbook has already been created and is stored in a location that the protocol server can load files from. The workbook contains a list with an **AutoFilter**. The following UML diagram illustrates this example.

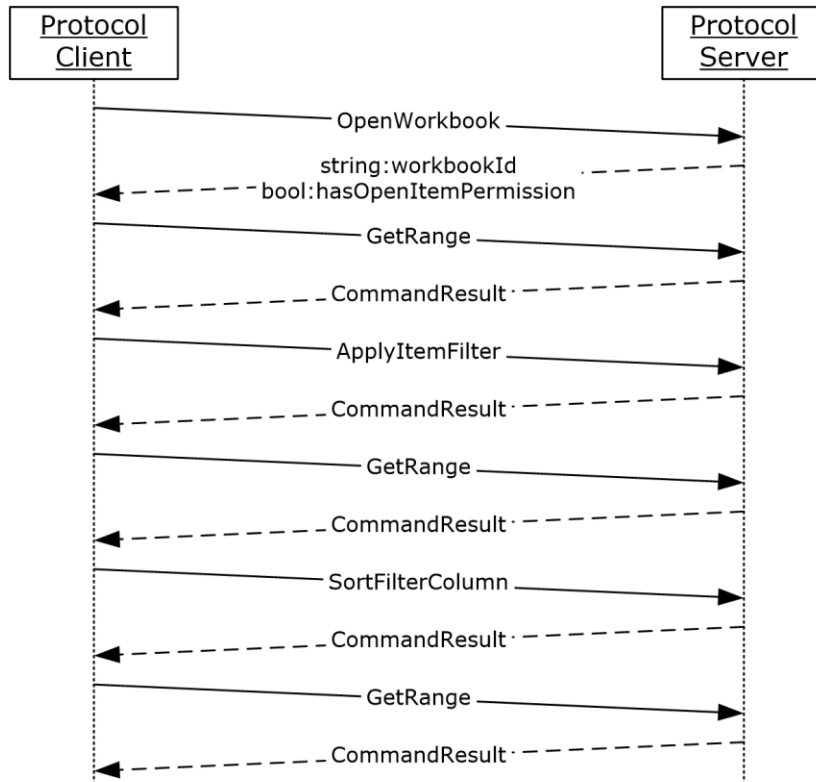


Figure 3: Communication sequence diagram for filtering and sorting a list and returning XML

The order of operations, including the relevant **XML** for each step, is as follows:

Opening a new session (loading the workbook)

Request

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <OpenWorkbook
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <inParameters>
        <url>http://Contoso/Docs/Documents/Filter.xlsx</url>
        <subscriberId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</subscriberId>
```

```

    <flags>Recyclable</flags>
    <cultureParameter>
      <UICultureName>en-US</UICultureName>
      <DataCultureName>en-US</DataCultureName>
      <SharePointDataCultureName></SharePointDataCultureName>
    </cultureParameter>
    <TimeZoneSerialization>+0480#0000-11-00-01T02:00:00:0000#+0000#0000-03-00-
02T02:00:00:0000#-0060</TimeZoneSerialization>
  </inParameters>
  <parameter>
    <StateId>-1</StateId>
    <VisibleSheetRangeRequest>
      <FirstRow>-1</FirstRow>
      <VisibleRowsRequested>1</VisibleRowsRequested>
      <FirstColumn>-1</FirstColumn>
      <VisibleColumnsRequested>1</VisibleColumnsRequested>
      <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
      <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
      <NeedAllBorderValues>>false</NeedAllBorderValues>
      <ChartsOnly>>false</ChartsOnly>
    </VisibleSheetRangeRequest>
    <Confirmation>Blank</Confirmation>
    <ProtocolClientId>ms-ewa</ProtocolClientId>
    <RequestSiteId>beb895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
    <CompleteResponseTimeout>2000</CompleteResponseTimeout>
    <Flags></Flags>
  </parameter>
</OpenWorkbook>
</s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <OpenWorkbookResponse
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <OpenWorkbookResult>
        <StateId>1</StateId>
        <SpreadsheetData>
          <Workbook>
            <WorkbookOptions/>
            <Styles>
              <Style ID="sD">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
              </Style>
              <Style ID="1">
                <Font Size="11" FontName="Calibri" Color="#000000"/><Interior
Color="#D9D9D9" Pattern="Solid"/>
              </Style>
              <Style ID="2">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
                <Alignment Horizontal="Left"/>
                <Interior Color="#D9D9D9" Pattern="Solid"/>
              </Style>
              <Style ID="-1">
                <Borders/>
              </Style>
              <Style ID="bD">
                <Borders>
                  <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
                  <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
                </Borders>
              </Style>
            </Styles>
          </Workbook>
        </SpreadsheetData>
      </OpenWorkbookResult>
    </OpenWorkbookResponse>
  </s:Body>
</s:Envelope>

```

```

        <Style ID="-3">
            <Borders>
                <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
                <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
            </Borders>
        </Style>
    </Styles>
    <Worksheet ActiveSheet="1" Name="Sheet1">
        <WorksheetOptions DisplayOutlines="1"/>
        <autofilters>
            <autofilter Row="0" ColFirst="0" Type="Sheet">
                <item Index="0" DataType="Text" Name="Customer Geography"/>
            </autofilter>
        </autofilters>
        <Table LastNonEmptyRow="54" LastNonEmptyColumn="2"
CurrentFirstRow="1" FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1"
FirstVisibleColumn="1" LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4"
DefaultRowHeight="15" DefaultRowHeightPixels="20" DefaultColumnWidth="48"
DefaultColumnWidthPixels="64" DefaultIndentWidth="6.75" DefaultIndentWidthPixels="9"><Column
Width="116.25" WidthPixels="155"/>
            <Row Height="15" HeightPixels="20"><Cell StyleID="2"
BorderID="-3">
                <Data>Customer Geography</Data>
            </Cell>
        </Row>
    </Table>
</Worksheet>
<Worksheet Name="Sheet2">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
<Worksheet Name="Sheet3">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
</Workbook>
</SpreadsheetData>
<HealthInformation>
    <StateFlags></StateFlags>
    <HealthScore>0</HealthScore>
</HealthInformation>
<SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
<EditSessionIsDirty>>false</EditSessionIsDirty>

<EditSessionHasMultipleCollaborationUsers>>false</EditSessionHasMultipleCollaborationUsers>
</OpenWorkbookResult>
    <workbookId>1.V21.214QQ/7ySlvKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</workbookId>
    <outFlags>HasOpenItemPermission</outFlags>

<clientWorkbookUri>http://Contoso/Docs/Documents/Filter.xlsx</clientWorkbookUri>
</OpenWorkbookResponse>
</s:Body>
</s:Envelope>

```

Fetching the XML

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRange
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalServic
e/">
      <parameter>

```

```

        <WorkbookId>1.V21.214QQ/7ySliVKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</WorkbookId>
        <StateId>1</StateId>
        <VisibleSheetRangeRequest>
            <SheetName>Sheet1</SheetName>
            <FirstRow>0</FirstRow>
            <VisibleRowsRequested>28</VisibleRowsRequested>
            <FirstColumn>0</FirstColumn>
            <VisibleColumnsRequested>30</VisibleColumnsRequested>
            <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
            <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
            <NeedAllBorderValues>false</NeedAllBorderValues>
            <ChartsOnly>false</ChartsOnly>
        </VisibleSheetRangeRequest>
        <Confirmation>Blank</Confirmation>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
    </parameter>
</GetRange>
</s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRangeResponse
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalServic
e/">
      <GetRangeResult>
        <StateId>1</StateId>
        <SpreadsheetData><Workbook><WorkbookOptions/>
          <Styles>
            <Style ID="sD">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
            </Style>
            <Style ID="1">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
              <Interior Color="#D9D9D9" Pattern="Solid"/>
            </Style>
            <Style ID="2">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
              <Alignment Horizontal="Left"/>
              <Interior Color="#D9D9D9" Pattern="Solid"/>
            </Style>
            <Style ID="3">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
              <Interior Color="#D9D9D9" Pattern="Solid"/>
            </Style>
            <Style ID="4">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
              <Alignment Horizontal="Left"/>
              <Interior Color="#D9D9D9" Pattern="Solid"/>
            </Style>
            <Style ID="5">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
              <Alignment Horizontal="Left"/>
            </Style>
            <Style ID="6">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
            </Style>
            <Style ID="7">
              <Font Size="11" FontName="Calibri" Color="#000000"/>
            </Style>
          </Styles>
        </SpreadsheetData>
      </GetRangeResult>
    </GetRangeResponse>
  </s:Body>
</s:Envelope>

```

```

        <Alignment Horizontal="Left"/>
    </Style>
    <Style ID="-1">
        <Borders/>
    </Style>
    <Style ID="bD">
        <Borders>
            <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
            <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
        </Borders>
    </Style>
    <Style ID="-3">
        <Borders>
            <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
        </Borders>
    </Style>
    <Style ID="-4">
        <Borders>
            <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
        </Borders>
    </Style>
    <Style ID="-5">
        <Borders>
            <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
        </Borders>
    </Style>
    <Style ID="-6">
        <Borders>
            <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
            <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
        </Borders>
    </Style>
    <Style ID="-7">
        <Borders>
            <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
        </Borders>
    </Style>
</Styles>
<Worksheet ActiveSheet="1" Name="Sheet1"><WorksheetOptions
DisplayOutlines="1"/>
    <autofilters>
        <autofilter Row="0" ColFirst="0" Type="Sheet"><item Index="0"
DataType="Text" Name="Customer Geography"/>
            <item Index="1" Name=" Internet Sales Amount "/>
        </autofilter>
    </autofilters>
    <Table LastNonEmptyRow="54" LastNonEmptyColumn="30" CurrentFirstRow="1"
FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1" FirstVisibleColumn="1"
LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4" DefaultRowHeight="15"
DefaultRowHeightPixels="20" DefaultColumnWidth="48" DefaultColumnWidthPixels="64"
DefaultIndentWidth="6.75" DefaultIndentWidthPixels="9">
        <Column Width="116.25" WidthPixels="155"/>
        <Column Width="131.25" WidthPixels="175"/>
        <Column Width="48" WidthPixels="64" Span="27"/>
        <Row Height="15" HeightPixels="20">
            <Cell StyleID="2" BorderID="-5">
                <Data>Customer Geography</Data>
            </Cell>
            <Cell StyleID="4" BorderID="-6">
                <Data xml:space="preserve">Internet Sales Amount</Data>
            </Cell>

```



```

        <Data xml:space="preserve"> $
36.96 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Charente-Maritime</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="34441.7349">
        <Data xml:space="preserve"> $
34,441.73 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Essonne</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="279297.1838">
        <Data xml:space="preserve"> $
279,297.18 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Garonne (Haute)</Data>
    </Cell><Cell StyleID="7" FormulaBarText="54641.7232">
        <Data xml:space="preserve"> $
54,641.72 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Hauts de Seine</Data>
    </Cell><Cell StyleID="7" FormulaBarText="263416.1854">
        <Data xml:space="preserve"> $
263,416.19 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Loir et Cher</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="21473.7396">
        <Data xml:space="preserve"> $
21,473.74 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Loiret</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="91562.9056">
        <Data xml:space="preserve"> $
91,562.91 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Moselle</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="94046.2295">
        <Data xml:space="preserve"> $
94,046.23 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Nord</Data>
    </Cell><Cell StyleID="7" FormulaBarText="391400.2014">

```



```

        <Data xml:space="preserve"> $
391,400.20 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Pas de Calais</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="11342.9225">
        <Data xml:space="preserve"> $
11,342.92 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Seine (Paris)</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="539725.8">
        <Data xml:space="preserve"> $
539,725.80 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Seine et Marne</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="109735.2384">
        <Data xml:space="preserve"> $
109,735.24 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Seine Saint Denis</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="379479.7479">
        <Data xml:space="preserve"> $
379,479.75 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Somme</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="29555.2814">
        <Data xml:space="preserve"> $
29,555.28 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Val de Marne</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="28478.1246">
        <Data xml:space="preserve"> $
28,478.12 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Val d'Oise</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="46755.9003">
        <Data xml:space="preserve"> $
46,755.90 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">

```

```

        <Data>Yveline</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="268664.7958">
        <Data xml:space="preserve"> $
268,664.80 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Bayern</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="399966.7822">
        <Data xml:space="preserve"> $
399,966.78 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Brandenburg</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="119571.0799">
        <Data xml:space="preserve"> $
119,571.08 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Hamburg</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="467219.0392">
        <Data xml:space="preserve"> $
467,219.04 </Data>
    </Cell>
</Row>
</Table>
</Worksheet>
<Worksheet Name="Sheet2">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
<Worksheet Name="Sheet3">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
</Workbook>
</SpreadsheetData>
<HealthInformation>
    <StateFlags></StateFlags>
    <HealthScore>0</HealthScore>
</HealthInformation>
<SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
<EditSessionIsDirty>>false</EditSessionIsDirty>

<EditSessionHasMultipleCollaborationUsers>>false</EditSessionHasMultipleCollaborationUsers>
</GetRangeResult>
</GetRangeResponse>
</s:Body>
</s:Envelope>

```

Applying the filter

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <ApplyItemFilter
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <parameter>

```

```

        <WorkbookId>1.V21.214QQ/7ySliVkuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</WorkbookId>
        <StateId>-1</StateId>
        <Confirmation>Blank</Confirmation>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
    </parameter>
    <autoFilterOptions>
        <AutoFilterType>Sheet</AutoFilterType>
        <CriteriaType>AboveAverage</CriteriaType>
        <Id>0</Id>
        <SheetName>Sheet1</SheetName>
        <Column>2</Column>
        <NamedObjectView>>false</NamedObjectView>
    </autoFilterOptions>
    <blanks>>false</blanks>
    <hideBlanks>>false</hideBlanks>
</ApplyItemFilter>
</s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <ApplyItemFilterResponse
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalServic
e/">
      <ApplyItemFilterResult>
        <StateId>2</StateId>
        <HealthInformation>
          <StateFlags></StateFlags>
          <HealthScore>0</HealthScore>
        </HealthInformation>
        <SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
        <EditSessionIsDirty>>false</EditSessionIsDirty>

<EditSessionHasMultipleCollaborationUsers>>false</EditSessionHasMultipleCollaborationUsers>
      </ApplyItemFilterResult>
    </ApplyItemFilterResponse>
  </s:Body>
</s:Envelope>

```

Fetching the XML

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRange
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalServic
e/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVkuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</WorkbookId>
        <StateId>2</StateId>
        <VisibleSheetRangeRequest>
          <SheetName>Sheet1</SheetName>
          <FirstRow>0</FirstRow>

```

```

        <VisibleRowsRequested>28</VisibleRowsRequested>
        <FirstColumn>0</FirstColumn>
        <VisibleColumnsRequested>30</VisibleColumnsRequested>
        <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
        <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
        <NeedAllBorderValues>>false</NeedAllBorderValues>
        <ChartsOnly>>false</ChartsOnly>
    </VisibleSheetRangeRequest>
    <Confirmation>Blank</Confirmation>
    <ProtocolClientId>ms-ewa</ProtocolClientId>
    <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
    <CompleteResponseTimeout>0</CompleteResponseTimeout>
    <Flags></Flags>
</parameter>
</GetRange>
</s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRangeResponse
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <GetRangeResult>
        <StateId>2</StateId>
        <SpreadsheetData>
          <Workbook>
            <WorkbookOptions/>
            <Styles>
              <Style ID="sD">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
              </Style>
              <Style ID="1">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
                <Interior Color="#D9D9D9" Pattern="Solid"/>
              </Style>
              <Style ID="2">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
                <Alignment Horizontal="Left"/>
                <Interior Color="#D9D9D9" Pattern="Solid"/>
              </Style>
              <Style ID="3">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
                <Interior Color="#D9D9D9" Pattern="Solid"/>
              </Style>
              <Style ID="4">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
                <Alignment Horizontal="Left"/>
                <Interior Color="#D9D9D9" Pattern="Solid"/>
              </Style>
              <Style ID="5">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
                <Alignment Horizontal="Left"/>
              </Style>
              <Style ID="6">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
              </Style>
              <Style ID="7">
                <Font Size="11" FontName="Calibri" Color="#000000"/>
                <Alignment Horizontal="Left"/>
              </Style>
              <Style ID="-1">
                <Borders/>
              </Style>
            </Styles>
          </Workbook>
        </SpreadsheetData>
      </GetRangeResult>
    </GetRangeResponse>
  </s:Body>
</s:Envelope>

```

```

<Style ID="bD">
  <Borders>
    <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
  </Borders>
</Style>
<Style ID="-3">
  <Borders>
    <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
  </Borders>
</Style>
<Style ID="-4">
  <Borders>
    <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
  </Borders>
</Style>
<Style ID="-5">
  <Borders>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
  </Borders>
</Style>
<Style ID="-6">
  <Borders>
    <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
  </Borders>
</Style>
<Style ID="-7">
  <Borders>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
  </Borders>
</Style>
</Styles>
<Worksheet ActiveSheet="1" Name="Sheet1">
  <WorksheetOptions DisplayOutlines="1"/>
  <autofilters>
    <autofilter Row="0" ColFirst="0" Type="Sheet">
      <item Index="0" DataType="Text" Name="Customer Geography"/>
      <item Index="1" Type="Filtered" Name=" Internet Sales Amount "
CriteriaType="AboveAverage"/>
    </autofilter>
  </autofilters>
  <Table LastNonEmptyRow="70" LastNonEmptyColumn="30" CurrentFirstRow="1"
FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1" FirstVisibleColumn="1"
LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4" DefaultRowHeight="15"
DefaultRowHeightPixels="20" DefaultColumnWidth="48" DefaultColumnWidthPixels="64"
DefaultIndentWidth="6.75" DefaultIndentWidthPixels="9">
    <Column Width="116.25" WidthPixels="155"/><Column Width="131.25"
WidthPixels="175"/>
    <Column Width="48" WidthPixels="64" Span="27"/>
    <Row Height="15" HeightPixels="20">
      <Cell StyleID="2" BorderID="-5">
        <Data>Customer Geography</Data>
      </Cell>
      <Cell StyleID="4" BorderID="-6">
        <Data xml:space="preserve"> Internet Sales Amount </Data>
      </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
      <Cell StyleID="5">
        <Data>New South Wales</Data>

```

```

        </Cell>
        <Cell StyleID="7" FormulaBarText="3934485.7265">
          <Data xml:space="preserve"> $
3,934,485.73 </Data>
        </Cell>
      </Row>
      <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>Queensland</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="1988415.0297">
          <Data xml:space="preserve"> $
1,988,415.03 </Data>
        </Cell>
      </Row>
      <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>South Australia</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="618255.8616">
          <Data xml:space="preserve"> $
618,255.86 </Data>
        </Cell>
      </Row>
      <Row Hidden="1"/>
      <Row Index="6" Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>Victoria</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="2279906.0633">
          <Data xml:space="preserve"> $
2,279,906.06 </Data>
        </Cell>
      </Row>
      <Row Hidden="1"/>
      <Row Index="8" Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>British Columbia</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="1955340.0996">
          <Data xml:space="preserve"> $
1,955,340.10 </Data>
        </Cell>
      </Row>
      <Row Hidden="1" Span="19"/>
      <Row Index="29" Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>Hessen</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="794876.0774">
          <Data xml:space="preserve"> $
794,876.08 </Data>
        </Cell>
      </Row>
      <Row Hidden="1"/>
      <Row Index="31" Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>Saarland</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="653087.484">
          <Data xml:space="preserve"> $
653,087.48 </Data>
        </Cell>
      </Row>
      <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>England</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="3391712.2109">

```



```

        <Row Height="15" HeightPixels="20"><Cell StyleID="6" Index="2"/>
        </Row>
        <Row Height="15" HeightPixels="20"><Cell StyleID="6" Index="2"/>
        </Row>
    </Table>
</Worksheet>
<Worksheet Name="Sheet2"><WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
<Worksheet Name="Sheet3">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
</Workbook>
</SpreadsheetData>
<HealthInformation>
    <StateFlags></StateFlags>
    <HealthScore>0</HealthScore>
</HealthInformation>
<SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
<EditSessionIsDirty>>false</EditSessionIsDirty>

<EditSessionHasMultipleCollaborationUsers>>false</EditSessionHasMultipleCollaborationUsers>
    </GetRangeResult>
</GetRangeResponse>
</s:Body>
</s:Envelope>

```

Applying the sort

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <SortFilterColumn
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVkuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</WorkbookId>
        <StateId>-1</StateId>
        <Confirmation>Blank</Confirmation>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
      </parameter>
      <autoFilterOptions>
        <AutoFilterType>Sheet</AutoFilterType>
        <CriteriaType>Nil</CriteriaType>
        <Id>0</Id>
        <SheetName>Sheet1</SheetName>
        <Column>2</Column>
        <NamedObjectView>>false</NamedObjectView>
      </autoFilterOptions>
      <sortType>Ascending</sortType>
    </SortFilterColumn>
  </s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">

```



```

    <SortFilterColumnResponse
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
    <SortFilterColumnResult>
    <StateId>3</StateId>
    <HealthInformation>
    <StateFlags></StateFlags>
    <HealthScore>0</HealthScore>
    </HealthInformation>
    <SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
    <EditSessionIsDirty>>false</EditSessionIsDirty>

    <EditSessionHasMultipleCollaborationUsers>>false</EditSessionHasMultipleCollaborationUsers>
    </SortFilterColumnResult>
  </SortFilterColumnResponse>
</s:Body>
</s:Envelope>

```

Fetching the XML

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRange
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVkuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-01T02:00:00#0000#0000-03-00-02T02:00:00#0000#-006036.bebf895a-f22a-49d5-b8b0-f65d01d0a3991.N</WorkbookId>
        <StateId>3</StateId>
        <VisibleSheetRangeRequest>
          <SheetName>Sheet1</SheetName>
          <FirstRow>0</FirstRow>
          <VisibleRowsRequested>28</VisibleRowsRequested>
          <FirstColumn>0</FirstColumn>
          <VisibleColumnsRequested>30</VisibleColumnsRequested>
          <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
          <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
          <NeedAllBorderValues>>false</NeedAllBorderValues>
          <ChartsOnly>>false</ChartsOnly>
        </VisibleSheetRangeRequest>
        <Confirmation>Blank</Confirmation>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
      </parameter>
    </GetRange>
  </s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRangeResponse
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <GetRangeResult>
        <StateId>3</StateId>
        <SpreadsheetData>
          <Workbook>

```

```

<WorkbookOptions/>
<Styles>
  <Style ID="sD">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
  </Style>
  <Style ID="1">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
    <Interior Color="#D9D9D9" Pattern="Solid"/>
  </Style>
  <Style ID="2">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
    <Alignment Horizontal="Left"/>
    <Interior Color="#D9D9D9" Pattern="Solid"/>
  </Style>
  <Style ID="3">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
    <Interior Color="#D9D9D9" Pattern="Solid"/>
  </Style>
  <Style ID="4">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
    <Alignment Horizontal="Left"/>
    <Interior Color="#D9D9D9" Pattern="Solid"/>
  </Style>
  <Style ID="5">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
    <Alignment Horizontal="Left"/>
  </Style>
  <Style ID="6">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
  </Style>
  <Style ID="7">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
    <Alignment Horizontal="Left"/>
  </Style>
  <Style ID="-1">
    <Borders/>
  </Style>
  <Style ID="bD">
    <Borders>
      <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
      <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
    </Borders>
  </Style>
  <Style ID="-3">
    <Borders>
      <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
    </Borders>
  </Style>
  <Style ID="-4">
    <Borders>
      <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
    </Borders>
  </Style>
  <Style ID="-5">
    <Borders>
      <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
    </Borders>
  </Style>
  <Style ID="-6">
    <Borders>
      <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
      <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
    </Borders>
  </Style>

```

```

        </Borders>
    </Style>
    <Style ID="-7">
        <Borders>
            <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
        </Borders>
    </Style>
</Styles>
<Worksheet ActiveSheet="1" Name="Sheet1">
<WorksheetOptions DisplayOutlines="1"/>
<autofilters>
    <autofilter Row="0" ColFirst="0" Type="Sheet">
        <item Index="0" DataType="Text" Name="Customer Geography"/>
        <item Index="1" Type="BothAsc" Name=" Internet Sales Amount "
CriteriaType="AboveAverage"/>
    </autofilter>
</autofilters>
<Table LastNonEmptyRow="70" LastNonEmptyColumn="30" CurrentFirstRow="1"
FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1" FirstVisibleColumn="1"
LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4" DefaultRowHeight="15"
DefaultRowHeightPixels="20" DefaultColumnWidth="48" DefaultColumnWidthPixels="64"
DefaultIndentWidth="6.75" DefaultIndentWidthPixels="9">
    <Column Width="116.25" WidthPixels="155"/>
    <Column Width="131.25" WidthPixels="175"/>
    <Column Width="48" WidthPixels="64" Span="27"/>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="2" BorderID="-5">
            <Data>Customer Geography</Data>
        </Cell>
        <Cell StyleID="4" BorderID="-6">
            <Data xml:space="preserve"> Internet Sales Amount </Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>South Australia</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="618255.8616">
            <Data xml:space="preserve"> $ 618,255.86
</Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Saarland</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="653087.484">
            <Data xml:space="preserve"> $ 653,087.48
</Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Hessen</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="794876.0774">
            <Data xml:space="preserve"> $ 794,876.08
</Data>
        </Cell>
    </Row>
    <Row Hidden="1"/>
    <Row Index="6" Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Oregon</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="1170991.5397">
            <Data xml:space="preserve"> $ 1,170,991.54
</Data>

```



```
</GetRangeResult>  
</GetRangeResponse>  
</s:Body>  
</s:Envelope>
```

5 Security

5.1 Security Considerations for Implementers

In addition to the security considerations applicable to the underlying protocols, there are security risks associated with exposing **session identifiers**. If the session identifier is exposed, then it is possible for an attacker to read information from, or modify data in, a session on the protocol server. An implementer of this protocol needs to consider keeping session identifiers protected. There could be some cases where it is desirable to expose the session identifier, however, an implementer is to use caution in how they expose session identifiers and consider the security risks.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

For ease of implementation, the full WSDL is provided in this appendix.

```
<?xml version="1.0" encoding="UTF-8"?>
<wsdl:definitions xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:tns2="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:wsaw="http://www.w3.org/2006/05/addressing/wsdl"
targetNamespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema
xmlns:tns3="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Imports"
targetNamespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Imports">
      <xs:import namespace="http://microsoft.com/wsdl/types/" />
      <xs:import
namespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server" />
      <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/" />
      <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/Arrays" />
      <xs:import
namespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/" />
    </xs:schema>
  </wsdl:types>
  <wsdl:portType name="ExcelServiceSoap">
    <wsdl:operation name="PasteRange">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/PasteRange"
message="tns2:ExcelServiceSoap_PasteRange_InputMessage" />
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/PasteRangeResponse"
message="tns2:ExcelServiceSoap_PasteRange_OutputMessage" />
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/PasteRangeExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_PasteRange_ExcelServerMessageFault_FaultMessage" />
    </wsdl:operation>
    <wsdl:operation name="PasteString">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/PasteString"
message="tns2:ExcelServiceSoap_PasteString_InputMessage" />
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/PasteStringResponse"
message="tns2:ExcelServiceSoap_PasteString_OutputMessage" />
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/PasteStringExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_PasteString_ExcelServerMessageFault_FaultMessage" />
    </wsdl:operation>
    <wsdl:operation name="ApplyToRange">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyToRange"
message="tns2:ExcelServiceSoap_ApplyToRange_InputMessage" />
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyToRangeResponse"
message="tns2:ExcelServiceSoap_ApplyToRange_OutputMessage" />
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
```



```

Service/ExcelServiceSoap/ApplyToRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap ApplyToRange ExcelServerMessageFault FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="GetFunctionList">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetFunctionList"
message="tns2:ExcelServiceSoap GetFunctionList InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetFunctionListResponse"
message="tns2:ExcelServiceSoap_GetFunctionList_OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetFunctionListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetFunctionList_ExcelServerMessageFault_FaultMessage"/>
          </wsdl:operation>
          <wsdl:operation name="AutoFit">
            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/AutoFit" message="tns2:ExcelServiceSoap AutoFit InputMessage"/>
              <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/AutoFitResponse"
message="tns2:ExcelServiceSoap_AutoFit_OutputMessage"/>
                <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/AutoFitExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_AutoFit_ExcelServerMessageFault_FaultMessage"/>
                  </wsdl:operation>
                  <wsdl:operation name="ResizeRowsColumns">
                    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ResizeRowsColumns"
message="tns2:ExcelServiceSoap_ResizeRowsColumns_InputMessage"/>
                      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ResizeRowsColumnsResponse"
message="tns2:ExcelServiceSoap ResizeRowsColumns OutputMessage"/>
                        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ResizeRowsColumnsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap ResizeRowsColumns ExcelServerMessageFault FaultMessage"/>
                          </wsdl:operation>
                          <wsdl:operation name="GenerateWorkbookFromHtml">
                            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtml"
message="tns2:ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage"/>
                              <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtmlResponse"
message="tns2:ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage"/>
                                <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtmlExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GenerateWorkbookFromHtml_ExcelServerMessageFault_FaultMessage"
/>
                                  </wsdl:operation>
                                  <wsdl:operation name="GetBixAnalysis">
                                    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetBixAnalysis"
message="tns2:ExcelServiceSoap_GetBixAnalysis_InputMessage"/>
                                      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

```

```

Service/ExcelServiceSoap/GetBixAnalysisResponse"
message="tns2:ExcelServiceSoap GetBixAnalysis OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetBixAnalysisExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetBixAnalysis_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="BixDrill">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/BixDrill" message="tns2:ExcelServiceSoap_BixDrill_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/BixDrillResponse"
message="tns2:ExcelServiceSoap BixDrill OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/BixDrillExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_BixDrill_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetPivotFieldManagerData">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerData"
message="tns2:ExcelServiceSoap_GetPivotFieldManagerData_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataResponse"
message="tns2:ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotFieldManagerData_ExcelServerMessageFault_FaultMessage"
/>
    </wsdl:operation>
    <wsdl:operation name="GetPivotFieldListData">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldListData"
message="tns2:ExcelServiceSoap_GetPivotFieldListData_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldListDataResponse"
message="tns2:ExcelServiceSoap_GetPivotFieldListData_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldListDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotFieldListData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ExpandPivotFieldListLevels">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevels"
message="tns2:ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsResponse"
message="tns2:ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ExpandPivotFieldListLevels_ExcelServerMessageFault_FaultMessag
e"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyPivotFieldManagerHiddenState">

```

```

    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenState"
message="tns2:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateResponse"
message="tns2:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_ExcelServerMessageFault_Fault
tMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyPivot">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivot"
message="tns2:ExcelServiceSoap_ApplyPivot_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotResponse"
message="tns2:ExcelServiceSoap_ApplyPivot_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivot_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyTimeSlicerInteractivity">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTimeSlicerInteractivity"
message="tns2:ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityResponse"
message="tns2:ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyTimeSlicerInteractivity_ExcelServerMessageFault_FaultMess
age"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyPivotValueFieldSettings">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettings"
message="tns2:ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsResponse"
message="tns2:ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivotValueFieldSettings_ExcelServerMessageFault_FaultMess
age"/>
    </wsdl:operation>
    <wsdl:operation name="GetPivotValueFieldSettings">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettings"
message="tns2:ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

```

```

Service/ExcelServiceSoap/GetPivotValueFieldSettingsResponse"
message="tns2:ExcelServiceSoap GetPivotValueFieldSettings OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotValueFieldSettings_ExcelServerMessageFault_FaultMessag
e"/>
  </wsdl:operation>
  <wsdl:operation name="DdaGetSelectedData">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedData"
message="tns2:ExcelServiceSoap DdaGetSelectedData InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedDataResponse"
message="tns2:ExcelServiceSoap_DdaGetSelectedData_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaGetSelectedData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaSetSelectedData">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedData"
message="tns2:ExcelServiceSoap_DdaSetSelectedData_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedDataResponse"
message="tns2:ExcelServiceSoap DdaSetSelectedData OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaSetSelectedData_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="DdaAddBinding">
        <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBinding"
message="tns2:ExcelServiceSoap_DdaAddBinding_InputMessage"/>
        <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBindingResponse"
message="tns2:ExcelServiceSoap_DdaAddBinding_OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBindingExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap DdaAddBinding ExcelServerMessageFault FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="DdaGetBinding">
          <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBinding"
message="tns2:ExcelServiceSoap DdaGetBinding InputMessage"/>
          <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingResponse"
message="tns2:ExcelServiceSoap DdaGetBinding OutputMessage"/>
          <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaGetBinding_ExcelServerMessageFault_FaultMessage"/>
          </wsdl:operation>
          <wsdl:operation name="DdaReleaseBinding">
            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/DdaReleaseBinding"
message="tns2:ExcelServiceSoap DdaReleaseBinding InputMessage"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaReleaseBindingResponse"
message="tns2:ExcelServiceSoap_DdaReleaseBinding_OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaReleaseBindingExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaReleaseBinding_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="DdaGetBindingData">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingData"
message="tns2:ExcelServiceSoap_DdaGetBindingData_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingDataResponse"
message="tns2:ExcelServiceSoap_DdaGetBindingData_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaGetBindingData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaSetBindingData">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetBindingData"
message="tns2:ExcelServiceSoap_DdaSetBindingData_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetBindingDataResponse"
message="tns2:ExcelServiceSoap_DdaSetBindingData_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetBindingDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaSetBindingData_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="DdaGetAllBindings">
        <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetAllBindings"
message="tns2:ExcelServiceSoap_DdaGetAllBindings_InputMessage"/>
        <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetAllBindingsResponse"
message="tns2:ExcelServiceSoap_DdaGetAllBindings_OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetAllBindingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap DdaGetAllBindings ExcelServerMessageFault FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="DdaLoadSettings">
          <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettings"
message="tns2:ExcelServiceSoap DdaLoadSettings InputMessage"/>
          <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettingsResponse"
message="tns2:ExcelServiceSoap_DdaLoadSettings_OutputMessage"/>
          <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettingsExcelServerMessageFault"

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name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap DdaLoadSettings ExcelServerMessageFault FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="DdaSaveSettings">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettings"
message="tns2:ExcelServiceSoap DdaSaveSettings InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettingsResponse"
message="tns2:ExcelServiceSoap_DdaSaveSettings_OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaSaveSettings_ExcelServerMessageFault_FaultMessage"/>
          </wsdl:operation>
          <wsdl:operation name="GetRangeEmbeddingInfo">
            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeEmbeddingInfo"
message="tns2:ExcelServiceSoap_GetRangeEmbeddingInfo_InputMessage"/>
              <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeEmbeddingInfoResponse"
message="tns2:ExcelServiceSoap GetRangeEmbeddingInfo OutputMessage"/>
                <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeEmbeddingInfoExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetRangeEmbeddingInfo_ExcelServerMessageFault_FaultMessage"/>
                  </wsdl:operation>
                  <wsdl:operation name="DdaAddRowsColumns">
                    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddRowsColumns"
message="tns2:ExcelServiceSoap_DdaAddRowsColumns_InputMessage"/>
                      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddRowsColumnsResponse"
message="tns2:ExcelServiceSoap_DdaAddRowsColumns_OutputMessage"/>
                        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddRowsColumnsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_DdaAddRowsColumns_ExcelServerMessageFault_FaultMessage"/>
                          </wsdl:operation>
                          <wsdl:operation name="DdaDeleteAllDataValues">
                            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaDeleteAllDataValues"
message="tns2:ExcelServiceSoap_DdaDeleteAllDataValues_InputMessage"/>
                              <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaDeleteAllDataValuesResponse"
message="tns2:ExcelServiceSoap_DdaDeleteAllDataValues_OutputMessage"/>
                                <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaDeleteAllDataValuesExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap DdaDeleteAllDataValues ExcelServerMessageFault FaultMessage"/>
                                  </wsdl:operation>
                                  <wsdl:operation name="OpenWorkbook">
                                    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbook"
message="tns2:ExcelServiceSoap OpenWorkbook InputMessage"/>
                                      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/OpenWorkbookResponse"
message="tns2:ExcelServiceSoap_OpenWorkbook_OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_OpenWorkbook_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="CloseWorkbook">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbook"
message="tns2:ExcelServiceSoap_CloseWorkbook_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbookResponse"
message="tns2:ExcelServiceSoap_CloseWorkbook_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_CloseWorkbook_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SaveWorkbook">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbook"
message="tns2:ExcelServiceSoap_SaveWorkbook_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookResponse"
message="tns2:ExcelServiceSoap_SaveWorkbook_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_SaveWorkbook_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="SaveWorkbookAs">
        <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAs"
message="tns2:ExcelServiceSoap_SaveWorkbookAs_InputMessage"/>
        <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsResponse"
message="tns2:ExcelServiceSoap_SaveWorkbookAs_OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_SaveWorkbookAs_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="ParseRange">
          <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ParseRange"
message="tns2:ExcelServiceSoap_ParseRange_InputMessage"/>
          <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ParseRangeResponse"
message="tns2:ExcelServiceSoap_ParseRange_OutputMessage"/>
          <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ParseRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ParseRange_ExcelServerMessageFault_FaultMessage"/>
          </wsdl:operation>
          <wsdl:operation name="GetRange">
            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRange" message="tns2:ExcelServiceSoap_GetRange_InputMessage"/>
            <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/GetRangeResponse"
message="tns2:ExcelServiceSoap GetRange OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetRange_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="GetRangeValues">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValues"
message="tns2:ExcelServiceSoap_GetRangeValues_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesResponse"
message="tns2:ExcelServiceSoap GetRangeValues OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetRangeValues_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ProcessRestRequest">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessRestRequest"
message="tns2:ExcelServiceSoap ProcessRestRequest InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessRestRequestResponse"
message="tns2:ExcelServiceSoap_ProcessRestRequest_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessRestRequestExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ProcessRestRequest_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="GetRangeValuesA1">
        <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1"
message="tns2:ExcelServiceSoap_GetRangeValuesA1_InputMessage"/>
        <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1Response"
message="tns2:ExcelServiceSoap_GetRangeValuesA1_OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1ExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetRangeValuesA1_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="SetRange">
          <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRange" message="tns2:ExcelServiceSoap SetRange InputMessage"/>
          <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeResponse"
message="tns2:ExcelServiceSoap_SetRange_OutputMessage"/>
          <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap SetRange ExcelServerMessageFault FaultMessage"/>
          </wsdl:operation>
          <wsdl:operation name="SetRangeA1">
            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeA1"
message="tns2:ExcelServiceSoap_SetRangeA1_InputMessage"/>

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    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeA1Response"
message="tns2:ExcelServiceSoap_SetRangeA1_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeA1ExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_SetRangeA1_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SetParameters">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetParameters"
message="tns2:ExcelServiceSoap_SetParameters_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetParametersResponse"
message="tns2:ExcelServiceSoap_SetParameters_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetParametersExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_SetParameters_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetRangeForClipboard">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeForClipboard"
message="tns2:ExcelServiceSoap_GetRangeForClipboard_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeForClipboardResponse"
message="tns2:ExcelServiceSoap_GetRangeForClipboard_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeForClipboardExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetRangeForClipboard_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="Refresh">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/Refresh" message="tns2:ExcelServiceSoap Refresh InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshResponse"
message="tns2:ExcelServiceSoap Refresh OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_Refresh_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="RefreshAll">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshAll"
message="tns2:ExcelServiceSoap_RefreshAll_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshAllResponse"
message="tns2:ExcelServiceSoap_RefreshAll_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshAllExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_RefreshAll_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="RecalcAll">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAll" message="tns2:ExcelServiceSoap_RecalcAll_InputMessage"/>

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    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllResponse"
message="tns2:ExcelServiceSoap_RecalcAll_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_RecalcAll_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="CancelRequest">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CancelRequest"
message="tns2:ExcelServiceSoap_CancelRequest_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CancelRequestResponse"
message="tns2:ExcelServiceSoap_CancelRequest_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CancelRequestExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_CancelRequest_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="Recalc">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/Recalc" message="tns2:ExcelServiceSoap_Recalc_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcResponse"
message="tns2:ExcelServiceSoap_Recalc_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_Recalc_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="RecalcAll">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAll" message="tns2:ExcelServiceSoap_RecalcAll_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllResponse"
message="tns2:ExcelServiceSoap_RecalcAll_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_RecalcAll_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetSessionInformation">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSessionInformation"
message="tns2:ExcelServiceSoap_GetSessionInformation_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSessionInformationResponse"
message="tns2:ExcelServiceSoap_GetSessionInformation_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSessionInformationExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetSessionInformation_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="FindRange">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/FindRange" message="tns2:ExcelServiceSoap_FindRange_InputMessage"/>

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    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/FindRangeResponse"
message="tns2:ExcelServiceSoap_FindRange_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/FindRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_FindRange_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyTop10Filter">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTop10Filter"
message="tns2:ExcelServiceSoap_ApplyTop10Filter_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTop10FilterResponse"
message="tns2:ExcelServiceSoap_ApplyTop10Filter_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTop10FilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyTop10Filter_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyItemFilter">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilter"
message="tns2:ExcelServiceSoap_ApplyItemFilter_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilterResponse"
message="tns2:ExcelServiceSoap_ApplyItemFilter_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyItemFilter_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SortFilterColumn">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumn"
message="tns2:ExcelServiceSoap_SortFilterColumn_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumnResponse"
message="tns2:ExcelServiceSoap_SortFilterColumn_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumnExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_SortFilterColumn_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetAutoFilterItemList">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetAutoFilterItemList"
message="tns2:ExcelServiceSoap_GetAutoFilterItemList_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetAutoFilterItemListResponse"
message="tns2:ExcelServiceSoap_GetAutoFilterItemList_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetAutoFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetAutoFilterItemList_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>

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    <wsdl:operation name="GetPivotMenu">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotMenu"
message="tns2:ExcelServiceSoap_GetPivotMenu_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotMenuResponse"
message="tns2:ExcelServiceSoap_GetPivotMenu_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotMenuExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPivotMenu_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ConnectAndGetPivotMenu">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotMenu"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotMenu_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotMenuResponse"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotMenu_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotMenuExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotMenu_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetSlicerItemList">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemList"
message="tns2:ExcelServiceSoap_GetSlicerItemList_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemListResponse"
message="tns2:ExcelServiceSoap_GetSlicerItemList_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetSlicerItemList_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ConnectAndGetSlicerItemList">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemList"
message="tns2:ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListResponse"
message="tns2:ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ConnectAndGetSlicerItemList_ExcelServerMessageFault_FaultMessa
ge"/>
    </wsdl:operation>
    <wsdl:operation name="ApplySlicerSelection">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplySlicerSelection"
message="tns2:ExcelServiceSoap_ApplySlicerSelection_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplySlicerSelectionResponse"
message="tns2:ExcelServiceSoap_ApplySlicerSelection_OutputMessage"/>

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    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplySlicerSelectionExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplySlicerSelection_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="UpdateSlicer">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/UpdateSlicer"
message="tns2:ExcelServiceSoap UpdateSlicer InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/UpdateSlicerResponse"
message="tns2:ExcelServiceSoap_UpdateSlicer_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/UpdateSlicerExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap UpdateSlicer ExcelServerMessageFault FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetPivotFilterItemList">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemList"
message="tns2:ExcelServiceSoap_GetPivotFilterItemList_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemListResponse"
message="tns2:ExcelServiceSoap GetPivotFilterItemList OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap GetPivotFilterItemList ExcelServerMessageFault FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ConnectAndGetPivotFilterItemList">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemList"
message="tns2:ExcelServiceSoap ConnectAndGetPivotFilterItemList InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListResponse"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_ExcelServerMessageFault_Fault
Message"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyPivotFilter">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFilter"
message="tns2:ExcelServiceSoap_ApplyPivotFilter_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFilterResponse"
message="tns2:ExcelServiceSoap_ApplyPivotFilter_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap ApplyPivotFilter ExcelServerMessageFault FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyPivotTop10Filter">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/ApplyPivotTop10Filter"
message="tns2:ExcelServiceSoap ApplyPivotTop10Filter InputMessage"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotTop10FilterResponse"
message="tns2:ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotTop10FilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivotTop10Filter_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="ApplyPivotSort">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSort"
message="tns2:ExcelServiceSoap_ApplyPivotSort_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortResponse"
message="tns2:ExcelServiceSoap_ApplyPivotSort_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ApplyPivotSort_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="TogglePivotDrill">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrill"
message="tns2:ExcelServiceSoap_TogglePivotDrill_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrillResponse"
message="tns2:ExcelServiceSoap_TogglePivotDrill_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrillExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_TogglePivotDrill_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="RemovePivotFilter">
        <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RemovePivotFilter"
message="tns2:ExcelServiceSoap_RemovePivotFilter_InputMessage"/>
        <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RemovePivotFilterResponse"
message="tns2:ExcelServiceSoap_RemovePivotFilter_OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RemovePivotFilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap RemovePivotFilter ExcelServerMessageFault FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="GetWorkbook">
          <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbook"
message="tns2:ExcelServiceSoap_GetWorkbook InputMessage"/>
          <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbookResponse"
message="tns2:ExcelServiceSoap_GetWorkbook_OutputMessage"/>
          <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetWorkbook_ExcelServerMessageFault_FaultMessage"/>

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    </wsdl:operation>
    <wsdl:operation name="GetPublishedObjects">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedObjects"
message="tns2:ExcelServiceSoap_GetPublishedObjects_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedObjectsResponse"
message="tns2:ExcelServiceSoap_GetPublishedObjects_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedObjectsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPublishedObjects_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetObjectInformation">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformation"
message="tns2:ExcelServiceSoap_GetObjectInformation_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformationResponse"
message="tns2:ExcelServiceSoap_GetObjectInformation_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformationExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetObjectInformation_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetSheetNames">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSheetNames"
message="tns2:ExcelServiceSoap_GetSheetNames_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSheetNamesResponse"
message="tns2:ExcelServiceSoap_GetSheetNames_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSheetNamesExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetSheetNames_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetPublishedSheetNames">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedSheetNames"
message="tns2:ExcelServiceSoap_GetPublishedSheetNames_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedSheetNamesResponse"
message="tns2:ExcelServiceSoap_GetPublishedSheetNames_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedSheetNamesExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetPublishedSheetNames_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetSparklines">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSparklines"
message="tns2:ExcelServiceSoap_GetSparklines_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSparklinesResponse"
message="tns2:ExcelServiceSoap_GetSparklines_OutputMessage"/>

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    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSparklinesExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetSparklines_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetImage">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImage" message="tns2:ExcelServiceSoap_GetImage_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImageResponse"
message="tns2:ExcelServiceSoap_GetImage_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImageExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetImage_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetScaledImage">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetScaledImage"
message="tns2:ExcelServiceSoap_GetScaledImage_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetScaledImageResponse"
message="tns2:ExcelServiceSoap_GetScaledImage_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetScaledImageExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetScaledImage_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetChart">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChart" message="tns2:ExcelServiceSoap_GetChart_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartResponse"
message="tns2:ExcelServiceSoap_GetChart_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetChart_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetChartElementData">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartElementData"
message="tns2:ExcelServiceSoap_GetChartElementData_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartElementDataResponse"
message="tns2:ExcelServiceSoap_GetChartElementData_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartElementDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetChartElementData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetRangeImage">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImage"
message="tns2:ExcelServiceSoap_GetRangeImage_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/GetRangeImageResponse"
message="tns2:ExcelServiceSoap GetRangeImage OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImageExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetRangeImage_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="ValidatePrint">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ValidatePrint"
message="tns2:ExcelServiceSoap_ValidatePrint_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ValidatePrintResponse"
message="tns2:ExcelServiceSoap ValidatePrint OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ValidatePrintExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ValidatePrint_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ExpandCollapseOutline">
      <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandCollapseOutline"
message="tns2:ExcelServiceSoap_ExpandCollapseOutline_InputMessage"/>
      <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandCollapseOutlineResponse"
message="tns2:ExcelServiceSoap_ExpandCollapseOutline_OutputMessage"/>
      <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandCollapseOutlineExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_ExpandCollapseOutline_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="SetCalculationOptions">
        <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetCalculationOptions"
message="tns2:ExcelServiceSoap_SetCalculationOptions_InputMessage"/>
        <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetCalculationOptionsResponse"
message="tns2:ExcelServiceSoap SetCalculationOptions OutputMessage"/>
        <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetCalculationOptionsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap SetCalculationOptions ExcelServerMessageFault FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="GetHealthScore">
          <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetHealthScore"
message="tns2:ExcelServiceSoap GetHealthScore InputMessage"/>
          <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetHealthScoreResponse"
message="tns2:ExcelServiceSoap_GetHealthScore_OutputMessage"/>
          <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetHealthScoreExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetHealthScore_ExcelServerMessageFault_FaultMessage"/>
          </wsdl:operation>
          <wsdl:operation name="GetInteractiveReportBootstrapData">
            <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/GetInteractiveReportBootstrapData"
message="tns2:ExcelServiceSoap_GetInteractiveReportBootstrapData_InputMessage"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetInteractiveReportBootstrapDataResponse"
message="tns2:ExcelServiceSoap_GetInteractiveReportBootstrapData_OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetInteractiveReportBootstrapDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetInteractiveReportBootstrapData_ExcelServerMessageFault_Fault
tMessage"/>
  </wsdl:operation>
  <wsdl:operation name="GetTimeSlicerFilterState">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterState"
message="tns2:ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterStateResponse"
message="tns2:ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterStateExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetTimeSlicerFilterState_ExcelServerMessageFault_FaultMessage"
/>
  </wsdl:operation>
  <wsdl:operation name="GetTimeSlicerStrings">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerStrings"
message="tns2:ExcelServiceSoap_GetTimeSlicerStrings_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerStringsResponse"
message="tns2:ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerStringsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetTimeSlicerStrings_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="SaveWorkbookForEditing">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookForEditing"
message="tns2:ExcelServiceSoap_SaveWorkbookForEditing_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookForEditingResponse"
message="tns2:ExcelServiceSoap_SaveWorkbookForEditing_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookForEditingExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_SaveWorkbookForEditing_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="EnsureWorkbookModel">
    <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/EnsureWorkbookModel"
message="tns2:ExcelServiceSoap_EnsureWorkbookModel_InputMessage"/>
    <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/EnsureWorkbookModelResponse"
message="tns2:ExcelServiceSoap_EnsureWorkbookModel_OutputMessage"/>
    <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/EnsureWorkbookModelExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap EnsureWorkbookModel ExcelServerMessageFault FaultMessage"/>
</wsdl:operation>
<wsdl:operation name="GetWorkbookConnections">
  <wsdl:input
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbookConnections"
message="tns2:ExcelServiceSoap_GetWorkbookConnections_InputMessage"/>
  <wsdl:output
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbookConnectionsResponse"
message="tns2:ExcelServiceSoap_GetWorkbookConnections_OutputMessage"/>
  <wsdl:fault
wsaw:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbookConnectionsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns2:ExcelServiceSoap_GetWorkbookConnections_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
</wsdl:portType>
<wsdl:binding name="DefaultBinding_ExcelServiceSoap" type="tns2:ExcelServiceSoap">
  <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="PasteRange">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/PasteRange" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="PasteString">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/PasteString" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplyToRange">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ApplyToRange" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetFunctionList">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetFunctionList" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>

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        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="AutoFit">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalservice/ExcelServiceSoap/AutoFit" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="ResizeRowsColumns">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalservice/ExcelServiceSoap/ResizeRowsColumns" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="GenerateWorkbookFromHtml">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalservice/ExcelServiceSoap/GenerateWorkbookFromHtml" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="GetBixAnalysis">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalservice/ExcelServiceSoap/GetBixAnalysis" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="BixDrill">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalservice/ExcelServiceSoap/BixDrill" style="document"/>
        <wsdl:input>

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        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetPivotFieldManagerData">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetPivotFieldManagerData" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetPivotFieldListData">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetPivotFieldListData" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ExpandPivotFieldListLevels">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ExpandPivotFieldListLevels" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivotFieldManagerHiddenState">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ApplyPivotFieldManagerHiddenState" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivot">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ApplyPivot" style="document"/>

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    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplyTimeSlicerInteractivity">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyTimeSlicerInteractivity" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplyPivotValueFieldSettings">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivotValueFieldSettings" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetPivotValueFieldSettings">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotValueFieldSettings" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="DdaGetSelectedData">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaGetSelectedData" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="DdaSetSelectedData">

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    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaSetSelectedData" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaAddBinding">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaAddBinding" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaGetBinding">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaGetBinding" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaReleaseBinding">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaReleaseBinding" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaGetBindingData">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaGetBindingData" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>

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    <wsdl:operation name="DdaSetBindingData">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaSetBindingData" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="DdaGetAllBindings">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaGetAllBindings" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="DdaLoadSettings">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaLoadSettings" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="DdaSaveSettings">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaSaveSettings" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetRangeEmbeddingInfo">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeEmbeddingInfo" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>

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</wsdl:operation>
<wsdl:operation name="DdaAddRowsColumns">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaAddRowsColumns" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaDeleteAllDataValues">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaDeleteAllDataValues" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="OpenWorkbook">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/OpenWorkbook" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="CloseWorkbook">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/CloseWorkbook" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SaveWorkbook">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/SaveWorkbook" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>

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        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="SaveWorkbookAs">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/SaveWorkbookAs" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="ParseRange">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ParseRange" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetRange">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRange" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetRangeValues">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeValues" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="ProcessRestRequest">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ProcessRestRequest" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">

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        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetRangeValuesA1">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeValuesA1" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
</wsdl:operation name="SetRange">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/SetRange" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
<wsdl:operation name="SetRangeA1">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/SetRangeA1" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
</wsdl:operation name="SetParameters">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/SetParameters" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
<wsdl:operation name="GetRangeForClipboard">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeForClipboard" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>

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        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="Refresh">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/Refresh" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="RefreshAll">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/RefreshAll" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="RecalcAll">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/RecalcAll" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="CancelRequest">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/CancelRequest" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="Recalc">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/Recalc" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>

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        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="RecalcA1">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/RecalcA1" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="GetSessionInformation">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetSessionInformation" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="FindRange">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/FindRange" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="ApplyTop10Filter">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ApplyTop10Filter" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
          <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
      </wsdl:operation>
      <wsdl:operation name="ApplyItemFilter">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ApplyItemFilter" style="document"/>
        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>

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        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SortFilterColumn">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/SortFilterColumn" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetAutoFilterItemList">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetAutoFilterItemList" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetPivotMenu">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetPivotMenu" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ConnectAndGetPivotMenu">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ConnectAndGetPivotMenu" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetSlicerItemList">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetSlicerItemList" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>

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    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ConnectAndGetSlicerItemList">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ConnectAndGetSlicerItemList" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplySlicerSelection">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplySlicerSelection" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="UpdateSlicer">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/UpdateSlicer" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetPivotFilterItemList">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotFilterItemList" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ConnectAndGetPivotFilterItemList">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ConnectAndGetPivotFilterItemList" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>

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    </wsdl:input>
  </wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivotFilter">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ApplyPivotFilter" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
<wsdl:operation name="ApplyPivotTop10Filter">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ApplyPivotTop10Filter" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
<wsdl:operation name="ApplyPivotSort">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ApplyPivotSort" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
<wsdl:operation name="TogglePivotDrill">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/TogglePivotDrill" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
<wsdl:operation name="RemovePivotFilter">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/RemovePivotFilter" style="document"/>
    <wsdl:input>

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        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetWorkbook">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetWorkbook" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetPublishedObjects">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetPublishedObjects" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetObjectInformation">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetObjectInformation" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetSheetNames">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetSheetNames" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetPublishedSheetNames">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetPublishedSheetNames" style="document"/>

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    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetSparklines">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSparklines" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetImage">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetImage" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetScaledImage">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetScaledImage" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetChart">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetChart" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetChartData">

```

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    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetChartElementData" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetRangeImage">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeImage" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ValidatePrint">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ValidatePrint" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ExpandCollapseOutline">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ExpandCollapseOutline" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="SetCalculationOptions">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/SetCalculationOptions" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>

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```

    <wsdl:operation name="GetHealthScore">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetHealthScore" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetInteractiveReportBootstrapData">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetInteractiveReportBootstrapData" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetTimeSlicerFilterState">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetTimeSlicerFilterState" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetTimeSlicerStrings">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetTimeSlicerStrings" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="SaveWorkbookForEditing">
      <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/SaveWorkbookForEditing" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>

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</wsdl:operation>
<wsdl:operation name="EnsureWorkbookModel">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/EnsureWorkbookModel" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetWorkbookConnections">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetWorkbookConnections" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
</wsdl:binding>
<wsdl:message name="ExcelServiceSoap ApplyItemFilter ExcelServerMessageFault FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap ApplyItemFilter InputMessage">
  <wsdl:part name="parameters" element="tns2:ApplyItemFilter"/>
</wsdl:part>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap ApplyItemFilter OutputMessage">
  <wsdl:part name="parameters" element="tns2:ApplyItemFilterResponse"/>
</wsdl:part>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap ApplyPivot ExcelServerMessageFault FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap ApplyPivot InputMessage">
  <wsdl:part name="parameters" element="tns2:ApplyPivot"/>
</wsdl:part>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap ApplyPivot OutputMessage">
  <wsdl:part name="parameters" element="tns2:ApplyPivotResponse"/>
</wsdl:part>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap ApplyPivotFieldManagerHiddenState ExcelServerMessageFault FaultMessage
">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap ApplyPivotFieldManagerHiddenState InputMessage">
  <wsdl:part name="parameters" element="tns2:ApplyPivotFieldManagerHiddenState"/>
</wsdl:part>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap ApplyPivotFieldManagerHiddenState OutputMessage">
  <wsdl:part name="parameters" element="tns2:ApplyPivotFieldManagerHiddenStateResponse"/>
</wsdl:part>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap ApplyPivotFilter ExcelServerMessageFault FaultMessage">

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    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotFilter_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotFilter"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotFilter_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotFilterResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotSort_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotSort_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotSort"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotSort_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotSortResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ApplyPivotTop10Filter_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotTop10Filter"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotTop10FilterResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ApplyPivotValueFieldSettings_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotValueFieldSettings"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyPivotValueFieldSettingsResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ApplySlicerSelection_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplySlicerSelection_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplySlicerSelection"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplySlicerSelection_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplySlicerSelectionResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ApplyTimeSlicerInteractivity_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyTimeSlicerInteractivity"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyTimeSlicerInteractivityResponse"/>
    </wsdl:message>

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    <wsdl:message
name="ExcelServiceSoap_ApplyTop10Filter_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyTop10Filter_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyTop10Filter"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyTop10Filter_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyTop10FilterResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyToRange_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyToRange_InputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyToRange"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyToRange_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ApplyToRangeResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_AutoFit_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_AutoFit_InputMessage">
    <wsdl:part name="parameters" element="tns2:AutoFit"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_AutoFit_OutputMessage">
    <wsdl:part name="parameters" element="tns2:AutoFitResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_BixDrill_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_BixDrill_InputMessage">
    <wsdl:part name="parameters" element="tns2:BixDrill"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_BixDrill_OutputMessage">
    <wsdl:part name="parameters" element="tns2:BixDrillResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_CancelRequest_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_CancelRequest_InputMessage">
    <wsdl:part name="parameters" element="tns2:CancelRequest"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_CancelRequest_OutputMessage">
    <wsdl:part name="parameters" element="tns2:CancelRequestResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_CloseWorkbook_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_CloseWorkbook_InputMessage">
    <wsdl:part name="parameters" element="tns2:CloseWorkbook"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_CloseWorkbook_OutputMessage">
    <wsdl:part name="parameters" element="tns2:CloseWorkbookResponse"/>
    </wsdl:message>

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    <wsdl:message
name="ExcelServiceSoap_ConnectAndGetPivotFilterItemList_ExcelServerMessageFault_FaultMessage"
>
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage">
    <wsdl:part name="parameters" element="tns2:ConnectAndGetPivotFilterItemList"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ConnectAndGetPivotFilterItemListResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ConnectAndGetPivotMenu_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ConnectAndGetPivotMenu_InputMessage">
    <wsdl:part name="parameters" element="tns2:ConnectAndGetPivotMenu"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ConnectAndGetPivotMenu_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ConnectAndGetPivotMenuResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ConnectAndGetSlicerItemList_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage">
    <wsdl:part name="parameters" element="tns2:ConnectAndGetSlicerItemList"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ConnectAndGetSlicerItemListResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_DdaAddBinding_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_DdaAddBinding_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaAddBinding"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_DdaAddBinding_OutputMessage">
    <wsdl:part name="parameters" element="tns2:DdaAddBindingResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_DdaAddRowsColumns_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_DdaAddRowsColumns_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaAddRowsColumns"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_DdaAddRowsColumns_OutputMessage">
    <wsdl:part name="parameters" element="tns2:DdaAddRowsColumnsResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_DdaDeleteAllDataValues_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_DdaDeleteAllDataValues_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaDeleteAllDataValues"/>
    </wsdl:message>

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    <wsdl:message name="ExcelServiceSoap_DdaDeleteAllDataValues_OutputMessage">
      <wsdl:part name="parameters" element="tns2:DdaDeleteAllDataValuesResponse"/>
    </wsdl:message>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_DdaGetAllBindings_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaGetAllBindings_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetAllBindings"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaGetAllBindings_OutputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetAllBindingsResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaGetBinding_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaGetBinding_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetBinding"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaGetBinding_OutputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetBindingResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_DdaGetBindingData_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaGetBindingData_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetBindingData"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap DdaGetBindingData OutputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetBindingDataResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap DdaGetSelectedData ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaGetSelectedData_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetSelectedData"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap DdaGetSelectedData OutputMessage">
    <wsdl:part name="parameters" element="tns2:DdaGetSelectedDataResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaLoadSettings_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaLoadSettings_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaLoadSettings"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap DdaLoadSettings OutputMessage">
    <wsdl:part name="parameters" element="tns2:DdaLoadSettingsResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap DdaReleaseBinding ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_DdaReleaseBinding_InputMessage">
    <wsdl:part name="parameters" element="tns2:DdaReleaseBinding"/>
  </wsdl:message>

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</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaReleaseBinding_OutputMessage">
  <wsdl:part name="parameters" element="tns2:DdaReleaseBindingResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSaveSettings_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSaveSettings_InputMessage">
  <wsdl:part name="parameters" element="tns2:DdaSaveSettings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSaveSettings_OutputMessage">
  <wsdl:part name="parameters" element="tns2:DdaSaveSettingsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaSetBindingData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSetBindingData_InputMessage">
  <wsdl:part name="parameters" element="tns2:DdaSetBindingData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSetBindingData_OutputMessage">
  <wsdl:part name="parameters" element="tns2:DdaSetBindingDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaSetSelectedData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSetSelectedData_InputMessage">
  <wsdl:part name="parameters" element="tns2:DdaSetSelectedData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSetSelectedData_OutputMessage">
  <wsdl:part name="parameters" element="tns2:DdaSetSelectedDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_EnsureWorkbookModel_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_EnsureWorkbookModel_InputMessage">
  <wsdl:part name="parameters" element="tns2:EnsureWorkbookModel"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_EnsureWorkbookModel_OutputMessage">
  <wsdl:part name="parameters" element="tns2:EnsureWorkbookModelResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ExpandCollapseOutline_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ExpandCollapseOutline_InputMessage">
  <wsdl:part name="parameters" element="tns2:ExpandCollapseOutline"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ExpandCollapseOutline_OutputMessage">
  <wsdl:part name="parameters" element="tns2:ExpandCollapseOutlineResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ExpandPivotFieldListLevels_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>

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    <wsdl:message name="ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage">
      <wsdl:part name="parameters" element="tns2:ExpandPivotFieldListLevels"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage">
      <wsdl:part name="parameters" element="tns2:ExpandPivotFieldListLevelsResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_FindRange_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_FindRange_InputMessage">
      <wsdl:part name="parameters" element="tns2:FindRange"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_FindRange_OutputMessage">
      <wsdl:part name="parameters" element="tns2:FindRangeResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_GenerateWorkbookFromHtml_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage">
      <wsdl:part name="parameters" element="tns2:GenerateWorkbookFromHtml"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage">
      <wsdl:part name="parameters" element="tns2:GenerateWorkbookFromHtmlResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_GetAutoFilterItemList_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetAutoFilterItemList_InputMessage">
      <wsdl:part name="parameters" element="tns2:GetAutoFilterItemList"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetAutoFilterItemList_OutputMessage">
      <wsdl:part name="parameters" element="tns2:GetAutoFilterItemListResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetBixAnalysis_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetBixAnalysis_InputMessage">
      <wsdl:part name="parameters" element="tns2:GetBixAnalysis"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetBixAnalysis_OutputMessage">
      <wsdl:part name="parameters" element="tns2:GetBixAnalysisResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetChart_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetChart_InputMessage">
      <wsdl:part name="parameters" element="tns2:GetChart"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetChart_OutputMessage">
      <wsdl:part name="parameters" element="tns2:GetChartResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_GetChartDataElementData_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>

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<wsdl:message name="ExcelServiceSoap_GetChartDataElementData_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetChartDataElementData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetChartDataElementData_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetChartDataElementDataResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetFunctionList_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
<wsdl:message name="ExcelServiceSoap_GetFunctionList_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetFunctionList"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetFunctionList_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetFunctionListResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetHealthScore_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
<wsdl:message name="ExcelServiceSoap_GetHealthScore_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetHealthScore"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetHealthScore_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetHealthScoreResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetImage_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
<wsdl:message name="ExcelServiceSoap_GetImage_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetImage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetImage_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetImageResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetInteractiveReportBootstrapData_ExcelServerMessageFault_FaultMessage
">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
<wsdl:message name="ExcelServiceSoap_GetInteractiveReportBootstrapData_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetInteractiveReportBootstrapData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetInteractiveReportBootstrapData_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetInteractiveReportBootstrapDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetObjectInformation_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>
<wsdl:message name="ExcelServiceSoap_GetObjectInformation_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetObjectInformation"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetObjectInformation_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetObjectInformationResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPivotFieldListData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:part>

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</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFieldListData_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotFieldListData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFieldListData_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotFieldListDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPivotFieldManagerData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFieldManagerData_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotFieldManagerData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotFieldManagerDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPivotFilterItemList_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFilterItemList_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotFilterItemList"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFilterItemList_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotFilterItemListResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotMenu_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotMenu_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotMenu"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotMenu_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotMenuResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPivotValueFieldSettings_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotValueFieldSettings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetPivotValueFieldSettingsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPublishedObjects_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPublishedObjects_InputMessage">
  <wsdl:part name="parameters" element="tns2:GetPublishedObjects"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPublishedObjects_OutputMessage">
  <wsdl:part name="parameters" element="tns2:GetPublishedObjectsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPublishedSheetNames_ExcelServerMessageFault_FaultMessage">

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    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetPublishedSheetNames_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetPublishedSheetNames"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetPublishedSheetNames_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetPublishedSheetNamesResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetRange_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetRange_InputMessage">
        <wsdl:part name="parameters" element="tns2:GetRange"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetRange_OutputMessage">
        <wsdl:part name="parameters" element="tns2:GetRangeResponse"/>
      </wsdl:message>
      <wsdl:message
name="ExcelServiceSoap_GetRangeEmbeddingInfo_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetRangeEmbeddingInfo_InputMessage">
            <wsdl:part name="parameters" element="tns2:GetRangeEmbeddingInfo"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetRangeEmbeddingInfo_OutputMessage">
            <wsdl:part name="parameters" element="tns2:GetRangeEmbeddingInfoResponse"/>
          </wsdl:message>
          <wsdl:message
name="ExcelServiceSoap_GetRangeForClipboard_ExcelServerMessageFault_FaultMessage">
            <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_GetRangeForClipboard_InputMessage">
                <wsdl:part name="parameters" element="tns2:GetRangeForClipboard"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_GetRangeForClipboard_OutputMessage">
                <wsdl:part name="parameters" element="tns2:GetRangeForClipboardResponse"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_GetRangeImage_ExcelServerMessageFault_FaultMessage">
                <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_GetRangeImage_InputMessage">
                    <wsdl:part name="parameters" element="tns2:GetRangeImage"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_GetRangeImage_OutputMessage">
                    <wsdl:part name="parameters" element="tns2:GetRangeImageResponse"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_GetRangeValues_ExcelServerMessageFault_FaultMessage">
                    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
                      </wsdl:message>
                      <wsdl:message name="ExcelServiceSoap_GetRangeValues_InputMessage">
                        <wsdl:part name="parameters" element="tns2:GetRangeValues"/>
                      </wsdl:message>
                      <wsdl:message name="ExcelServiceSoap_GetRangeValues_OutputMessage">
                        <wsdl:part name="parameters" element="tns2:GetRangeValuesResponse"/>
                      </wsdl:message>
                      <wsdl:message
name="ExcelServiceSoap_GetRangeValuesAll_ExcelServerMessageFault_FaultMessage">

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    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetRangeValuesA1_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetRangeValuesA1"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetRangeValuesA1_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetRangeValuesA1Response"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetScaledImage_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetScaledImage_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetScaledImage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetScaledImage_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetScaledImageResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_GetSessionInformation_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSessionInformation_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetSessionInformation"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSessionInformation_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetSessionInformationResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSheetNames_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSheetNames_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetSheetNames"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSheetNames_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetSheetNamesResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_GetSlicerItemList_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSlicerItemList_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetSlicerItemList"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSlicerItemList_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetSlicerItemListResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSparklines_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSparklines_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetSparklines"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetSparklines_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetSparklinesResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_GetTimeSlicerFilterState_ExcelServerMessageFault_FaultMessage">

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    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage">
    <wsdl:part name="parameters" element="tns2:GetTimeSlicerFilterState"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage">
    <wsdl:part name="parameters" element="tns2:GetTimeSlicerFilterStateResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_GetTimeSlicerStrings_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetTimeSlicerStrings_InputMessage">
        <wsdl:part name="parameters" element="tns2:GetTimeSlicerStrings"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage">
        <wsdl:part name="parameters" element="tns2:GetTimeSlicerStringsResponse"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetWorkbook_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetWorkbook_InputMessage">
            <wsdl:part name="parameters" element="tns2:GetWorkbook"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetWorkbook_OutputMessage">
            <wsdl:part name="parameters" element="tns2:GetWorkbookResponse"/>
          </wsdl:message>
          <wsdl:message
name="ExcelServiceSoap_GetWorkbookConnections_ExcelServerMessageFault_FaultMessage">
            <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_GetWorkbookConnections_InputMessage">
                <wsdl:part name="parameters" element="tns2:GetWorkbookConnections"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_GetWorkbookConnections_OutputMessage">
                <wsdl:part name="parameters" element="tns2:GetWorkbookConnectionsResponse"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_OpenWorkbook_ExcelServerMessageFault_FaultMessage">
                <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_OpenWorkbook_InputMessage">
                    <wsdl:part name="parameters" element="tns2:OpenWorkbook"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_OpenWorkbook_OutputMessage">
                    <wsdl:part name="parameters" element="tns2:OpenWorkbookResponse"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_ParseRange_ExcelServerMessageFault_FaultMessage">
                    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
                      </wsdl:message>
                      <wsdl:message name="ExcelServiceSoap_ParseRange_InputMessage">
                        <wsdl:part name="parameters" element="tns2:ParseRange"/>
                      </wsdl:message>
                      <wsdl:message name="ExcelServiceSoap_ParseRange_OutputMessage">
                        <wsdl:part name="parameters" element="tns2:ParseRangeResponse"/>
                      </wsdl:message>
                      <wsdl:message name="ExcelServiceSoap_PasteRange_ExcelServerMessageFault_FaultMessage">

```



```

    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_PasteRange_InputMessage">
    <wsdl:part name="parameters" element="tns2:PasteRange"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_PasteRange_OutputMessage">
    <wsdl:part name="parameters" element="tns2:PasteRangeResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap PasteString ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_PasteString_InputMessage">
    <wsdl:part name="parameters" element="tns2:PasteString"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap PasteString OutputMessage">
    <wsdl:part name="parameters" element="tns2:PasteStringResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap ProcessRestRequest ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ProcessRestRequest_InputMessage">
    <wsdl:part name="parameters" element="tns2:ProcessRestRequest"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap ProcessRestRequest OutputMessage">
    <wsdl:part name="parameters" element="tns2:ProcessRestRequestResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap Recalc ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_Recalc_InputMessage">
    <wsdl:part name="parameters" element="tns2:Recalc"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap Recalc OutputMessage">
    <wsdl:part name="parameters" element="tns2:RecalcResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_RecalcA1_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_RecalcA1_InputMessage">
    <wsdl:part name="parameters" element="tns2:RecalcA1"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_RecalcA1_OutputMessage">
    <wsdl:part name="parameters" element="tns2:RecalcA1Response"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_RecalcAll_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_RecalcAll_InputMessage">
    <wsdl:part name="parameters" element="tns2:RecalcAll"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_RecalcAll_OutputMessage">
    <wsdl:part name="parameters" element="tns2:RecalcAllResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_Refresh_ExcelServerMessageFault_FaultMessage">

```

```

    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_Refresh_InputMessage">
    <wsdl:part name="parameters" element="tns2:Refresh"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_Refresh_OutputMessage">
    <wsdl:part name="parameters" element="tns2:RefreshResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap RefreshAll ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_RefreshAll_InputMessage">
    <wsdl:part name="parameters" element="tns2:RefreshAll"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap RefreshAll OutputMessage">
    <wsdl:part name="parameters" element="tns2:RefreshAllResponse"/>
    </wsdl:message>
    </wsdl:message>
name="ExcelServiceSoap RemovePivotFilter ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_RemovePivotFilter_InputMessage">
    <wsdl:part name="parameters" element="tns2:RemovePivotFilter"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap RemovePivotFilter OutputMessage">
    <wsdl:part name="parameters" element="tns2:RemovePivotFilterResponse"/>
    </wsdl:message>
    </wsdl:message>
name="ExcelServiceSoap_ResizeRowsColumns_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap ResizeRowsColumns InputMessage">
    <wsdl:part name="parameters" element="tns2:ResizeRowsColumns"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ResizeRowsColumns_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ResizeRowsColumnsResponse"/>
    </wsdl:message>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap SaveWorkbook ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_SaveWorkbook_InputMessage">
    <wsdl:part name="parameters" element="tns2:SaveWorkbook"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap SaveWorkbook OutputMessage">
    <wsdl:part name="parameters" element="tns2:SaveWorkbookResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap SaveWorkbookAs ExcelServerMessageFault FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_SaveWorkbookAs_InputMessage">
    <wsdl:part name="parameters" element="tns2:SaveWorkbookAs"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap SaveWorkbookAs OutputMessage">
    <wsdl:part name="parameters" element="tns2:SaveWorkbookAsResponse"/>
    </wsdl:message>
    </wsdl:message>
name="ExcelServiceSoap_SaveWorkbookForEditing_ExcelServerMessageFault_FaultMessage">

```

```

    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_SaveWorkbookForEditing_InputMessage">
    <wsdl:part name="parameters" element="tns2:SaveWorkbookForEditing"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_SaveWorkbookForEditing_OutputMessage">
    <wsdl:part name="parameters" element="tns2:SaveWorkbookForEditingResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_SetCalculationOptions_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_SetCalculationOptions_InputMessage">
        <wsdl:part name="parameters" element="tns2:SetCalculationOptions"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_SetCalculationOptions_OutputMessage">
        <wsdl:part name="parameters" element="tns2:SetCalculationOptionsResponse"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_SetParameters_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_SetParameters_InputMessage">
            <wsdl:part name="parameters" element="tns2:SetParameters"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_SetParameters_OutputMessage">
            <wsdl:part name="parameters" element="tns2:SetParametersResponse"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_SetRange_ExcelServerMessageFault_FaultMessage">
            <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_SetRange_InputMessage">
                <wsdl:part name="parameters" element="tns2:SetRange"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_SetRange_OutputMessage">
                <wsdl:part name="parameters" element="tns2:SetRangeResponse"/>
              </wsdl:message>
              <wsdl:message name="ExcelServiceSoap_SetRangeA1_ExcelServerMessageFault_FaultMessage">
                <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_SetRangeA1_InputMessage">
                    <wsdl:part name="parameters" element="tns2:SetRangeA1"/>
                  </wsdl:message>
                  <wsdl:message name="ExcelServiceSoap_SetRangeA1_OutputMessage">
                    <wsdl:part name="parameters" element="tns2:SetRangeA1Response"/>
                  </wsdl:message>
                  <wsdl:message
name="ExcelServiceSoap_SortFilterColumn_ExcelServerMessageFault_FaultMessage">
                    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
                      </wsdl:message>
                      <wsdl:message name="ExcelServiceSoap_SortFilterColumn_InputMessage">
                        <wsdl:part name="parameters" element="tns2:SortFilterColumn"/>
                      </wsdl:message>
                      <wsdl:message name="ExcelServiceSoap_SortFilterColumn_OutputMessage">
                        <wsdl:part name="parameters" element="tns2:SortFilterColumnResponse"/>
                      </wsdl:message>
                      <wsdl:message
name="ExcelServiceSoap_TogglePivotDrill_ExcelServerMessageFault_FaultMessage">

```

```

    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_TogglePivotDrill_InputMessage">
    <wsdl:part name="parameters" element="tns2:TogglePivotDrill"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_TogglePivotDrill_OutputMessage">
    <wsdl:part name="parameters" element="tns2:TogglePivotDrillResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_UpdateSlicer_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_UpdateSlicer_InputMessage">
    <wsdl:part name="parameters" element="tns2:UpdateSlicer"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_UpdateSlicer_OutputMessage">
    <wsdl:part name="parameters" element="tns2:UpdateSlicerResponse"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ValidatePrint_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="tns:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ValidatePrint_InputMessage">
    <wsdl:part name="parameters" element="tns2:ValidatePrint"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ValidatePrint_OutputMessage">
    <wsdl:part name="parameters" element="tns2:ValidatePrintResponse"/>
  </wsdl:message>
</wsdl:definitions>

```

7 Appendix B: Full XML Schema

Schema name	Prefix	Section
http://microsoft.com/wsdl/types/	q2	7.1
http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server	tns	7.2
http://schemas.microsoft.com/2003/10/Serialization/Arrays	q1	7.4
http://schemas.microsoft.com/2003/10/Serialization/	tns1	7.3
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/	tns2	7.5

For ease of implementation, the following sections provide the full XML schema for this protocol.

7.1 http://microsoft.com/wsdl/types/ Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema elementFormDefault="qualified" targetNamespace="http://microsoft.com/wsdl/types/"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:simpleType name="guid">
    <xs:restriction base="xs:string">
      <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
    </xs:restriction>
  </xs:simpleType>
</xs:schema>
```

7.2 http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
elementFormDefault="qualified"
targetNamespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="ExcelServerMessage">
    <xs:sequence>
      <xs:element minOccurs="0" name="Appearance" type="tns:ExcelServerMessageAppearance"/>
      <xs:element minOccurs="0" name="Caption" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="DebugInfo" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="Description" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="DisplaysCorrelationId" type="xs:boolean"/>
      <xs:element minOccurs="0" name="ExtendedDescription" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="HasClientUrl" type="xs:boolean"/>
      <xs:element minOccurs="0" name="HasOpenItemPermission" type="xs:boolean"/>
      <xs:element minOccurs="0" name="HealthInformation" nillable="true"
type="tns:ServerHealthInformation"/>
      <xs:element minOccurs="0" name="HelpDisplayText" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="HelpTopicId" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="Id" type="tns:ExcelServerMessageId"/>
      <xs:element minOccurs="0" name="Severity" type="tns:ExcelServerMessageSeverity"/>
      <xs:element minOccurs="0" name="Type" type="tns:ExcelServerMessageType"/>
      <xs:element minOccurs="0" name="WrongEcsServerId" nillable="true" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ExcelServerMessage" nillable="true" type="tns:ExcelServerMessage"/>
  <xs:simpleType name="ExcelServerMessageAppearance">
    <xs:list>
```

```

    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="OK"/>
        <xs:enumeration value="Cancel"/>
        <xs:enumeration value="Yes"/>
        <xs:enumeration value="No"/>
        <xs:enumeration value="Notification"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:element name="ExcelServerMessageAppearance" nillable="true"
type="tns:ExcelServerMessageAppearance"/>
<xs:complexType name="ServerHealthInformation">
  <xs:sequence>
    <xs:element minOccurs="0" name="HealthScore" type="xs:float"/>
    <xs:element minOccurs="0" name="StateFlags" type="tns:ServerStateFlags"/>
    <xs:element minOccurs="0" name="ThrottlingInformation" nillable="true"
type="tns:ServerThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="ServerHealthInformation" nillable="true"
type="tns:ServerHealthInformation"/>
<xs:simpleType name="ServerStateFlags">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Probation"/>
        <xs:enumeration value="ShuttingDown"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:element name="ServerStateFlags" nillable="true" type="tns:ServerStateFlags"/>
<xs:complexType name="ServerThrottlingInformation">
  <xs:sequence>
    <xs:element minOccurs="0" name="CpuUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="MemoryUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="ScenarioThrottlingInformationList" nillable="true"
type="tns:ArrayOfScenarioThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="ServerThrottlingInformation" nillable="true"
type="tns:ServerThrottlingInformation"/>
<xs:complexType name="ArrayOfScenarioThrottlingInformation">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ScenarioThrottlingInformation"
nillable="true" type="tns:ScenarioThrottlingInformation"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="ArrayOfScenarioThrottlingInformation" nillable="true"
type="tns:ArrayOfScenarioThrottlingInformation"/>
<xs:complexType name="ScenarioThrottlingInformation">
  <xs:sequence>
    <xs:element minOccurs="0" name="CpuUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="MemoryUsage" type="xs:long"/>
    <xs:element minOccurs="0" name="Scenario" nillable="true" type="xs:string"/>
    <xs:element xmlns:q1="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
minOccurs="0" name="SubscriberList" nillable="true" type="q1:ArrayOfstring"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="ScenarioThrottlingInformation" nillable="true"
type="tns:ScenarioThrottlingInformation"/>
<xs:simpleType name="ExcelServerMessageId">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Blank"/>
    <xs:enumeration value="InternalError"/>
  </xs:restriction>
</xs:simpleType>

```

```

<xs:enumeration value="NotMemberOfRole"/>
<xs:enumeration value="EncryptionTooLow"/>
<xs:enumeration value="ConfirmDataRefresh"/>
<xs:enumeration value="ExternalDataRefreshFailed"/>
<xs:enumeration value="ExternalDataRefreshFailedReal"/>
<xs:enumeration value="ExternalDataRefreshFailedReadOnly"/>
<xs:enumeration value="NoAccessToOdcReadOnly"/>
<xs:enumeration value="ErrorConnectingToDataSourceReadOnly"/>
<xs:enumeration value="InvalidUserNameOrPasswordReadOnly"/>
<xs:enumeration value="InvalidUserNameOrPassword"/>
<xs:enumeration value="ExternalDataNotAllowedOnTL"/>
<xs:enumeration value="InvalidUriOrLocalConnectionPath"/>
<xs:enumeration value="DclNotTrusted"/>
<xs:enumeration value="OdcFileDoesNotExist"/>
<xs:enumeration value="OdcNotSupported"/>
<xs:enumeration value="ErrorAccessingSsoFromEcs"/>
<xs:enumeration value="SsoError"/>
<xs:enumeration value="ErrorConnectingToDataSource"/>
<xs:enumeration value="UnattendedAccountNotConfigured"/>
<xs:enumeration value="IncorrectAuthUsed"/>
<xs:enumeration value="ExternalDataRefreshFailed_Details"/>
<xs:enumeration value="GenericModelFailure"/>
<xs:enumeration value="ModelStreamingFailure"/>
<xs:enumeration value="NoStreamingServers"/>
<xs:enumeration value="LegacyModelError"/>
<xs:enumeration value="ConnectionChangeOutOfSync"/>
<xs:enumeration value="PivotNoOverlapAllowed"/>
<xs:enumeration value="PivotOverlapList"/>
<xs:enumeration value="PivotCubeNotUnique"/>
<xs:enumeration value="NoDataItemsOlap"/>
<xs:enumeration value="OlapSchemaFail"/>
<xs:enumeration value="InvalidPivot"/>
<xs:enumeration value="OlapNoMoreDetail"/>
<xs:enumeration value="DrillActionInvalid"/>
<xs:enumeration value="DriverNotOlap"/>
<xs:enumeration value="CubeMissing"/>
<xs:enumeration value="SkipLine"/>
<xs:enumeration value="CDimMismatch"/>
<xs:enumeration value="DataSetAxisTooBig"/>
<xs:enumeration value="CubeIntegrityError"/>
<xs:enumeration value="PivotNotExpandedToProtectCellContents"/>
<xs:enumeration value="PivotTruncatedSheetEdge"/>
<xs:enumeration value="DdlGrpNotSup"/>
<xs:enumeration value="PivotFormulasCollided"/>
<xs:enumeration value="NoRetItems"/>
<xs:enumeration value="OlapConnectVisualModeProvider"/>
<xs:enumeration value="PivotNoSourceData"/>
<xs:enumeration value="PivotFilteringError"/>
<xs:enumeration value="PivotTableIncorrectDateFormat"/>
<xs:enumeration value="PivotTableEndingLargerThanStarting"/>
<xs:enumeration value="PivotTableIncorrectNumberFormat"/>
<xs:enumeration value="MergedCellOverlap"/>
<xs:enumeration value="PivotSourceNotAvailable"/>
<xs:enumeration value="UnexpectedPivotError"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownReason"/>
<xs:enumeration value="EditModeCannotAcquireLock"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownUser"/>
<xs:enumeration value="EditModeWorkbookCheckedOutRequired"/>
<xs:enumeration value="EditModeWorkbookCheckedOutToLocalDrafts"/>
<xs:enumeration value="SiteTooBusy"/>
<xs:enumeration value="SiteCollectionMemoryQuotaExceeded"/>
<xs:enumeration value="SessionMemoryQuotaExceeded"/>
<xs:enumeration value="SiteCollectionChartQuotaExceeded"/>
<xs:enumeration value="RequestLimitsExceeded"/>
<xs:enumeration value="SavingUnsupportedInViewMode"/>
<xs:enumeration value="SavingWorkbookNoWorkbookName"/>
<xs:enumeration value="FileSaveGeneric"/>
<xs:enumeration value="SavingWorkbookInvalidPermissions"/>
<xs:enumeration value="SavingWorkbookLockedOrCheckedOut"/>

```

```

<xs:enumeration value="SavingWorkbookNotCheckedOut"/>
<xs:enumeration value="SavingWorkbookAccessDenied"/>
<xs:enumeration value="SavingWorkbookInvalidFileType"/>
<xs:enumeration value="SavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookNotTrustedLocation"/>
<xs:enumeration value="SavingWorkbookInvalidLocation"/>
<xs:enumeration value="SavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookTrustedLocationSettingWarning"/>
<xs:enumeration value="SavingWorkbookAlmostTooLarge"/>
<xs:enumeration value="SavingWorkbookTooLarge"/>
<xs:enumeration value="NewWorkbookInvalidLocation"/>
<xs:enumeration value="FileOpenSecuritySettings"/>
<xs:enumeration value="FileOpenNotFound"/>
<xs:enumeration value="FileOpenAccessDenied"/>
<xs:enumeration value="FileCorrupt"/>
<xs:enumeration value="OpenWorkbookTooLarge"/>
<xs:enumeration value="OpenWorkbookTooLargeNoUrl"/>
<xs:enumeration value="OpenWorkbookLocationNotTrusted"/>
<xs:enumeration value="OpenWorkbookAccessDenied"/>
<xs:enumeration value="WorkbookNotSupported"/>
<xs:enumeration value="WorkbookNotSupportedViewRight"/>
<xs:enumeration value="UnsupportedFeatureViewWarning"/>
<xs:enumeration value="UnsupportedFeatureSaveCopyWarning"/>
<xs:enumeration value="UnsupportedFeatureDownloadWarning"/>
<xs:enumeration value="ExternalWorkbookLinksDisabled"/>
<xs:enumeration value="WorkbookLockedRead"/>
<xs:enumeration value="EditModeCannotEditNonSharePointWorkbook"/>
<xs:enumeration value="EditModeAccessDenied"/>
<xs:enumeration value="GenericFileOpenError"/>
<xs:enumeration value="IRMedWorkbook"/>
<xs:enumeration value="ParameterInvalid"/>
<xs:enumeration value="ParameterLimitExceeded"/>
<xs:enumeration value="WorkbookInternalLimit"/>
<xs:enumeration value="OldFormatConversionFailed"/>
<xs:enumeration value="EditModeWorkbookExternalData"/>
<xs:enumeration value="FormulaEditingNotEnabled"/>
<xs:enumeration value="DimensionMismatch"/>
<xs:enumeration value="SetRangeFailure"/>
<xs:enumeration value="ObjectTypeNotSupported"/>
<xs:enumeration value="ParameterDoesNotExist"/>
<xs:enumeration value="FormulaParseFailed"/>
<xs:enumeration value="SetParameterFailure"/>
<xs:enumeration value="CannotEditPivotTable"/>
<xs:enumeration value="InsDelCellsNonblankCells"/>
<xs:enumeration value="InsDelCellsArrayFmla"/>
<xs:enumeration value="InsDelCellsPivotTable"/>
<xs:enumeration value="InsDelCellsTable"/>
<xs:enumeration value="InsDelCellsMergedCells"/>
<xs:enumeration value="InsDelCellsDatatable"/>
<xs:enumeration value="InsDelCellsRowsForWholeColumn"/>
<xs:enumeration value="InsDelCellsColumnsForWholeRow"/>
<xs:enumeration value="InsertChartPivotTable"/>
<xs:enumeration value="SuggestChartNoNumericData"/>
<xs:enumeration value="SuggestChartFailed"/>
<xs:enumeration value="PivotChartInteractivityMissingWarning"/>
<xs:enumeration value="EditChartTitleTooLong"/>
<xs:enumeration value="EditChartTitleStartsWithEquals"/>
<xs:enumeration value="EditChartDataTooLong"/>
<xs:enumeration value="EditChartDataInvalidReference"/>
<xs:enumeration value="EditChartDataOverlapsPivotTable"/>
<xs:enumeration value="ChartOperationNotSupported"/>
<xs:enumeration value="EditChartDataPivotChart"/>
<xs:enumeration value="ChangeChartTypePivotScatter"/>
<xs:enumeration value="ChartTooManyDataSeries"/>
<xs:enumeration value="InvalidSheetName"/>
<xs:enumeration value="RangeParseError"/>
<xs:enumeration value="SpecifiedRangeNotFound"/>

```



```

<xs:enumeration value="RangeDefinitionError"/>
<xs:enumeration value="DiscontiguousRangeNotSupported"/>
<xs:enumeration value="RangeRequestAreaExceeded"/>
<xs:enumeration value="SheetRangeMismatch"/>
<xs:enumeration value="ImageGenFailed"/>
<xs:enumeration value="ApiInvalidArgument"/>
<xs:enumeration value="ApiInvalidCoordinate"/>
<xs:enumeration value="ConfirmationUnsupported"/>
<xs:enumeration value="ApiInvalidDimensionReturned"/>
<xs:enumeration value="ApiMissingSiteContext"/>
<xs:enumeration value="Ewr_IllegalPageSize"/>
<xs:enumeration value="Ewr_WorkbookNotSpecified"/>
<xs:enumeration value="Ewr_LoadProgress"/>
<xs:enumeration value="Ewr_FileCorrupt"/>
<xs:enumeration value="Ewr_WorkbookNotSupported"/>
<xs:enumeration value="Ewr_GenericFileOpenError"/>
<xs:enumeration value="Ewr_InvalidParameterGeneric"/>
<xs:enumeration value="Ewr_InvalidParameterMandatoryMissing"/>
<xs:enumeration value="Ewr_InvalidParameterUnexpectedFormat"/>
<xs:enumeration value="Ewr_InvalidParameterOutOfRange"/>
<xs:enumeration value="Ewr_InvalidParameterOperationNotAllowed"/>
<xs:enumeration value="Ewr_ParameterInvalid"/>
<xs:enumeration value="Ewr_ParameterLimitExceeded"/>
<xs:enumeration value="Ewr_ParameterDoesNotExist"/>
<xs:enumeration value="Ewr_SetParameterFailure"/>
<xs:enumeration value="Ewr_SetParameterFailureOnOpen"/>
<xs:enumeration value="Ewr_ParameterReadFromDocPropsError"/>
<xs:enumeration value="Ewr_FormulaEditingNotEnabled"/>
<xs:enumeration value="Ewr_InvalidVisibleItem"/>
<xs:enumeration value="Ewr_EditSaveAsOverCurrentWorkbook"/>
<xs:enumeration value="Ewr_RequestTimedOut"/>
<xs:enumeration value="Ewr_ServerCommunicationError"/>
<xs:enumeration value="Ewr_ServerAuthenticationError"/>
<xs:enumeration value="Ewr_Top10InvalidValue"/>
<xs:enumeration value="Ewr_Top10InvalidValue_Float"/>
<xs:enumeration value="DocumentIsIrmProtected"/>
<xs:enumeration value="Mewa_PageStateInitFailed"/>
<xs:enumeration value="Mewa_CriticalParameterMissing"/>
<xs:enumeration value="Mewa_GridViewRenderingFailed"/>
<xs:enumeration value="Mewa_FeatureNotActive"/>
<xs:enumeration value="OperationNotSupportedInViewOnly"/>
<xs:enumeration value="OperationOnInvalidState"/>
<xs:enumeration value="InvalidOrTimedOutSession"/>
<xs:enumeration value="InvalidOrTimedOutSessionRecoverable"/>
<xs:enumeration value="InvalidOrTimedOutSessionPageRefresh"/>
<xs:enumeration value="ScratchPadChangesLost"/>
<xs:enumeration value="MaxSessionsPerUserExceeded"/>
<xs:enumeration value="OperationCanceled"/>
<xs:enumeration value="MaxRequestDurationExceeded"/>
<xs:enumeration value="NoOccurrencesFound"/>
<xs:enumeration value="EcsInvalidNamedObject"/>
<xs:enumeration value="NoPublishedItems"/>
<xs:enumeration value="RetryError"/>
<xs:enumeration value="StopOpenOnRefreshFailure"/>
<xs:enumeration value="ProductExpired"/>
<xs:enumeration value="SortActionInvalid"/>
<xs:enumeration value="SortActionNotSupportedWithPivot"/>
<xs:enumeration value="CircularReferencesFound"/>
<xs:enumeration value="SessionNotFound"/>
<xs:enumeration value="NewWorkbookSessionTimeout"/>
<xs:enumeration value="NewWorkbookSessionTimeoutRecoverable"/>
<xs:enumeration value="GeneratedWorkbookSessionTimeoutRegenerate"/>
<xs:enumeration value="GeneratedWorkbookSessionTimeoutNonRecoverable"/>
<xs:enumeration value="GeneratedWorkbookSessionTimeoutRecoverable"/>
<xs:enumeration value="EditXLSFile"/>
<xs:enumeration value="UnsupportedFeatureEditWarning"/>
<xs:enumeration value="EditModeSessionExists"/>
<xs:enumeration value="NewerWorkbookExists"/>
<xs:enumeration value="ExternalDataOfficeLive"/>

```

```

<xs:enumeration value="PowerPivotOfficeLive"/>
<xs:enumeration value="LostAuthentication"/>
<xs:enumeration value="ListEntryNotFound_1"/>
<xs:enumeration value="ListEntryNotFound_2"/>
<xs:enumeration value="ListEntryAlreadyExists_1"/>
<xs:enumeration value="ListEntryAlreadyExists_2"/>
<xs:enumeration value="InvalidArgumentValue"/>
<xs:enumeration value="MissingArgumentName"/>
<xs:enumeration value="InvalidArgumentName"/>
<xs:enumeration value="ArgumentBadInRemove"/>
<xs:enumeration value="ManagementUIListEntryAlreadyExists"/>
<xs:enumeration value="ManagementUIListEntryNotFound"/>
<xs:enumeration value="ManagementUIInternalError"/>
<xs:enumeration value="UnsupportedUICulture"/>
<xs:enumeration value="UnsupportedDataCulture"/>
<xs:enumeration value="SpecifiedItemNotFound"/>
<xs:enumeration value="EcsSnapshotAccessDenied"/>
<xs:enumeration value="SaveFailed"/>
<xs:enumeration value="WrongEcs"/>
<xs:enumeration value="PasteDataLimitHit"/>
<xs:enumeration value="UndoStackEmpty"/>
<xs:enumeration value="RedoStackEmpty"/>
<xs:enumeration value="UndoStackCleared"/>
<xs:enumeration value="UndoCollabFail"/>
<xs:enumeration value="RedoCollabFail"/>
<xs:enumeration value="HyperlinkLocationRequired"/>
<xs:enumeration value="CollabLocaleMismatch"/>
<xs:enumeration value="RestoredLocale"/>
<xs:enumeration value="InvalidEditSession"/>
<xs:enumeration value="InvalidEditSessionPageRefresh"/>
<xs:enumeration value="InvalidEditSessionId"/>
<xs:enumeration value="UnableToLoadEditSession"/>
<xs:enumeration value="SavingWorkbookFailed"/>
<xs:enumeration value="RefreshLockFailed"/>
<xs:enumeration value="InvalidChartName"/>
<xs:enumeration value="RetryOutOfSync"/>
<xs:enumeration value="OperationFailed"/>
<xs:enumeration value="OpenInExcelActiveXError"/>
<xs:enumeration value="OpenInExcelCollaborationError"/>
<xs:enumeration value="ProcessingUserChangesFileDownloadIgnored"/>
<xs:enumeration value="PhoneticDataLossWarning"/>
<xs:enumeration value="NoViewingLicenseError"/>
<xs:enumeration value="NoEditingLicenseError"/>
<xs:enumeration value="BIFeatureNotAvailable"/>
<xs:enumeration value="BIFeatureNotAvailableOnOpen"/>
<xs:enumeration value="NoUnsupportedFeatureCopyAndEdit"/>
<xs:enumeration value="CrossEnvironmentEditNotSupported"/>
<xs:enumeration value="RestBiff8Unsupported"/>
<xs:enumeration value="ExtendedBIFeatureNotAvailable"/>
<xs:enumeration value="ExtendedBIROOFailed"/>
<xs:enumeration value="TransitionXls"/>
<xs:enumeration value="UnsupportedFeaturesSaveOverwrite"/>
<xs:enumeration value="UnsupportedFeaturesSaveCopy"/>
<xs:enumeration value="ChallengeAnonymousUser"/>
<xs:enumeration value="ClipboardAccessDenied"/>
<xs:enumeration value="CannotMergeCellsInTable"/>
<xs:enumeration value="MergeCellsLoseData"/>
<xs:enumeration value="CollabConflictError"/>
<xs:enumeration value="OdfCompatibilityWarning"/>
<xs:enumeration value="OdfUnsupportedEncryption"/>
<xs:enumeration value="OdfUnreadableContentGeneric"/>
<xs:enumeration value="Ewr_OdfUnreadableContentGeneric"/>
<xs:enumeration value="XLSMacroFailure"/>
<xs:enumeration value="XLSPreBiff8Failure"/>
<xs:enumeration value="XLSPasswordProtectionFailure"/>
<xs:enumeration value="XLSIRMFailure"/>
<xs:enumeration value="XLSUnknownFailures"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidProperty"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidGenerationItems"/>

```

```

<xs:enumeration value="GenerateWorkbookFailureTable"/>
<xs:enumeration value="GenerateWorkbookFailureConditionalFormatting"/>
<xs:enumeration value="GenerateWorkbookFailureSlicers"/>
<xs:enumeration value="GenerateWorkbookFailureChart"/>
<xs:enumeration value="GenerateWorkbookFailureOpenWorkbook"/>
<xs:enumeration value="GenerateWorkbookFailureUpdateTheme"/>
<xs:enumeration value="GenerateWorkbookFailureAttribution"/>
<xs:enumeration value="GenerateWorkbookFailureResizeColumn"/>
<xs:enumeration value="GenerateWorkbookFailureClearUndoStack"/>
<xs:enumeration value="CrossDomainAjaxNotSupported"/>
<xs:enumeration value="WorkbookNotInCollection"/>
<xs:enumeration value="FossEditUnknown"/>
<xs:enumeration value="FossSaveUnknown"/>
<xs:enumeration value="FossSaveEmptyTitle"/>
<xs:enumeration value="FossSaveEmptyQuestion"/>
<xs:enumeration value="FossSaveEmptySurvey"/>
<xs:enumeration value="FossSaveSurveyNotFound"/>
<xs:enumeration value="FossSaveTableLimited"/>
<xs:enumeration value="FossSaveTooManyQuestions"/>
<xs:enumeration value="FossSaveBlocked"/>
<xs:enumeration value="FossViewDefaultError"/>
<xs:enumeration value="FossViewBlocked"/>
<xs:enumeration value="FossSubmitDefaultError"/>
<xs:enumeration value="FossSubmitTableLimited"/>
<xs:enumeration value="FossDeleteSurveyNotFound"/>
<xs:enumeration value="FossShareSurveyNotFound"/>
<xs:enumeration value="FossShareHostError"/>
<xs:enumeration value="FossUnshareHostError"/>
<xs:enumeration value="FossEnvironmentUnsupported"/>
<xs:enumeration value="FossViewUnsupportedFeatures"/>
<xs:enumeration value="EwrPrintSelectionTooBig"/>
<xs:enumeration value="DdaUnsupportedCoercionType"/>
<xs:enumeration value="DdaReadUnsupportedSelection"/>
<xs:enumeration value="DdaReadCoercionBindingMismatch"/>
<xs:enumeration value="DdaReadInvalidRowColCount"/>
<xs:enumeration value="DdaReadCoercionSelectionMismatch"/>
<xs:enumeration value="DdaReadInvalidRowColOffset"/>
<xs:enumeration value="DdaReadBeyondDataLimits"/>
<xs:enumeration value="DdaWriteUnsupportedDataObject"/>
<xs:enumeration value="DdaWriteUnsupportedSelection"/>
<xs:enumeration value="DdaWriteSelectionShapeAndDataMismatch"/>
<xs:enumeration value="DdaWriteDataOverlap"/>
<xs:enumeration value="DdaWriteDataOverflow"/>
<xs:enumeration value="DdaWriteInvalidRowColOffset"/>
<xs:enumeration value="DdaWriteCoercionDataMismatch"/>
<xs:enumeration value="DdaWriteCoercionSelectionMismatch"/>
<xs:enumeration value="DdaWriteBeyondDataLimits"/>
<xs:enumeration value="DdaWriteTableHasNoHeaders"/>
<xs:enumeration value="DdaBindingNotFound"/>
<xs:enumeration value="DdaBindingInvalidSelection"/>
<xs:enumeration value="DdaBindingInvalidOperation"/>
<xs:enumeration value="DdaBindingNamedItemNotFound"/>
<xs:enumeration value="DdaBindingMultipleNamedItemFound"/>
<xs:enumeration value="DdaBindingInvalidNamedItemForBindingType"/>
<xs:enumeration value="DdaBindingUnknownType"/>
<xs:enumeration value="DdaBindingInvalidRef"/>
<xs:enumeration value="DdaStaleSettings"/>
<xs:enumeration value="DdaNoAccessHiddenCells"/>
<xs:enumeration value="JsomBrowserUdfsAbandoned"/>
<xs:enumeration value="JsomBrowserUdfsCanceled"/>
<xs:enumeration value="JsomBrowserUdfsRecalcFailed"/>
<xs:enumeration value="AccessTokenExpiringWarning"/>
<xs:enumeration value="AccessTokenExpiredWarning"/>
<xs:enumeration value="DataTypeMismatch"/>
<xs:enumeration value="CloneWorkbookAllSheetsInteractiveReports"/>
<xs:enumeration value="Count"/>
</xs:restriction>
</xs:simpleType>
<xs:element name="ExcelServerMessageId" nillable="true" type="tns:ExcelServerMessageId"/>

```

```

<xs:simpleType name="ExcelServerMessageSeverity">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error"/>
    <xs:enumeration value="Warning"/>
    <xs:enumeration value="Information"/>
    <xs:enumeration value="Progress"/>
    <xs:enumeration value="GettingStarted"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="ExcelServerMessageSeverity" nillable="true"
type="tns:ExcelServerMessageSeverity"/>
<xs:simpleType name="ExcelServerMessageType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Alert"/>
    <xs:enumeration value="Status"/>
    <xs:enumeration value="Confirmation"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="ExcelServerMessageType" nillable="true"
type="tns:ExcelServerMessageType"/>
<xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/">
<xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/Arrays"/>
</xs:schema>

```

7.3 http://schemas.microsoft.com/2003/10/Serialization/ Schema

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns1="http://schemas.microsoft.com/2003/10/Serialization/"
attributeFormDefault="qualified" elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/2003/10/Serialization/"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="anyType" nillable="true" type="xs:anyType"/>
  <xs:element name="anyURI" nillable="true" type="xs:anyURI"/>
  <xs:element name="base64Binary" nillable="true" type="xs:base64Binary"/>
  <xs:element name="boolean" nillable="true" type="xs:boolean"/>
  <xs:element name="byte" nillable="true" type="xs:byte"/>
  <xs:element name="dateTime" nillable="true" type="xs:dateTime"/>
  <xs:element name="decimal" nillable="true" type="xs:decimal"/>
  <xs:element name="double" nillable="true" type="xs:double"/>
  <xs:element name="float" nillable="true" type="xs:float"/>
  <xs:element name="int" nillable="true" type="xs:int"/>
  <xs:element name="long" nillable="true" type="xs:long"/>
  <xs:element name="QName" nillable="true" type="xs:QName"/>
  <xs:element name="short" nillable="true" type="xs:short"/>
  <xs:element name="string" nillable="true" type="xs:string"/>
  <xs:element name="unsignedByte" nillable="true" type="xs:unsignedByte"/>
  <xs:element name="unsignedInt" nillable="true" type="xs:unsignedInt"/>
  <xs:element name="unsignedLong" nillable="true" type="xs:unsignedLong"/>
  <xs:element name="unsignedShort" nillable="true" type="xs:unsignedShort"/>
  <xs:element name="char" nillable="true" type="tns1:char"/>
  <xs:simpleType name="char">
    <xs:restriction base="xs:int"/>
  </xs:simpleType>
  <xs:element name="duration" nillable="true" type="tns1:duration"/>
  <xs:simpleType name="duration">
    <xs:restriction base="xs:duration">
      <xs:pattern value="\-?P(\d*D)?(T(\d*H)?(\d*M)?(\d*(\.\d*)?S)?)?"/>
      <xs:minInclusive value="-P10675199DT2H48M5.4775808S"/>
      <xs:maxInclusive value="P10675199DT2H48M5.4775807S"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="guid" nillable="true" type="tns1:guid"/>
  <xs:simpleType name="guid">
    <xs:restriction base="xs:string">
      <xs:pattern value="[\da-fA-F]{8}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{12}"/>
    </xs:restriction>
  </xs:simpleType>

```

```

</xs:simpleType>
<xs:attribute name="FactoryType" type="xs:QName"/>
<xs:attribute name="Id" type="xs:ID"/>
<xs:attribute name="Ref" type="xs:IDREF"/>
</xs:schema>

```

7.4 <http://schemas.microsoft.com/2003/10/Serialization/Arrays> Schema

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:q1="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
  elementFormDefault="qualified"
  targetNamespace="http://schemas.microsoft.com/2003/10/Serialization/Arrays"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType name="ArrayOfstring">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="string" nillable="true"
        type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ArrayOfstring" nillable="true" type="q1:ArrayOfstring"/>
</xs:schema>

```

7.5 <http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/> Schema

```

<?xml version="1.0" encoding="UTF-8"?>
<xs:schema
  xmlns:tns2="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
  elementFormDefault="qualified"
  targetNamespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  attributeFormDefault="unqualified">
  <xs:import namespace="http://microsoft.com/wsdl/types/" />
  <xs:element name="PasteRange">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
          type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="source" type="tns2:SheetRange"/>
        <xs:element minOccurs="0" maxOccurs="1" name="destination" type="tns2:SheetRange"/>
        <xs:element minOccurs="1" maxOccurs="1" name="types" type="tns2:PasteTypes"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="CommandParameter">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfListInfo"
        type="tns2:ClientUdfListInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="WorkbookId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="VisibleSheetRangeRequest"
        type="tns2:VisibleSheetRange"/>
      <xs:element minOccurs="0" maxOccurs="1" name="WorkOnBehalfRequest"
        type="tns2:WorkOnBehalf"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Confirmation"
        type="tns2:ExcelServerMessageId"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ProtocolClientId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Zone" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="PreviousOwnerId" type="xs:string"/>
      <xs:element xmlns:q2="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
        name="RequestSiteId" type="q2:guid"/>
      <xs:element minOccurs="0" maxOccurs="1" name="RequestId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="CompleteResponseTimeout" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Flags"
        type="tns2:CommandParameterFlags"/>
    </xs:sequence>
  </xs:complexType>

```

```

    <xs:element minOccurs="0" maxOccurs="1" name="RequestLimits"
type="tns2:RequestLimits"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CollaborationParameter"
type="tns2:CollaborationParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataParameter"
type="tns2:WorkbookMetadataParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FrontEndMachineName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfListInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfs"
type="tns2:ArrayOfClientUdfDefinition"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfClientUdfDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfDefinition"
nillable="true" type="tns2:ClientUdfDefinition"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UdfName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsVolatile" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="VisibleSheetRange">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ObjectName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcelRange" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleRowsRequested" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleColumnsRequested" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleFirstRowOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleFirstColumnOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalculateVisibleOffsetFromOrigin"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NeedAllBorderValues" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ChartsOnly" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisallowAutoNOV" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FallbackOnInvalidSheet"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ReturnAllRelatedSlicers"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RenderingOptions"
type="tns2:GridRenderingOptions"/>
    <xs:element minOccurs="1" maxOccurs="1" name="BootstrapDataOnly" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="TrimEmptyCells" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="GridRenderingOptions">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="HideGridlines"/>
        <xs:enumeration value="HideRowAndColumnHeaders"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:complexType name="WorkOnBehalf">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UserSid" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UserToken" type="xs:base64Binary"/>
  </xs:sequence>
</xs:complexType>

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```

    <xs:element minOccurs="1" maxOccurs="1" name="UserTokenTtl" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ExcelServerMessageId">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Blank"/>
    <xs:enumeration value="InternalError"/>
    <xs:enumeration value="NotMemberOfRole"/>
    <xs:enumeration value="EncryptionTooLow"/>
    <xs:enumeration value="ConfirmDataRefresh"/>
    <xs:enumeration value="ExternalDataRefreshFailed"/>
    <xs:enumeration value="ExternalDataRefreshFailedReal"/>
    <xs:enumeration value="ExternalDataRefreshFailedReadOrViewOnly"/>
    <xs:enumeration value="NoAccessToOdcReadOrViewOnly"/>
    <xs:enumeration value="ErrorConnectingToDataSourceReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPasswordReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPassword"/>
    <xs:enumeration value="ExternalDataNotAllowedOnTL"/>
    <xs:enumeration value="InvalidUriOrLocalConnectionPath"/>
    <xs:enumeration value="DclNotTrusted"/>
    <xs:enumeration value="OdcFileDoesNotExist"/>
    <xs:enumeration value="OdcNotSupported"/>
    <xs:enumeration value="ErrorAccessingSsoFromEcs"/>
    <xs:enumeration value="SsoError"/>
    <xs:enumeration value="ErrorConnectingToDataSource"/>
    <xs:enumeration value="UnattendedAccountNotConfigured"/>
    <xs:enumeration value="IncorrectAuthUsed"/>
    <xs:enumeration value="ExternalDataRefreshFailed_Details"/>
    <xs:enumeration value="GenericModelFailure"/>
    <xs:enumeration value="ModelStreamingFailure"/>
    <xs:enumeration value="NoStreamingServers"/>
    <xs:enumeration value="LegacyModelError"/>
    <xs:enumeration value="ConnectionChangeOutOfSync"/>
    <xs:enumeration value="PivotNoOverlapAllowed"/>
    <xs:enumeration value="PivotOverlapList"/>
    <xs:enumeration value="PivotCubeNotUnique"/>
    <xs:enumeration value="NoDataItemsOlap"/>
    <xs:enumeration value="OlapSchemaFail"/>
    <xs:enumeration value="InvalidPivot"/>
    <xs:enumeration value="OlapNoMoreDetail"/>
    <xs:enumeration value="DrillActionInvalid"/>
    <xs:enumeration value="DriverNotOlap"/>
    <xs:enumeration value="CubeMissing"/>
    <xs:enumeration value="SkipLine"/>
    <xs:enumeration value="CDimMismatch"/>
    <xs:enumeration value="DataSetAxisTooBig"/>
    <xs:enumeration value="CubeIntegrityError"/>
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    <xs:enumeration value="PivotTruncatedSheetEdge"/>
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    <xs:enumeration value="PivotFormulasCollided"/>
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    <xs:enumeration value="PivotNoSourceData"/>
    <xs:enumeration value="PivotFilteringError"/>
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    <xs:enumeration value="PivotTableIncorrectNumberFormat"/>
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    <xs:enumeration value="PivotSourceNotAvailable"/>
    <xs:enumeration value="UnexpectedPivotError"/>
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    <xs:enumeration value="EditModeCannotAcquireLock"/>
    <xs:enumeration value="EditModeCannotAcquireLockUnknownUser"/>
    <xs:enumeration value="EditModeWorkbookCheckedOutRequired"/>
    <xs:enumeration value="EditModeWorkbookCheckedOutToLocalDrafts"/>
    <xs:enumeration value="SiteTooBusy"/>
    <xs:enumeration value="SiteCollectionMemoryQuotaExceeded"/>
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</xs:simpleType>

```

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<xs:enumeration value="SiteCollectionChartQuotaExceeded"/>
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<xs:enumeration value="SavingWorkbookInvalidPermissions"/>
<xs:enumeration value="SavingWorkbookLockedOrCheckedOut"/>
<xs:enumeration value="SavingWorkbookNotCheckedOut"/>
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<xs:enumeration value="SavingWorkbookAlmostTooLarge"/>
<xs:enumeration value="SavingWorkbookTooLarge"/>
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<xs:enumeration value="FileCorrupt"/>
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<xs:enumeration value="InsDelCellsRowsForWholeColumn"/>
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<xs:enumeration value="ChartOperationNotSupported"/>
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<xs:enumeration value="OdfUnreadableContentGeneric"/>
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<xs:enumeration value="XLSPreBiff8Failure"/>
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<xs:enumeration value="GenerateWorkbookFailureClearUndoStack"/>
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<xs:enumeration value="JsomBrowserUdfsCanceled"/>
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    <xs:enumeration value="Count"/>
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        <xs:enumeration value="SuppressOneTimeRecalc"/>
        <xs:enumeration value="LogCpuTime"/>
        <xs:enumeration value="IsObjectModel"/>
        <xs:enumeration value="WantServerEvents"/>
        <xs:enumeration value="CanRegenerate"/>
        <xs:enumeration value="DoesNotCreatePrivateWorkbook"/>
        <xs:enumeration value="ConfirmationChoiceTrue"/>
      </xs:restriction>
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  </xs:list>
</xs:simpleType>
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type="xs:long"/>
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</xs:complexType>
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type="tns2:CollaborationState"/>
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</xs:complexType>
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  </xs:sequence>
</xs:complexType>
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type="tns2:WorkbookMetadataState"/>
  </xs:sequence>
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  <xs:sequence>
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    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
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  <xs:list>
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        <xs:enumeration value="Cut"/>
        <xs:enumeration value="Copy"/>
        <xs:enumeration value="Paste"/>
        <xs:enumeration value="Values"/>
      </xs:restriction>
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  </xs:list>
</xs:simpleType>

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        <xs:enumeration value="Formatting"/>
        <xs:enumeration value="Formulas"/>
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</xs:simpleType>
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</xs:simpleType>
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type="tns2:CommandResult"/>
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type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SpreadsheetData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ExtendedInfo"
type="tns2:CommandResultExtendedInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfCallInfo"
type="tns2:ClientUdfCallInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PeriodicRefreshInfo"
type="tns2:PeriodicRefreshInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HealthInformation"
type="tns2:ServerHealthInformation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SecondsBeforeNextPoll" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="EditSessionIsDirty" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="EditSessionHasMultipleCollaborationUsers"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="OperationStates"
type="tns2:OperationStates"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RequestId" type="xs:string"/>
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type="tns2:CollaborationResult"/>
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type="tns2:WorkbookMetadataResult"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ServerEvents" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataConnections"
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type="tns2:ArrayOfExcelServerMessage"/>
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type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UnsupportedFeaturesRemoved"
type="xs:boolean"/>
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type="xs:boolean"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="Id" type="tns2:ExcelServerMessageId"/>
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</xs:complexType>

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        <xs:element minOccurs="1" maxOccurs="1" name="Severity"
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type="tns2:ExcelServerMessageType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Appearance"
type="tns2:ExcelServerMessageAppearance"/>
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        <xs:element minOccurs="0" maxOccurs="1" name="ExtendedDescription" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="DisplaysCorrelationId"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HelpDisplayText" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HealthInformation"
type="tns2:ServerHealthInformation"/>
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        <xs:enumeration value="Information"/>
        <xs:enumeration value="Progress"/>
        <xs:enumeration value="GettingStarted"/>
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                <xs:enumeration value="Cancel"/>
                <xs:enumeration value="Yes"/>
                <xs:enumeration value="No"/>
                <xs:enumeration value="Notification"/>
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<xs:complexType name="ServerThrottlingInformation">
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        <xs:element minOccurs="1" maxOccurs="1" name="CpuUsage" type="xs:long"/>
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type="tns2:ArrayOfScenarioThrottlingInformation"/>
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nillable="true" type="tns2:ScenarioThrottlingInformation"/>
    </xs:sequence>
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    <xs:sequence>
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        <xs:element minOccurs="1" maxOccurs="1" name="MemoryUsage" type="xs:long"/>
        <xs:element minOccurs="1" maxOccurs="1" name="CpuUsage" type="xs:long"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SubscriberList"
type="tns2:ArrayOfString"/>
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<xs:complexType name="ArrayOfString">
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type="xs:string"/>
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</xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="1" name="Calls" type="tns2:ArrayOfClientUdfCall"/>
        <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
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type="tns2:ClientUdfCall"/>
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        <xs:element minOccurs="0" maxOccurs="1" name="UdfName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns2:ArrayOfAnyType"/>
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</xs:complexType>
<xs:complexType name="PeriodicRefreshInfo">
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        <xs:element minOccurs="1" maxOccurs="1" name="ExpirationTime" type="xs:int"/>
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type="tns2:ArrayOfString"/>
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</xs:complexType>
<xs:complexType name="OperationStates">
    <xs:sequence>
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    </xs:sequence>
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        <xs:enumeration value="None"/>
        <xs:enumeration value="Enabled"/>
        <xs:enumeration value="DisabledEmptyStack"/>
        <xs:enumeration value="DisabledClearedStack"/>
    </xs:restriction>
</xs:simpleType>

```

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        <xs:enumeration value="DisabledCollab"/>
    </xs:restriction>
</xs:simpleType>
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        <xs:element minOccurs="0" maxOccurs="1" name="CollaborationState"
type="tns2:CollaborationState"/>
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type="tns2:ArrayOfPresenceUserInfo"/>
    </xs:sequence>
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<xs:complexType name="ArrayOfPresenceUserInfo">
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type="tns2:PresenceUserInfo"/>
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</xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="1" name="User" type="tns2:PresenceUserId"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UserColor" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NumberOfTimesInSession" type="xs:int"/>
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<xs:complexType name="PresenceUserId">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="UserName" type="xs:string"/>
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type="tns2:WorkbookMetadataState"/>
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    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorkbookMetadata">
    <xs:sequence>
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type="tns2:ArrayOfWorksheetData"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SheetChanges"
type="tns2:ArrayOfWorksheetChangeInfo"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HidePivotFieldList" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ServerEventMetadataList"
type="tns2:ArrayOfServerEventMetadata"/>
        <xs:element minOccurs="0" maxOccurs="1" name="WebExtensions"
type="tns2:ArrayOfWebExtensionMetadata"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HasSurveys" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SurveyTitle" type="xs:string"/>
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type="tns2:WorksheetData"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorksheetData">
    <xs:sequence>
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        <xs:element minOccurs="0" maxOccurs="1" name="TabColor" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns2:SheetFlags"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SheetType" type="tns2:SheetType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Visibility" type="tns2:SheetVisibility"/>
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    <xs:simpleType>
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        <xs:enumeration value="RtlName"/>
        <xs:enumeration value="DisplayRtl"/>
        <xs:enumeration value="HeadersVisible"/>
        <xs:enumeration value="DisplayOutlines"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:simpleType name="SheetType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Worksheet"/>
    <xs:enumeration value="Chart"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SheetVisibility">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Visible"/>
    <xs:enumeration value="Hidden"/>
    <xs:enumeration value="VeryHidden"/>
  </xs:restriction>
</xs:simpleType>
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nillable="true" type="tns2:WorksheetChangeInfo"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="WorksheetChangeInfo">
  <xs:sequence>
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    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="NewName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="xs:int"/>
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nillable="true" type="tns2:ServerEventMetadata"/>
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</xs:complexType>
<xs:complexType name="ServerEventMetadata">
  <xs:sequence>
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    <xs:element minOccurs="0" maxOccurs="1" name="ServerEventXml" type="xs:string"/>
  </xs:sequence>
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  <xs:sequence>
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nillable="true" type="tns2:WebExtensionMetadata"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="WebExtensionMetadata">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WebExtensionId" type="xs:string"/>
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type="tns2:ArrayOfBindingMetadata"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfBindingMetadata">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="BindingMetadata" nillable="true"
type="tns2:BindingMetadata"/>
  </xs:sequence>
</xs:complexType>

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<xs:complexType name="BindingMetadata">
  <xs:sequence>
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    <xs:element minOccurs="1" maxOccurs="1" name="BindingType" type="tns2:DdaBindingType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Reference" type="tns2:BindingReference"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasHeaders" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasTotals" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsValidRef" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="DdaBindingType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Unknown"/>
    <xs:enumeration value="None"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="Text"/>
    <xs:enumeration value="Matrix"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="BindingReference">
  <xs:sequence>
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    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
  </xs:sequence>
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  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSources" type="xs:string"/>
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type="tns2:ArrayOfDataConnectionInfo"/>
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</xs:complexType>
<xs:complexType name="ArrayOfDataConnectionInfo">
  <xs:sequence>
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nillable="true" type="tns2:DataConnectionInfo"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="DataConnectionInfo">
  <xs:sequence>
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    <xs:element minOccurs="1" maxOccurs="1" name="StreamingFailed" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SourceIndex" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ConnectionName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RefreshTimestamp" type="xs:dateTime"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecurityToken" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SlidesIds" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsEmbedded" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ConnectionString" type="xs:string"/>
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</xs:complexType>
<xs:element name="PasteString">
  <xs:complexType>
    <xs:sequence>
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type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="source" type="xs:string"/>
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    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="PasteStringResponse">
  <xs:complexType>
    <xs:sequence>

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        <xs:element minOccurs="0" maxOccurs="1" name="PasteStringResult"
type="tns2:CommandResult"/>
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</xs:element>
<xs:element name="ApplyToRange">
    <xs:complexType>
        <xs:sequence>
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type="tns2:CommandParameter"/>
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            <xs:element minOccurs="0" maxOccurs="1" name="range" type="tns2:SheetRange"/>
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<xs:element name="ApplyToRangeResponse">
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        <xs:sequence>
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type="tns2:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetFunctionList">
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        <xs:sequence>
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type="tns2:CommandParameter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="FunctionInfo">
    <xs:sequence>
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        <xs:element minOccurs="0" maxOccurs="1" name="NameUI" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Help" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Params" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="GroupUI" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsCompatibility" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HelpId" type="xs:string"/>
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type="tns2:FunctionInfo"/>
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</xs:complexType>
<xs:element name="GetFunctionListResponse">
    <xs:complexType>
        <xs:sequence>
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type="tns2:CommandResult"/>
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type="tns2:ArrayOfFunctionInfo"/>
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    </xs:complexType>
</xs:element>
<xs:element name="AutoFit">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
            <xs:element minOccurs="1" maxOccurs="1" name="isRow" type="xs:boolean"/>
            <xs:element minOccurs="0" maxOccurs="1" name="autoFitRange" type="tns2:SheetRange"/>
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    </xs:complexType>
</xs:element>

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<xs:element name="AutoFitResponse">
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    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="AutoFitResult"
type="tns2:CommandResult"/>
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  </xs:complexType>
</xs:element>
<xs:element name="ResizeRowsColumns">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="resizeRowColumnRange"
type="tns2:ResizeRowColumnRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="ResizeRowColumnRange">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:SheetRange">
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        <xs:element minOccurs="1" maxOccurs="1" name="ColumnWidth" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RowHeight" type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
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  <xs:complexType>
    <xs:sequence>
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type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GenerateWorkbookFromHtml">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="html" type="tns2:TableHtml"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns2:WorkbookGenerationOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="subscriberId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="url" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="TableHtml">
  <xs:sequence>
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    <xs:element minOccurs="0" maxOccurs="1" name="Bd" type="tns2:ArrayOfRowHtml"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Li" type="xs:int"/>
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<xs:complexType name="ArrayOfRowHtml">
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type="tns2:RowHtml"/>
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</xs:complexType>
<xs:complexType name="RowHtml">
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  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfCellHtml">
  <xs:sequence>

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        <xs:element minOccurs="0" maxOccurs="unbounded" name="CellHtml" nillable="true"
type="tns2:CellHtml"/>
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<xs:complexType name="CellHtml">
    <xs:sequence>
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        <xs:element minOccurs="0" maxOccurs="1" name="I" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="H" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorkbookGenerationOptions">
    <xs:sequence>
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        <xs:element minOccurs="0" maxOccurs="1" name="Locale" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataCulture" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UICulture" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="GenerateItems"
type="tns2:WorkbookGenerationItems"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DarkColor1" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DarkColor2" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LightColor1" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LightColor2" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="AccentColor1" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="AccentColor2" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FontName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FontSize" type="xs:double"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Attribution" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UserId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UserFriendlyName" type="xs:string"/>
    </xs:sequence>
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                <xs:enumeration value="Slicers"/>
                <xs:enumeration value="Charts"/>
                <xs:enumeration value="ConditionalFormatting"/>
                <xs:enumeration value="All"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
</xs:simpleType>
<xs:complexType name="GenerateWorkbookFromHtmlResult">
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        <xs:element minOccurs="0" maxOccurs="1" name="GeneratedObjects"
type="tns2:ArrayOfGeneratedNamedObject"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RequestStartTime" type="xs:dateTime"/>
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nillable="true" type="tns2:GeneratedNamedObject"/>
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</xs:complexType>
<xs:complexType name="GeneratedNamedObject">
    <xs:sequence>
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        <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType"
type="tns2:NamedObjectType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
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    </xs:sequence>

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</xs:complexType>
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  <xs:restriction base="xs:string">
    <xs:enumeration value="InvalidNamedObjectType"/>
    <xs:enumeration value="Chart"/>
    <xs:enumeration value="PivotTable"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="NamedRange"/>
    <xs:enumeration value="WebExtension"/>
    <xs:enumeration value="MaxNamedObjectType"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="GenerateWorkbookFromHtmlResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GenerateWorkbookFromHtmlResult"
type="tns2:CommandResult"/>
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type="tns2:GenerateWorkbookFromHtmlResult"/>
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  </xs:complexType>
</xs:element>
<xs:element name="GetBixAnalysis">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns2:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
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    <xs:element minOccurs="0" maxOccurs="1" name="FieldId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberPropertyId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterValue1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterValue2" type="xs:string"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="SortByValue" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DataFieldIndex" type="xs:int"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="ChartElementValue2" type="xs:int"/>
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    <xs:enumeration value="AnchorOnSheetCell"/>
    <xs:enumeration value="AnchorOnChartSeries"/>
    <xs:enumeration value="AnchorOnChartCat"/>
    <xs:enumeration value="AnchorOnChartDataPoint"/>
    <xs:enumeration value="AnchorOnChartPageButton"/>
    <xs:enumeration value="AnchorOnChartRowButton"/>
  </xs:restriction>
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    <xs:enumeration value="AnchorOnChartColButton"/>
    <xs:enumeration value="AnchorOnChart"/>
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    <xs:enumeration value="AnchorOnPivotChartHierarchyNotOnPivot"/>
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    <xs:enumeration value="Sum"/>
    <xs:enumeration value="LastTop10"/>
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    <xs:enumeration value="CaptionBeginsWith"/>
    <xs:enumeration value="CaptionDoesNotBeginWith"/>
    <xs:enumeration value="CaptionEndsWith"/>
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    <xs:enumeration value="CaptionContains"/>
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    <xs:enumeration value="CaptionIsGreaterThan"/>
    <xs:enumeration value="CaptionIsGreaterThanOrEqualTo"/>
    <xs:enumeration value="CaptionIsLessThan"/>
    <xs:enumeration value="CaptionIsLessThanOrEqualTo"/>
    <xs:enumeration value="CaptionIsBetween"/>
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    <xs:enumeration value="ValueFirst"/>
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    <xs:enumeration value="DateEquals"/>
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    <xs:enumeration value="DateBetween"/>
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    <xs:enumeration value="DateToday"/>
    <xs:enumeration value="DateYesterday"/>
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    <xs:enumeration value="DateThisQuarter"/>
    <xs:enumeration value="DateLastQuarter"/>
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    <xs:enumeration value="DateThisYear"/>
    <xs:enumeration value="DateLastYear"/>
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    <xs:enumeration value="DateAllDatesInPeriodQuarter2"/>
    <xs:enumeration value="DateAllDatesInPeriodQuarter3"/>
    <xs:enumeration value="DateAllDatesInPeriodQuarter4"/>
    <xs:enumeration value="DateAllDatesInPeriodJanuary"/>
    <xs:enumeration value="DateAllDatesInPeriodFebruary"/>
    <xs:enumeration value="DateAllDatesInPeriodMarch"/>
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    <xs:enumeration value="DateAllDatesInPeriodJune"/>
    <xs:enumeration value="DateAllDatesInPeriodJuly"/>
    <xs:enumeration value="DateAllDatesInPeriodAugust"/>
    <xs:enumeration value="DateAllDatesInPeriodSeptember"/>
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    <xs:enumeration value="DateAllDatesInPeriodNovember"/>
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type="tns2:ArrayOfInt"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ColumnAxis"
type="tns2:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RowAxis"
type="tns2:ArrayOfPivotFieldListItem"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="ShowCheckBox" type="xs:boolean"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="IsChecked" type="xs:boolean"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="PivotTableIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PivotCacheIndex" type="xs:int"/>
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type="tns2:ArrayOfPivotFieldListItem"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
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type="tns2:PivotFieldListData"/>
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type="tns2:CommandParameter"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:PivotOperationOptions"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="FieldWellVersion" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SourceAxis" type="xs:int"/>
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type="tns2:SlicerOptions"/>
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type="tns2:TimeSlicerInteractivityType"/>
            <xs:element minOccurs="0" maxOccurs="1" name="sharedFilterState"
type="tns2:TimeSlicerFilterState"/>
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type="tns2:TimeSlicerBetweenFilterState"/>
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type="tns2:TimeSlicerSettings"/>
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type="xs:int"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="SlicerClearItems" type="xs:boolean"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="SlicerViewableHeightNov2" type="xs:int"/>
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type="tns2:ArrayOfSlicerItemRange"/>
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type="tns2:ArrayOfSlicerItemRange"/>
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          <xs:enumeration value="ReportUniqueNames"/>
          <xs:enumeration value="GetItemSlicers"/>
          <xs:enumeration value="GetTimeSlicers"/>
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  </xs:simpleType>
  <xs:complexType name="TimeSlicerFilterState">
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type="tns2:CommandParameter"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:PivotValueFieldSettingsApplyData"/>
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type="tns2:ArrayOfInt"/>
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type="tns2:PivotValueFieldSettingsInfo"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns2:DdaValueType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns2:DdaFilterType"/>
        <xs:element minOccurs="0" maxOccurs="1" name="currentSheetName" type="xs:string"/>
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      <xs:enumeration value="Text"/>
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type="tns2:CommandResult"/>
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  <xs:element name="DdaSetSelectedData">
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type="tns2:DdaBindingType"/>
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type="tns2:DdaAddBindingOption"/>
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type="tns2:CommandResult"/>
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type="tns2:CommandParameter"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns2:DdaValueType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns2:DdaFilterType"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="colCount" type="xs:int"/>
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  <xs:element name="DdaSetBindingData">
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    </xs:complexType>
  </xs:element>
  <xs:element name="DdaGetAllBindings">
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type="tns2:ArrayOfBindingMetadata"/>
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type="tns2:CommandResult"/>
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type="tns2:CommandParameter"/>
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    <xs:complexType>
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type="tns2:CommandResult"/>
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type="tns2:RangeEmbeddingInfo"/>
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type="tns2:CommandParameter"/>
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type="tns2:CommandResult"/>
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    </xs:complexType>
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<xs:element name="DdaDeleteAllDataValues">
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type="tns2:CommandParameter"/>
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type="tns2:CommandParameter"/>

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        <xs:element minOccurs="0" maxOccurs="1" name="SubscriberId" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns2:OpenWorkbookFlags"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CultureCommandParameter"
type="tns2:CultureCommandParameter"/>
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type="xs:base64Binary"/>
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        <xs:element minOccurs="0" maxOccurs="1" name="PreviousSessionId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UserId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UserFriendlyName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="TimeZoneSerialization" type="xs:string"/>
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type="tns2:ScenarioRestrictions"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ThrottlingScenario"
type="tns2:ResourceThrottlingScenario"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DenylistOverrides" type="xs:string"/>
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type="tns2:ExcelServerFeature"/>
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                <xs:enumeration value="DisableUndo"/>
                <xs:enumeration value="Recyclable"/>
                <xs:enumeration value="ShouldCheckCanary"/>
                <xs:enumeration value="InternalWorkbook"/>
                <xs:enumeration value="EmbedView"/>
                <xs:enumeration value="DisallowXls"/>
                <xs:enumeration value="CanOverwriteUnsupportedFile"/>
                <xs:enumeration value="SkipAuthentication"/>
                <xs:enumeration value="GenerateWorkbook"/>
                <xs:enumeration value="PreviouslyHadUnsupportedFeatures"/>
                <xs:enumeration value="OnlyOpenFromCollection"/>
                <xs:enumeration value="LoadedOnDemand"/>
                <xs:enumeration value="PreviouslyHadUnsupportedFeaturesForEdit"/>
                <xs:enumeration value="SuppressRefreshOnOpen"/>
                <xs:enumeration value="OpenForRefresh"/>
                <xs:enumeration value="AllowExcelServices"/>
                <xs:enumeration value="IgnoreUnsupportedFeatures"/>
                <xs:enumeration value="RetainEditSessionWithUnsupportedFeatures"/>
                <xs:enumeration value="AllowExtendedBIFeatures"/>
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      <xs:enumeration value="LimitedEdit"/>
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  </xs:restriction>
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  <xs:list>
    <xs:simpleType>
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        <xs:enumeration value="ExternalData"/>
        <xs:enumeration value="LoadBIF8"/>
        <xs:enumeration value="Editing"/>
        <xs:enumeration value="CancelableOperations"/>
        <xs:enumeration value="JSOM"/>
        <xs:enumeration value="API"/>
        <xs:enumeration value="ResourceThrottling"/>
        <xs:enumeration value="CancelableRefresh"/>
        <xs:enumeration value="NeedsSignOutChecking"/>
        <xs:enumeration value="Evaluation"/>
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        <xs:enumeration value="DataCenterUpgrade"/>
        <xs:enumeration value="ViewingComments"/>
        <xs:enumeration value="WorkbookConversion"/>
        <xs:enumeration value="ShowBrandingInApp"/>
        <xs:enumeration value="AdControl"/>
        <xs:enumeration value="OfficeTrialOffer"/>
        <xs:enumeration value="OfficeForMacTrial"/>
        <xs:enumeration value="UnsupportedBrowserBusinessBar"/>
        <xs:enumeration value="EditByDefault"/>
        <xs:enumeration value="AlwaysShowDownloadToExcel"/>
        <xs:enumeration value="ShowEmbedBrandingUI"/>
        <xs:enumeration value="CrossDocumentMessengerDisabled"/>
        <xs:enumeration value="UnattendedAccount"/>
        <xs:enumeration value="ExcelEverywhere"/>
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        <xs:enumeration value="CloudBISupport"/>
        <xs:enumeration value="InteractiveReportRoundtrip"/>
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  </xs:list>
</xs:simpleType>

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      <xs:element minOccurs="0" maxOccurs="1" name="WorkbookFileVersionId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="EditUrl" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ExcelFeatures"
type="tns2:ExcelServerFeature"/>
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type="tns2:OpenWorkbookOutFlags"/>
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type="tns2:OpenWorkbookOutParameters"/>
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          <xs:enumeration value="RequiresCheckOut"/>
          <xs:enumeration value="Biff8Format"/>
          <xs:enumeration value="HasUnsupportedFeatures"/>
          <xs:enumeration value="SupportsEditing"/>
          <xs:enumeration value="StaticView"/>
          <xs:enumeration value="HasXlsMacros"/>
          <xs:enumeration value="HasUnsupportedFeaturesForEdit"/>
        </xs:restriction>
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  </xs:element>

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type="tns2:WorkbookType"/>
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    <xs:enumeration value="FullSnapshot"/>
    <xs:enumeration value="PublishedItemsSnapshot"/>
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type="tns2:CommandParameter"/>
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type="tns2:CommandResult"/>
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<xs:element name="GetRange">
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type="tns2:CommandResult"/>
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    </xs:complexType>
</xs:element>
<xs:element name="GetRangeValues">
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type="tns2:CommandParameter"/>
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            <xs:element minOccurs="1" maxOccurs="1" name="formatted" type="xs:boolean"/>
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<xs:element name="GetRangeValuesResponse">
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type="tns2:CommandResult"/>
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type="tns2:ArrayOfAnyType"/>
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</xs:element>
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type="tns2:OpenWorkbookInParameters"/>
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name="RequestSiteId" type="q2:guid"/>
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type="tns2:ArrayOfRangeValuesA1"/>
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type="tns2:ArrayOfRangeValuesA1"/>
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type="tns2:CellDataFormat"/>
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</xs:element>
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                <xs:enumeration value="Unformatted"/>
                <xs:enumeration value="Compound"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
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type="tns2:CommandResult"/>
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type="tns2:ArrayOfRangeValuesA1"/>
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type="tns2:CommandParameter"/>
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            <xs:element minOccurs="0" maxOccurs="1" name="cellsArray"/>
            <xs:element minOccurs="0" maxOccurs="1" name="setCellRange" type="tns2:SheetRange"/>
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    </xs:restriction>
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    <xs:enumeration value="CTRLSHIFT"/>
    <xs:enumeration value="COMBOKEYMAX"/>
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type="tns2:CellCompoundValue"/>
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type="tns2:WorkbookGenerationOptions"/>
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type="tns2:RestChartPngRequest"/>
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type="tns2:RestInteractiveReportsListRequest"/>
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type="tns2:RestInteractiveReportsListResult"/>
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type="tns2:RestInteractiveReportsStoreRequest"/>
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type="tns2:RestInteractiveReportsStoreResult"/>
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type="tns2:RestRangePngRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPngResult"
type="tns2:RestPngResult"/>
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type="tns2:RestChartPngResult"/>
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    <xs:element minOccurs="0" maxOccurs="1" name="RestObjectStateRequest"
type="tns2:RestObjectStateRequest"/>
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type="tns2:RestTimelineInfoRequest"/>
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type="tns2:RestTimelineInfoResult"/>
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type="tns2:RestWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestWorkbookResult"
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    <xs:element minOccurs="0" maxOccurs="1" name="RestODataResult"
type="tns2:RestODataResult"/>
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    <xs:enumeration value="Name"/>
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    <xs:enumeration value="Num"/>
    <xs:enumeration value="Ref"/>
    <xs:enumeration value="Value"/>
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  </xs:restriction>
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        <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
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type="tns2:ImageRenderingOptions"/>
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  <xs:complexContent mixed="false">
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type="tns2:GetPublishedObjectsOptions"/>
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        </xs:sequence>
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type="tns2:ArrayOfPublishedObjectName"/>
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type="tns2:ArrayOfSheetName"/>
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    </xs:sequence>
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<xs:complexType name="RestSlicersListRequest">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestRequest">
            <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="1" name="Options"
type="tns2:SlicerOptionsBits"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestSlicersListResult">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestResult">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="SlicersList"
type="tns2:ArrayOfSlicerInfo"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfSlicerInfo">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="SlicerInfo" nillable="true"
type="tns2:SlicerInfo"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="SlicerInfo">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="UpdatesAllowed" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ConnectedPublishedObjects"
type="tns2:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="RestSlicerItemsListRequest">
    <xs:complexContent mixed="false">
      <xs:extension base="tns2:RestRequest">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
          <xs:element minOccurs="1" maxOccurs="1" name="ItemOffset" type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:int"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="RestSlicerItemsListResult">
    <xs:complexContent mixed="false">
      <xs:extension base="tns2:RestResult">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="Revision" type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="TotalItemCount" type="xs:int"/>
          <xs:element minOccurs="1" maxOccurs="1" name="HasEffectiveSelection"
type="xs:boolean"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Items"
type="tns2:ArrayOfSlicerItem"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfSlicerItem">
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type="tns2:SlicerItem"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="SlicerItem">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Hidden" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="NoData" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="RestApplySlicerSelectionRequest">
    <xs:complexContent mixed="false">
      <xs:extension base="tns2:RestRequest">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="SelectionMode"
type="tns2:RestSlicerSelectionMode"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Selected" type="tns2:ArrayOfString"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Unselected"
type="tns2:ArrayOfString"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>

```

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</xs:complexType>
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  <xs:restriction base="xs:string">
    <xs:enumeration value="SelectedOnly"/>
    <xs:enumeration value="ClearFilter"/>
    <xs:enumeration value="Cumulative"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="RestObjectStateRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ObjType"
type="tns2:NamedObjectType"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SetRowSortRequest"
type="tns2:RestObjectStateSetRowSortRequest"/>
        <xs:element minOccurs="0" maxOccurs="1" name="GetRequest"
type="tns2:RestObjectStateGetRequest"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestObjectStateSetRowSortRequest">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="IsAscending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortBy" type="tns2:StateSortBy"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ColumnID" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="StateSortBy">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="ByName"/>
    <xs:enumeration value="ColumnID"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="RestObjectStateGetRequest">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="IsGetAll" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsGetRowSortState" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsGetColumns" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="RestObjectStateResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ObjectStateResult"
type="tns2:ObjectStateResult"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="ObjectStateResult">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="IsAscending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSortable" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ColumnId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortBy" type="tns2:SortByType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayNames" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UniqueNames" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MeasureName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TableColumns"
type="tns2:ArrayOfObjectStateResultColumn"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="SortByType">
  <xs:restriction base="xs:string">

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        <xs:enumeration value="SortByUnsupported"/>
        <xs:enumeration value="SortByNone"/>
        <xs:enumeration value="SortByColumn"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfObjectStateResultColumn">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ObjectStateResultColumn"
nillable="true" type="tns2:ObjectStateResultColumn"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ObjectStateResultColumn">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Hidden" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SingleItem" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="LevelId" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="IdList" type="tns2:ArrayOfInt"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ColumnId" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="RestApplyTimelineSelectionRequest">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestRequest">
            <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel"
type="tns2:RestTimelineLevel"/>
                <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
                <xs:element minOccurs="0" maxOccurs="1" name="SelectionBeginDate"
type="tns2:DateTimeRecord"/>
                <xs:element minOccurs="0" maxOccurs="1" name="SelectionEndDate"
type="tns2:DateTimeRecord"/>
                <xs:element minOccurs="1" maxOccurs="1" name="UpdateDisplayLevel"
type="xs:boolean"/>
                <xs:element minOccurs="1" maxOccurs="1" name="UpdateSelection" type="xs:boolean"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:simpleType name="RestTimelineLevel">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Years"/>
        <xs:enumeration value="Quarters"/>
        <xs:enumeration value="Months"/>
        <xs:enumeration value="Days"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="RestTimelineInfoRequest">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestRequest">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestTimelineInfoResult">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestResult">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="MinDate" type="tns2:DateTimeRecord"/>
                <xs:element minOccurs="0" maxOccurs="1" name="MaxDate" type="tns2:DateTimeRecord"/>
                <xs:element minOccurs="0" maxOccurs="1" name="SelectionBeginDate"
type="tns2:DateTimeRecord"/>
                <xs:element minOccurs="0" maxOccurs="1" name="SelectionEndDate"
type="tns2:DateTimeRecord"/>
                <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel"
type="tns2:RestTimelineLevel"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <xs:element minOccurs="1" maxOccurs="1" name="SelectionState"
type="tns2:RestTimelineSelectionState"/>
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    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="RestTimelineSelectionState">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Between"/>
        <xs:enumeration value="ClearFilter"/>
        <xs:enumeration value="Unsupported"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="RestWorkbookRequest">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestRequest"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestWorkbookResult">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestResult">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="WorkbookResult"
type="tns2:GetWorkbookResult"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GetWorkbookResult">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Bits" type="xs:base64Binary"/>
        <xs:element minOccurs="0" maxOccurs="1" name="StoredWorkbookName" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="RestRangeValuesRequest">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestRequest">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
                <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType" nillable="true"
type="tns2:NamedObjectType"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRangeValuesResult">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestResult">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns2:ArrayOfAnyType"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRangeXmlRequest">
    <xs:complexContent mixed="false">
        <xs:extension base="tns2:RestRequest">
            <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
                <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
                <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectView" type="xs:boolean"/>
                <xs:element minOccurs="1" maxOccurs="1" name="IsPrintRequest" type="xs:boolean"/>
                <xs:element minOccurs="1" maxOccurs="1" name="DisallowAutoNov" type="xs:boolean"/>
                <xs:element minOccurs="0" maxOccurs="1" name="ObjectName" type="xs:string"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```



```

</xs:complexType>
<xs:complexType name="RestRangeXmlResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CommandResult"
type="tns2:CommandResult"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsChromeRtl" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestODataRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="RequestHeaders"
type="tns2:ArrayOfArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseHeaders"
type="tns2:ArrayOfArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ServicePathUri" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Uri" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RequestBody" type="xs:base64Binary"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HttpMethod" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestODataResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ResponseStatusCode" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseHeaders"
type="tns2:ArrayOfArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseBody"
type="xs:base64Binary"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestOpenWorkbookRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestCloseWorkbookRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestRequest"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestOpenWorkbookResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:RestResult">
      <xs:sequence>
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      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="SetRangeResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetRangeResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SetRangeA1">

```

```

    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="setRangeRequests"
type="tns2:ArrayOfRangeValuesA1"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="SetRangeA1Response">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="SetRangeA1Result"
type="tns2:CommandResult"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="SetParameters">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="workbookParameters"
type="tns2:ArrayOfWorkbookParameter"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="ArrayOfWorkbookParameter">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="WorkbookParameter"
nillable="true" type="tns2:WorkbookParameter"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="WorkbookParameter">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Comment" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsPivotPageField" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsSlicer" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="RequiresConnection" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns2:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="SetParametersResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="SetParametersResult"
type="tns2:CommandResult"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetRangeForClipboard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="source" type="tns2:SheetRange"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetRangeForClipboardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetRangeForClipboardResult"
type="tns2:CommandResult"/>
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    </xs:complexType>
  </xs:element>

```

```

<xs:element name="Refresh">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataConnectionName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="externalSourceIndex" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="targetAppId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clientSessionId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="RefreshResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RefreshResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="RefreshAll">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="periodic" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ssoAppId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clientSessionId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="RefreshAllResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RefreshAllResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="RecalcAll">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="calculateType"
type="tns2:CalculateType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="recalcParams"
type="tns2:RecalcParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:simpleType name="CalculateType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Recalculate"/>
    <xs:enumeration value="CalculateFull"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="RecalcParameters">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfResultInfo"
type="tns2:ClientUdfResultInfo"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstClientUdfRecalc" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfResultInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Results"
type="tns2:ArrayOfClientUdfResult"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

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    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfClientUdfResult">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfResult" nillable="true"
type="tns2:ClientUdfResult"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ClientUdfResult">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Id" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Result"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ErrorResult" type="tns2:CellError"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="RecalcAllResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="RecalcAllResult"
type="tns2:CommandResult"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="CancelRequest">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="CancelRequestResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CancelRequestResult"
type="tns2:CommandResult"/>
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  </xs:element>
  <xs:element name="Recalc">
    <xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns2:SheetRange"/>
      </xs:sequence>
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  </xs:element>
  <xs:element name="RecalcResponse">
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      <xs:sequence>
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type="tns2:CommandResult"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="RecalcA1">
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        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="sheetName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="rangeName" type="xs:string"/>
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  </xs:element>
  <xs:element name="RecalcA1Response">
    <xs:complexType>
      <xs:sequence>

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        <xs:element minOccurs="0" maxOccurs="1" name="RecalcA1Result"
type="tns2:CommandResult"/>
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</xs:element>
<xs:element name="GetSessionInformation">
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type="tns2:CommandParameter"/>
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</xs:element>
<xs:element name="GetSessionInformationResponse">
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type="tns2:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="serverVersion" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="uiCultureName" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="dataCultureName" type="xs:string"/>
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</xs:element>
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type="tns2:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="searchTerm" type="xs:string"/>
            <xs:element minOccurs="1" maxOccurs="1" name="searchUp" type="xs:boolean"/>
            <xs:element minOccurs="0" maxOccurs="1" name="searchAfterCell"
type="tns2:SheetCell"/>
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<xs:element name="FindRangeResponse">
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type="tns2:CommandResult"/>
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</xs:element>
<xs:element name="ApplyTop10Filter">
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        <xs:sequence>
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type="tns2:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns2:AutoFilterOptions"/>
            <xs:element minOccurs="1" maxOccurs="1" name="top" type="xs:boolean"/>
            <xs:element minOccurs="1" maxOccurs="1" name="percent" type="xs:boolean"/>
            <xs:element minOccurs="1" maxOccurs="1" name="value" type="xs:int"/>
        </xs:sequence>
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</xs:element>
<xs:complexType name="AutoFilterOptions">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterType" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Criteria"
type="tns2:ArrayOfAutoFilterCriteria"/>
        <xs:element minOccurs="1" maxOccurs="1" name="CriteriaType"
type="tns2:AutoFilterCriteriaType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Id" type="xs:unsignedInt"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectView" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>

```

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    </xs:sequence>
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type="tns2:AutoFilterOperationType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Relation"
type="tns2:AutoFilterRelationOperator"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Value" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="AutoFilterOperationType">
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      <xs:enumeration value="NEQ"/>
      <xs:enumeration value="GT"/>
      <xs:enumeration value="GTEQ"/>
      <xs:enumeration value="LT"/>
      <xs:enumeration value="LTEQ"/>
      <xs:enumeration value="LastCount"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="AutoFilterRelationOperator">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Nil"/>
      <xs:enumeration value="And"/>
      <xs:enumeration value="Or"/>
      <xs:enumeration value="LastCount"/>
    </xs:restriction>
  </xs:simpleType>
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    <xs:restriction base="xs:string">
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      <xs:enumeration value="AboveAverage"/>
      <xs:enumeration value="BelowAverage"/>
      <xs:enumeration value="Tomorrow"/>
      <xs:enumeration value="Today"/>
      <xs:enumeration value="Yesterday"/>
      <xs:enumeration value="NextWeek"/>
      <xs:enumeration value="ThisWeek"/>
      <xs:enumeration value="LastWeek"/>
      <xs:enumeration value="NextMonth"/>
      <xs:enumeration value="ThisMonth"/>
      <xs:enumeration value="LastMonth"/>
      <xs:enumeration value="NextQuarter"/>
      <xs:enumeration value="ThisQuarter"/>
      <xs:enumeration value="LastQuarter"/>
      <xs:enumeration value="NextYear"/>
      <xs:enumeration value="ThisYear"/>
      <xs:enumeration value="LastYear"/>
      <xs:enumeration value="YearToDate"/>
      <xs:enumeration value="Q1"/>
      <xs:enumeration value="Q2"/>
      <xs:enumeration value="Q3"/>
      <xs:enumeration value="Q4"/>
      <xs:enumeration value="M1"/>
      <xs:enumeration value="M2"/>
      <xs:enumeration value="M3"/>
      <xs:enumeration value="M4"/>
      <xs:enumeration value="M5"/>
      <xs:enumeration value="M6"/>
      <xs:enumeration value="M7"/>
      <xs:enumeration value="M8"/>
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  </xs:simpleType>

```

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        <xs:enumeration value="M9"/>
        <xs:enumeration value="M10"/>
        <xs:enumeration value="M11"/>
        <xs:enumeration value="M12"/>
        <xs:enumeration value="LastCount"/>
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        <xs:sequence>
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type="tns2:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ApplyItemFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns2:AutoFilterOptions"/>
            <xs:element minOccurs="0" maxOccurs="1" name="values" type="tns2:ArrayOfString"/>
            <xs:element minOccurs="0" maxOccurs="1" name="autoFilterDateNodes"
type="tns2:ArrayOfAutoFilterDateNodeInfo"/>
            <xs:element minOccurs="1" maxOccurs="1" name="blanks" type="xs:boolean"/>
            <xs:element minOccurs="1" maxOccurs="1" name="hideBlanks" type="xs:boolean"/>
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</xs:element>
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nillable="true" type="tns2:AutoFilterDateNodeInfo"/>
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</xs:complexType>
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    <xs:sequence>
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type="tns2:AutoFilterDateNodeType"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Hour" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Minute" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Second" type="xs:short"/>
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<xs:simpleType name="AutoFilterDateNodeType">
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        <xs:enumeration value="Month"/>
        <xs:enumeration value="Day"/>
        <xs:enumeration value="Hour"/>
        <xs:enumeration value="Minute"/>
        <xs:enumeration value="Second"/>
        <xs:enumeration value="Max"/>
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type="tns2:CommandResult"/>
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```

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type="tns2:AutoFilterOptions"/>
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      <xs:enumeration value="Ascending"/>
      <xs:enumeration value="Descending"/>
      <xs:enumeration value="Toggle"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="SortFilterColumnResponse">
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        <xs:element minOccurs="0" maxOccurs="1" name="SortFilterColumnResult"
type="tns2:CommandResult"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetAutoFilterItemList">
    <xs:complexType>
      <xs:sequence>
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type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns2:AutoFilterOptions"/>
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    </xs:complexType>
  </xs:element>
  <xs:complexType name="AutoFilterItemList">
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      <xs:element minOccurs="1" maxOccurs="1" name="ShowTime" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ItemListMaxExceeded" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsBlanksSelected" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterDateNodes"
type="tns2:ArrayOfAutoFilterDateNodeInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterItems"
type="tns2:ArrayOfAutoFilterItem"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SecondValues"
type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SecondKeys" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MinuteValues"
type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MinuteKeys" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="HourValues" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="HourKeys" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DayValues" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DayKeys" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MonthValues" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MonthKeys" type="tns2:ArrayOfAnyType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="YearValues" type="tns2:ArrayOfAnyType"/>
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type="tns2:AutoFilterItem"/>
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  <xs:complexType name="AutoFilterItem">

```



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    <xs:sequence>
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    <xs:complexType>
      <xs:sequence>
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type="tns2:CommandResult"/>
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type="tns2:AutoFilterItemList"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetPivotMenu">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
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    </xs:complexType>
  </xs:element>
  <xs:complexType name="PivotMenu">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Top10MaxItems" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="AdvancedFiltering" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsPageFilter" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="PivotDataItems"
type="tns2:ArrayOfPivotField"/>
      <xs:element minOccurs="0" maxOccurs="1" name="PivotDataFields"
type="tns2:ArrayOfPivotField"/>
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type="tns2:ArrayOfPivotField"/>
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  <xs:complexType name="ArrayOfPivotField">
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type="tns2:PivotField"/>
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  </xs:complexType>
  <xs:complexType name="PivotField">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="MemberProperties"
type="tns2:ArrayOfPivotField"/>
      <xs:element minOccurs="0" maxOccurs="1" name="PivotFilterParameters"
type="tns2:ArrayOfPivotFilterParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsWholeDays" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsEnabledWholeDays" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="SortByValueIndex" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsNonnumericCaptionFilteringEnabled"
type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsDateFilteringEnabled"
type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsCaptionFilteringEnabled"
type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsFilteringEnabled" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsDateField" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsDataField" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="FilterParameter"
type="tns2:Top10FilterParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInRowArea" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInPageFilterArea"
type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsSortedByValue" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsSortedDescending" type="xs:boolean"/>
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```

```

        <xs:element minOccurs="1" maxOccurs="1" name="IsSortedAscending" type="xs:boolean"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="HasManualFilter" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HasTop10Filter" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsLevel" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsHierarchy" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="IdString" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayString" type="xs:string"/>
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nillable="true" type="tns2:PivotFilterParameter"/>
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</xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="1" name="MemberPropertyId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
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        <xs:enumeration value="Count"/>
        <xs:enumeration value="Percent"/>
        <xs:enumeration value="Sum"/>
    </xs:restriction>
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type="tns2:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotMenu" type="tns2:PivotMenu"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ConnectAndGetPivotMenu">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns2:PivotOperationOptions"/>
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    </xs:complexType>
</xs:element>
<xs:element name="ConnectAndGetPivotMenuResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="ConnectAndGetPivotMenuResult"
type="tns2:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotMenu" type="tns2:PivotMenu"/>
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    </xs:complexType>
</xs:element>

```

```

    </xs:complexType>
  </xs:element>
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      <xs:sequence>
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type="tns2:CommandParameter"/>
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type="tns2:SlicerOptions"/>
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    </xs:complexType>
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  <xs:complexType name="SlicerView">
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      <xs:element minOccurs="1" maxOccurs="1" name="RequiresUpdate" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="HasEffectiveSelection"
type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ItemsToScrollBar" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="CellDistance" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="CellMargin" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Offset" type="xs:int"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="ItemHeight" type="xs:unsignedInt"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="CaptionVisible" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="OlapSourced" type="xs:boolean"/>
    </xs:sequence>
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      <xs:element minOccurs="1" maxOccurs="1" name="GradientStop0" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="GradientType" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="HasGradient" type="xs:boolean"/>
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type="tns2:SlicerFontType"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="FillColor" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Indent" type="xs:int"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="Italic" type="xs:boolean"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="FontColor" type="xs:int"/>
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      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns2:SlicerFormatElementList"/>
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type="tns2:CommandParameter"/>
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type="tns2:SlicerOptions"/>
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type="tns2:CommandResult"/>
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      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns2:SlicerFormatElementList"/>
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type="tns2:SlicerOptions"/>
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type="tns2:SlicerOptions"/>
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type="tns2:CommandParameter"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
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                <xs:element minOccurs="1" maxOccurs="1" name="Selected" type="xs:boolean"/>
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type="tns2:CommandResult"/>
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type="tns2:PivotFilterItemList"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:CommandResult"/>
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type="tns2:PivotFilterItemList"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:CommandResult"/>
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  <xs:element name="ApplyPivotSort">
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type="tns2:CommandParameter"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:CommandParameter"/>
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type="tns2:PivotOperationOptions"/>
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type="tns2:CommandResult"/>
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type="tns2:ArrayOfPublishedObjectName"/>
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type="tns2:ArrayOfSheetName"/>
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  </xs:complexType>
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type="tns2:CommandParameter"/>
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type="tns2:ImageRenderingOptions"/>
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type="tns2:GetChartInformation"/>
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type="tns2:ImageRenderingOptions"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="SheetIndex" type="xs:int"/>
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        <xs:enumeration value="DataPoint"/>
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type="tns2:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="chartElementDataResult"
type="tns2:ChartElementData"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetRangeImage">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="getRangeImageInformation"
type="tns2:GetRangeImageInformation"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="GetRangeImageInformation">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="RangeId" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Width100" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Height100" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShowHeaders" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="GetRangeImageResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetRangeImageResult"
type="tns2:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="binaryRangeImage"
type="xs:base64Binary"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="ValidatePrint">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="printOptions"
type="tns2:PrintOptions"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="PrintOptions">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Type" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="sessionId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Title" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ObjectId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SelectedRange" type="tns2:SheetRange"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UsedRange" type="tns2:SheetRange"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UseSelection" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UsedRangeTooBig" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="ValidatePrintResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="ValidatePrintResult"
type="tns2:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="outPrintOptions"
type="tns2:PrintOptions"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ExpandCollapseOutline">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="sheetOrNamedRange" type="xs:string"/>
            <xs:element minOccurs="1" maxOccurs="1" name="namedRange" type="xs:boolean"/>
            <xs:element minOccurs="1" maxOccurs="1" name="outlineLevel" type="xs:unsignedByte"/>
            <xs:element minOccurs="1" maxOccurs="1" name="rowColumn" type="xs:int"/>
            <xs:element minOccurs="1" maxOccurs="1" name="row" type="xs:boolean"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ExpandCollapseOutlineResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="ExpandCollapseOutlineResult"
type="tns2:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="SetCalculationOptions">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
            <xs:element minOccurs="1" maxOccurs="1" name="calcType"
type="tns2:WorkbookCalculation"/>
        </xs:sequence>
    </xs:complexType>

```

```

</xs:element>
<xs:simpleType name="WorkbookCalculation">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Manual"/>
    <xs:enumeration value="Automatic"/>
    <xs:enumeration value="Semiautomatic"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="SetCalculationOptionsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetCalculationOptionsResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetHealthScore">
  <xs:complexType/>
</xs:element>
<xs:element name="GetHealthScoreResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetHealthScoreResult"
type="tns2:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetInteractiveReportBootstrapData">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clientId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="connectionsOnly" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetInteractiveReportBootstrapDataResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
name="GetInteractiveReportBootstrapDataResult" type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="interactiveReportInfo"
type="tns2:InteractiveReportInfo"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetTimeSlicerFilterState">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns2:SlicerOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="TimeSlicerView">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="CaptionHeight" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SpaceWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DayWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MonthWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="QuarterWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="YearWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectionLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplaySettings" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns2:PivotFilterType"/>
  </xs:sequence>
</xs:complexType>

```

```

    <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionBegin" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayStart" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MaxDate" type="tns2:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinDate" type="tns2:TimeDtr"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayLabel" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BetweenSelectionEnd" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BetweenSelectionBegin" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="OlapSourced" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeDtr">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Year" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeSlicerFormatElementList">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="TimeSlicerFormatElements"
type="tns2:ArrayOfTimeSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfTimeSlicerFormatElement">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeSlicerFormatElement"
nillable="true" type="tns2:TimeSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeSlicerFormatElement">
  <xs:complexContent mixed="false">
    <xs:extension base="tns2:SlicerFormatElement">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="FontHeight" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="GradientAngle" type="xs:double"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetTimeSlicerFilterStateResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerFilterStateResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns2:TimeSlicerFormatElementList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerView"
type="tns2:TimeSlicerView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetTimeSlicerStrings">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="TimeSlicerStringTemplates">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DayToDayYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayToDayMonth" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthYearToMonthYear" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

```

    <xs:element minOccurs="0" maxOccurs="1" name="MonthToMonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterYearToQuarterYear"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterToQuarterYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterToYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearToYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayYearToDayYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Day" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelDay" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelMonth" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelQuarter" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterNames" type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthNamesShort"
type="tns2:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthNames" type="tns2:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="GetTimeSlicerStringsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerStringsResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerStrings"
type="tns2:TimeSlicerStringTemplates"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SaveWorkbookForEditing">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SaveWorkbookForEditingResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SaveWorkbookForEditingResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="editUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="EnsureWorkbookModel">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="EnsureWorkbookModelResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="EnsureWorkbookModelResult"
type="tns2:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="catalog" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="sessionTimeout" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetWorkbookConnections">
  <xs:complexType>
    <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns2:CommandParameter"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="GetWorkbookConnectionsResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetWorkbookConnectionsResult"
type="tns2:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="connections"
type="tns2:ArrayOfString"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:simpleType name="RangeReference">
    <xs:restriction base="xs:string"/>
</xs:simpleType>
<xs:simpleType name="SessionIdentifier">
    <xs:restriction base="xs:string"/>
</xs:simpleType>
</xs:schema>

```


8 Appendix C: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs.

- Microsoft SharePoint Server 2013

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms "SHOULD" or "SHOULD NOT" implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term "MAY" implies that the product does not follow the prescription.

<1> [Section 2.2.2.1](#): Microsoft Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.13](#).

<2> [Section 2.2.4.13](#): If the date value is the 0th day in the month of January of the year 1900, Excel Calculation Services 2013 sets the value of the **Day** element to 0.

<3> [Section 2.2.4.13](#): If the date value is the 0th day in the month of January of the year 1900, Excel Calculation Services 2013 sets the value of the **Day** element to 0.

<4> [Section 2.2.4.50](#): Excel Calculation Services 2013 will attempt to fallback to a **fallback UI culture** when an unsupported **UI culture** is requested.

<5> [Section 2.2.4.56](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

<6> [Section 2.2.4.56](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

<7> [Section 2.2.4.56](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

<8> [Section 2.2.5](#): Excel Calculation Services 2013 uses the **A1** notation. See [\[MSFT-ACRR\]](#).

<9> [Section 2.2.5.25](#): Excel Calculation Services 2013 uses the A1 notation. See [\[MSFT-ACRR\]](#).

<10> [Section 3.1.4.1](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

<11> [Section 3.1.4.2](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

<12> [Section 3.1.4.3](#): Excel Calculation Services 2013 can also use any of the values specified in section [2.2.5.14](#).

<13> [Section 3.1.4.4](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

<14> [Section 3.1.4.5](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

<15> [Section 3.1.4.6](#): Excel Calculation Services 2013 can use any of the values specified in section [2.2.5.14](#).

[<16> Section 3.1.4.7](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<17> Section 3.1.4.8](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<18> Section 3.1.4.9](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<19> Section 3.1.4.10](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<20> Section 3.1.4.11](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<21> Section 3.1.4.12](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<22> Section 3.1.4.13](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<23> Section 3.1.4.14](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<24> Section 3.1.4.15](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<25> Section 3.1.4.16](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<26> Section 3.1.4.17](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<27> Section 3.1.4.18](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<28> Section 3.1.4.19](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<29> Section 3.1.4.20](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<30> Section 3.1.4.21](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<31> Section 3.1.4.22](#): Excel Calculation Services 2013 returns the **SpecifiedItemNotFound** value specified in section 2.2.5.14 if a user does not have **Open Item permission** and if the requested **range** is not wholly contained inside a **published item**.

[<32> Section 3.1.4.22](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<33> Section 3.1.4.23](#): Excel Calculation Services 2013 returns the **SpecifiedItemNotFound** value specified in section 2.2.5.14 if a user does not have Open Item permission and if the requested range is not wholly contained inside a published item.

[<34> Section 3.1.4.23](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<35> Section 3.1.4.24](#): Excel Calculation Services 2013 returns the **SpecifiedItemNotFound** value specified in section 2.2.5.14 if a user does not have Open Item permission and if the requested range is not wholly contained inside a published item.

[<36> Section 3.1.4.24](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<37> Section 3.1.4.25](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<38> Section 3.1.4.25.2.2](#): Excel Calculation Services 2013 returns "Excel Calculation Services (14.0)" when the **GetSessionInformation** operation is called.

[<39> Section 3.1.4.26](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<40> Section 3.1.4.27](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<41> Section 3.1.4.28](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<42> Section 3.1.4.29](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<43> Section 3.1.4.30](#): Excel Calculation Services 2013 has exceptions as noted in [\[MSDN-UFES\]](#).

[<44> Section 3.1.4.30](#): Excel Calculation Services 2013 has exceptions as noted in [\[MSDN-UFES\]](#).

[<45> Section 3.1.4.30](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<46> Section 3.1.4.31](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<47> Section 3.1.4.32](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<48> Section 3.1.4.33](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<49> Section 3.1.4.34](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.13.

[<50> Section 3.1.4.35](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<51> Section 3.1.4.36](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<52> Section 3.1.4.37](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<53> Section 3.1.4.38](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<54> Section 3.1.4.39](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<55> Section 3.1.4.40](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<56> Section 3.1.4.41](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<57> Section 3.1.4.42](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<58> Section 3.1.4.43](#): Excel Calculation Services 2013 will set the values sent by the protocol client and will not return an error if **rangeValues** contains values in only one dimension (A single **column (2)** or a single **row (2)**), and the first **worksheet cell** of **rangeCoordinates** falls on a **workbook** parameter.

[<59> Section 3.1.4.43](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.13.

[<60> Section 3.1.4.44](#): Excel Calculation Services 2013 will set the values sent by the protocol client and will not return an error if the **Value** in **RangeValuesA1** contains values in only one dimension (A single column (2) or a single row (2)), and the first worksheet cell of **rangeName** in **RangeValuesA1** falls on a workbook parameter.

[<61> Section 3.1.4.44](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<62> Section 3.1.4.45](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<63> Section 3.1.4.46](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<64> Section 3.1.4.47](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<65> Section 3.1.4.48](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<66> Section 3.1.4.49](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<67> Section 3.1.4.50](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<68> Section 3.1.4.51](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<69> Section 3.1.4.52](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<70> Section 3.1.4.53](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<71> Section 3.1.4.54](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<72> Section 3.1.4.55](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<73> Section 3.1.4.56](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<74> Section 3.1.4.57](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<75> Section 3.1.4.58](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.13.

[<76> Section 3.1.4.59](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<77> Section 3.1.4.61](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<78> Section 3.1.4.62](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<79> Section 3.1.4.63](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<80> Section 3.1.4.64](#): Excel Calculation Services 2013 can also use any of the values specified in section 2.2.5.14.

[<81> Section 3.1.4.65](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

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[<104> Section 3.1.4.89](#): Excel Calculation Services 2013 can use any of the values specified in section 2.2.5.14.

[<105> Section 3.1.5.1](#): Excel Calculation Services 2013 times out **sessions (2)** which are not **edit sessions** after a period of time of inactivity. This period of time is configurable.

[<106> Section 3.1.5.2](#): In Excel Calculation Services 2013, only some operations time out. Other operations can go over the allotted time.

9 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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