

## [MS-PPSAS]:

# PerformancePoint Services Authoring Service Protocol

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Preliminary

## Revision Summary

| Date       | Revision History | Revision Class | Comments   |
|------------|------------------|----------------|--|
| 7/13/2009  | 0.1              | Major          | Initial Availability   |
| 8/28/2009  | 0.2              | Editorial      | Revised and edited the technical content                                     |
| 11/6/2009  | 0.3              | Editorial      | Revised and edited the technical content                                     |
| 2/19/2010  | 1.0              | Major          | Updated and revised the technical content                                    |
| 3/31/2010  | 1.01             | Editorial      | Revised and edited the technical content                                     |
| 4/30/2010  | 1.02             | Editorial      | Revised and edited the technical content                                     |
| 6/7/2010   | 1.03             | Editorial      | Revised and edited the technical content                                     |
| 6/29/2010  | 1.04             | Editorial      | Changed language and formatting in the technical content.                    |
| 7/23/2010  | 1.05             | Minor          | Clarified the meaning of the technical content.                              |
| 9/27/2010  | 1.05             | None           | No changes to the meaning, language, or formatting of the technical content. |
| 11/15/2010 | 1.05             | None           | No changes to the meaning, language, or formatting of the technical content. |
| 12/17/2010 | 1.05             | None           | No changes to the meaning, language, or formatting of the technical content. |
| 3/18/2011  | 1.05             | None           | No changes to the meaning, language, or formatting of the technical content. |
| 6/10/2011  | 1.05             | None           | No changes to the meaning, language, or formatting of the technical content. |
| 1/20/2012  | 2.0              | Major          | Significantly changed the technical content.                                 |
| 4/11/2012  | 2.0              | None           | No changes to the meaning, language, or formatting of the technical content. |
| 7/16/2012  | 2.0              | None           | No changes to the meaning, language, or formatting of the technical content. |
| 9/12/2012  | 2.0              | None           | No changes to the meaning, language, or formatting of the technical content. |
| 10/8/2012  | 2.1              | Minor          | Clarified the meaning of the technical content.                              |
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| 7/30/2013  | 2.1              | None           | No changes to the meaning, language, or formatting of the technical content. |
| 11/18/2013 | 2.2              | Minor          | Clarified the meaning of the technical content.                              |
| 2/10/2014  | 2.2              | None           | No changes to the meaning, language, or formatting of the technical content. |
| 4/30/2014  | 2.3              | Minor          | Clarified the meaning of the technical content.                              |
| 7/31/2014  | 2.3              | None           | No changes to the meaning, language, or formatting of the                    |

| <b>Date</b> | <b>Revision History</b> | <b>Revision Class</b> | <b>Comments</b>  |
|-------------|-------------------------|-----------------------|--|
|             |                         |                       | technical content.   |
| 10/30/2014  | 2.4                     | Minor                 | Clarified the meaning of the technical content.                              |
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| 9/14/2016   | 3.0                     | None                  | No changes to the meaning, language, or formatting of the technical content. |
| 9/29/2016   | 3.0                     | None                  | No changes to the meaning, language, or formatting of the technical content. |
| 10/17/2016  | 3.0                     | None                  | No changes to the meaning, language, or formatting of the technical content. |
| 6/20/2017   | 3.1                     | Minor                 | Clarified the meaning of the technical content.                              |
| 9/19/2017   | 3.2                     | Minor                 | Clarified the meaning of the technical content.                              |
| 7/24/2018   | 4.0                     | Major                 | Significantly changed the technical content.                                 |

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Preliminary

# 1 Introduction

The PerformancePoint Authoring Services Protocol is a Web service protocol that is used to read from, write to, and perform basic operations on a visual interface displaying related views hosted on a server.

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:

**Analysis Services:** The abbreviated name for Microsoft SQL Server Analysis Services, which is used to create and maintain multidimensional data that is sent to client applications in response to queries. Also referred to as Online Analytical Processing (OLAP) server.

**attribute hierarchy:** A single-level **hierarchy** that uses only an attribute or a column from a source, back-end relational database as its hierarchy. An attribute hierarchy typically has the same name as the attribute and is always associated with the attribute on which it is based. An all-level member can optionally be enabled for an attribute hierarchy. See also OLAP hierarchy.

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

**average weighted value:** A type of **rollup** value. It indicates an average that factors the weighted value of all of the child values that are contained within it.

**banding:** A process and collection of settings that are used to define thresholds or boundaries between changes in indicator statuses. See also column banding and row banding.

**base64 encoding:** A binary-to-text encoding scheme whereby an arbitrary sequence of bytes is converted to a sequence of printable ASCII characters, as described in [\[RFC4648\]](#).

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

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

**context site:** A site that corresponds to the context of the current request.

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

**current user:** The user who is authenticated during processing operations on a front-end web server or a back-end database server.

**current version:** The latest version of a document that is available to a user, based on the permissions of the user and the publishing level of the document.

**dashboard:** A visual interface that displays a related group of interactive scorecard and report views. It provides views into key measures that are relevant to a business practice or process. Dashboard elements provide capabilities, such as shared filters, that enable users to perform tasks such as highlighting trends, comparing data, and controlling the data that is displayed.

**data point:** An individual value that is plotted in a chart and is represented together with other data points by bars, columns, lines, pie or doughnut slices, dots, and various other shapes, which are referred to as data markers. Data markers of the same color constitute a data series.

**data source:** (1) 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.

(2) A specified data source type, connection string, and credentials, which can be saved separately to a report server and shared among report projects or embedded in a report definition (.rdl) file.

**default member:** The dimension member that is used in a query if a member is not specified for the dimension.

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

**deserialize:** See unmarshal.

**dimension:** 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.

**display folder:** A folder into which attributes, measures, calculated members, and key performance indicators can be organized to facilitate browsing.

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

**drilldown:** A technique that is used to navigate hierarchical data, starting from general data and moving to increasingly finer levels of detail.

**fact:** A row in a table that contains numerical measures and keys, and associates specific facts with dimension tables, which are referred to as fact tables. A fact contains values that define a data event, such as a sales transaction.

**feature:** A package of SharePoint elements that can be activated or deactivated for a specific feature scope.

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

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

**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).

**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.

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

**Hypertext Transfer Protocol (HTTP):** An application-level protocol for distributed, collaborative, hypermedia information systems (text, graphic images, sound, video, and other multimedia files) on the World Wide Web.

**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 [\[RFC5246\]](#).

**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.

**list:** (1) A container within a SharePoint site that stores list items. A list has a customizable schema that is composed of one or more fields.

(2) An organization of a region of cells into a tabular structure in a workbook.

**list item:** An individual entry within a SharePoint list. Each list item has a schema that maps to fields in the list that contains the item, depending on the content type of the item.

**login name:** A string that is used to identify a user or entity to an operating system, directory service, or distributed system. For example, in Windows-integrated authentication, a login name uses the form "DOMAIN\username".

**major version:** An iteration of a software component, document, or list item that is ready for a larger group to see, or has changed significantly from the previous major version. For an item on a SharePoint site, the minor version is always "0" (zero) for a major version.

**master page:** An ASP.NET file that has a predefined layout that can include static text, HTML elements, and server controls.

**MD5:** A one-way, 128-bit hashing scheme that was developed by RSA Data Security, Inc., as described in [\[RFC1321\]](#).

**measure:** In a cube, a set of values that are typically numeric and are based on a column in the fact table of the cube. Measures are the central values that are aggregated and analyzed.

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

**member:** (1) A user in the Members group of a site.

(2) See OLAP member.

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

**named set:** A grouping of dimension members or items from a data source or a set expression that is named and treated as a single unit and that can be referenced or reused multiple times.

**normalized:** In relational database design, the movement of data toward its optimized state, typically third normal form, to avoid redundancy and inconsistency and to promote efficient maintenance and storage of that data.

**object:** A set of attributes, each with its associated values. Two attributes of an object have special significance: an identifying attribute and a parent-identifying attribute. An identifying attribute is a designated single-valued attribute that appears on every object; the value of this attribute identifies the object. For the set of objects in a replica, the values of the identifying attribute are distinct. A parent-identifying attribute is a designated single-valued attribute that appears on every object; the value of this attribute identifies the object's parent. That is, this attribute contains the value of the parent's identifying attribute, or a reserved value identifying no object. For the set of objects in a replica, the values of this parent-identifying attribute define a tree with objects as vertices and child-parent references as directed edges with the **child** as an edge's tail and the parent as an edge's head. Note that an object is a value, not a variable; a replica is a variable. The process of adding, modifying, or deleting an object in a replica replaces the entire value of the replica with a new value. As the word replica suggests, it is often the

case that two replicas contain "the same objects". In this usage, objects in two replicas are considered the same if they have the same value of the identifying attribute and if there is a process in place (replication) to converge the values of the remaining attributes. When the members of a set of replicas are considered to be the same, it is common to say "an object" as shorthand referring to the set of corresponding objects in the replicas.

**objective KPI:** A type of **key performance indicator (KPI)** that derives its target value and score from a rollup of the child KPIs that are contained within it.

**OLAP calculated member:** An OLAP member whose value is calculated at run time.

**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**.

**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.

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

**Portable Network Graphics (PNG):** A bitmap graphics file format that uses lossless data compression and supports variable transparency of images (alpha channels) and control of image brightness on different computers (gamma correction). PNG-format files have a .png file name extension.

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

**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.

**report:** A database object that provides a static representation of a set of data and can be used to group, sort, summarize, and aggregate data. The data in a report cannot be edited.

**report view:** An object that is used to display data in a **dashboard**. It can be coordinated with other report views by using filters. Examples of report views include analytic grids and charts, PivotTable reports, strategy maps, trend charts, and webpages.

**rollup:** A type of calculated value that is derived from the aggregated scores of child or descendant key performance indicators (KPIs) in a **scorecard**.

**score:** A measurement of how accurately an analysis model predicts new data. It can be used to measure the effectiveness of an analysis model by adjusting various values in the model.

**scorecard:** A report that depicts organizational and business performance by displaying a collection of **key performance indicators (KPIs)** with performance targets for those KPIs. Each KPI compares actual performance to goals for an area. A scorecard can be organized hierarchically and typically contains visualization tools such as trend charts and conditional formatting.

**Secure Sockets Layer (SSL):** A security protocol that supports confidentiality and integrity of messages in client and server applications that communicate over open networks. SSL supports server and, optionally, client authentication using X.509 certificates [\[X509\]](#) and [\[RFC5280\]](#). SSL is superseded by Transport Layer Security (TLS). TLS version 1.0 is based on SSL version 3.0 [SSL3].

**security zone:** A setting that determines whether a resource, such as a website, can access data on other domains, or access files and settings on a user's computer. There are four security zones: Internet, Local intranet, Trusted sites, and Restricted sites. The zone to which a resource is assigned specifies the security settings that are used for that resource. See also form security level.

**server:** (1) A computer on which the remote procedure call (RPC) server is executing.

(2) A replicating machine that sends replicated files to a partner (client). The term "server" refers to the machine acting in response to requests from partners that want to receive replicated files.

**server-relative URL:** A relative URL that does not specify a scheme or host, and assumes a base URI of the root of the host, as described in [\[RFC3986\]](#).

**Simple Time Period Specification (STPS):** A language and syntax that can be used to define time-based expressions, such as offsets from a specific date or the current date.

**site:** (1) A group of related webpages that is hosted by a server on the World Wide Web or an intranet. Each website has its own entry points, metadata, administration settings, and workflows. Also referred to as web site.

(2) A group of related pages and data within a SharePoint site collection. The structure and content of a site is based on a site definition. Also referred to as SharePoint site and web site.

**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.

**slice:** A subset of the data in a cube. It is specified by limiting one or more dimensions based on members of those dimensions.

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

**SOAP:** A lightweight protocol for exchanging structured information in a decentralized, distributed environment. **SOAP** uses XML technologies to define an extensible messaging framework, which provides a message construct that can be exchanged over a variety of underlying protocols. The framework has been designed to be independent of any particular programming model and other implementation-specific semantics. SOAP 1.2 supersedes SOAP 1.1. See [\[SOAP1.2-1/2003\]](#).

**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.

**strategy map:** A performance management tool that is used to visually present objectives and goals, groupings of objectives and goals, and mappings of objectives and goals to themes, initiatives, key performance indicators (KPIs), targets, business processes, and action plans.

**subsite:** A complete website that is stored in a named subdirectory of another website. The parent website can be the top-level site of a site collection or another subsite. Also referred to as subweb.

**target:** An actor to which a task is assigned.

**target application:** A logical entity that represents a software system for which credentials are maintained. It consists of metadata including the number and type of credentials that are required by the software system and a set of claims that identify the administrators who can update, read, and delete the entity.

**time intelligence:** A type of computation that is used to update data automatically, relative to the current time, in scorecards and reports.

**ToolTip:** A small pop-up window that provides brief context-sensitive help when users point to an item. Also referred to as ScreenTip.

**transform:** An operation that is performed on data to change it from one form to another. Two examples of transforms are compression and encryption.

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

**tuple:** An ordered grouping of members from different dimensions or hierarchies. A single member is a special case of a tuple and can be used as an expression. Every hierarchy does not have to be represented in a tuple.

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

**Unified Modeling Language (UML):** A language that can be used to specify, build, and document software and other systems, such as business models.

**Uniform Resource Locator (URL):** A string of characters in a standardized format that identifies a document or resource on the World Wide Web. The format is as specified in [\[RFC1738\]](#).

**UTF-8:** A byte-oriented standard for encoding Unicode characters, defined in the Unicode standard. Unless specified otherwise, this term refers to the UTF-8 encoding form specified in [\[UNICODE5.0.0/2007\]](#) section 3.9.

**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 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.

**whitespace:** A character that can be found between words, including a space (" "), a carriage return in combination with a line feed (newline), and a tab character.

**workbook:** A container for a collection of sheets.

**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 document:** A document object that is well formed, as described in [\[XML10/5\]](#), and might be valid. An XML document has a logical structure that is composed of declarations, elements, comments, character references, and processing instructions. It also has a physical structure that is composed of entities, starting with the root, or document, entity.

**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.

**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](mailto:dochelp@microsoft.com). We will assist you in finding the relevant information.

[MS-DSDIFFGRAM] Microsoft Corporation, "[SharePoint Web Services: DataSet DiffGram Structure](#)".

[MS-ESP] Microsoft Corporation, "[Excel Web Services Protocol](#)".

[MS-NRBF] Microsoft Corporation, "[.NET Remoting: Binary Format Data Structure](#)".

[MS-PRIMEPF] Microsoft Corporation, "[Deployment Package Format](#)".

[MS-SSAS] Microsoft Corporation, "[SQL Server Analysis Services Protocol](#)".

[MS-SSWPS] Microsoft Corporation, "[Secure Store Web Service Protocol](#)".

[MS-VGSFF] Microsoft Corporation, "[Visio Graphics Service \(.vdw\) File Format](#)".

[MS-XLSX] Microsoft Corporation, "[Excel \(.xlsx\) Extensions to the Office Open XML SpreadsheetML File Format](#)".

[MS-XLS] Microsoft Corporation, "[Excel Binary File Format \(.xls\) Structure](#)".

[RFC1738] Berners-Lee, T., Masinter, L., and McCahill, M., Eds., "Uniform Resource Locators (URL)", RFC 1738, December 1994, <http://www.rfc-editor.org/rfc/rfc1738.txt>

[RFC1808] Fielding, R., "Relative Uniform Resource Locators", RFC 1808, June 1995, <http://www.rfc-editor.org/rfc/rfc1808.txt>

[RFC1952] Deutsch, P., "GZIP file format specification version 4.3", RFC 1952, May 1996, <http://www.rfc-editor.org/rfc/rfc1952.txt>

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.rfc-editor.org/rfc/rfc2119.txt>

[RFC2616] Fielding, R., Gettys, J., Mogul, J., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, <http://www.rfc-editor.org/rfc/rfc2616.txt>

[SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", W3C Note, May 2000, <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>

[SOAP1.2/1] Gudgin, M., Hadley, M., Mendelsohn, N., Moreau, J., and Nielsen, H.F., "SOAP Version 1.2 Part 1: Messaging Framework", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part1-20030624>

[SOAP1.2/2] Gudgin, M., Hadley, M., Mendelsohn, N., Moreau, J., and Nielsen, H.F., "SOAP Version 1.2 Part 2: Adjuncts", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part2-20030624>

[UNICODE] The Unicode Consortium, "The Unicode Consortium Home Page", <http://www.unicode.org/>

[WSDL] Christensen, E., Curbera, F., Meredith, G., and Weerawarana, S., "Web Services Description Language (WSDL) 1.1", W3C Note, March 2001, <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>

[XMLNS] Bray, T., Hollander, D., Layman, A., et al., Eds., "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation, December 2009, <http://www.w3.org/TR/2009/REC-xml-names-20091208/>

[XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/>

[XMLSCHEMA2] Biron, P.V., Ed. and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>

### 1.2.2 Informative References

[DataTable] Microsoft Corporation, "DataTable Class", <http://msdn.microsoft.com/en-us/library/system.data.datatable.aspx>

[MSDN-Axis] Microsoft Corporation, "Axis (MDX) Function", <http://msdn.microsoft.com/en-us/library/ms145531.aspx>

[MSFT-ConnectionFormula] Microsoft Corporation, "Use the Connection Formula dialog box to configure a filter connection", TechNet Library, [http://technet.microsoft.com/en-us/library/ff535788\(office.14\).aspx](http://technet.microsoft.com/en-us/library/ff535788(office.14).aspx)

[MSFT-TimeIntelligence] Microsoft Corporation, "About syntax for Time Intelligence expressions", <https://support.office.com/en-in/article/About-syntax-for-Time-Intelligence-expressions-9d089136-7f1b-43ed-954c-f14ce31a0cb1>

### 1.3 Overview

Dashboard platforms typically support workflow whereby a user creates and publishes content representing the various parts that make up **dashboards**, such as indicators, scorecards, reports in a

variety of forms, and data source references. This content is composed of metadata (such as names of **dimensions** or measures, or the names of data source references), calculation definitions, and formatting information (such as color or layout.)

This protocol enables a protocol client to:

- Create, read, update, validate and delete a variety of dashboard content in a content store. The types and sub-types of content were summarized previously, and described in detail by Common Message Syntax (section 2.)
- Create, read, update, and delete annotations in an annotation store.
- Retrieve metadata, such as the names of dimensions or measures, via data source references.
- Retrieve data sets via data source references.
- Retrieve a listing of content sub-types and component information from a configuration store.

A typical scenario for using this protocol is an extensible editing application that enables users to create, publish and maintain some of the content used in a larger dashboard rendering system.

#### 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:

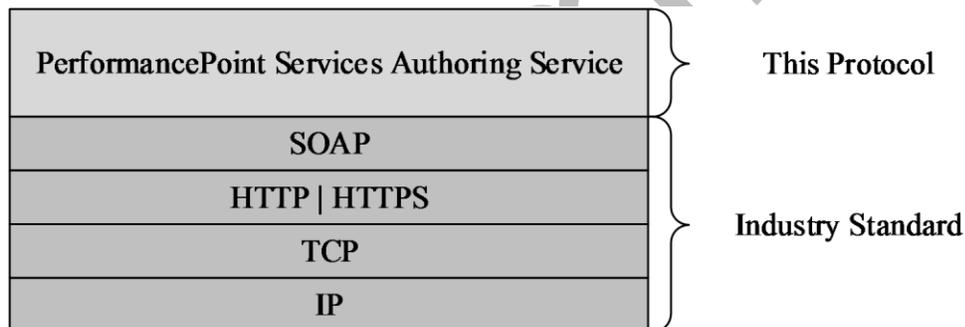


Figure 1: This protocol in relation to other protocols

#### 1.5 Prerequisites/Preconditions

This protocol operates against a site that is identified by a **URL** that is known by protocol clients. The **server (2)** endpoint is formed by appending "\_vti\_bin/pps/ppsauthoringservice.asmx" to the URL or the site, as in [http://www.contoso.com/\\_vti\\_bin/pps/ppsauthoringservice.asmx](http://www.contoso.com/_vti_bin/pps/ppsauthoringservice.asmx), for example.

This protocol assumes that authentication has been performed by the underlying protocols.

#### 1.6 Applicability Statement

This protocol enables communication between a **server (2)** that stores **dashboard** logic definitions and a protocol client which presents a user interface to author them.

This protocol is typically used to build dashboard editing applications. Other typical usages are limited to:

- Publishing a scorecard and retrieving the [GridViewData](#) for a scorecard so that the data can be rendered in an alternative fashion, such as for a mobile device (see section [3.1.4.19](#)).
- Creating and testing data source definitions (including retrieving test data sets) to check that the data source is configured correctly for used in the separate construction of scorecards or dashboards.

This protocol is intended for use by protocol clients connected by high-bandwidth, low-latency network connections, because of the complexity of some of the types used in the protocol and the typically large amount of metadata associated with data sources used in dashboards.

This protocol is not intended as a pass-through to query and receive data sets from back end data sources, except in service of the typical uses described previously.

Although the protocol does not require data source metadata references be acquired using the protocol (for example, publish scorecard content containing member names that were not acquired using the protocol) the protocol does not provide for discrete validation of metadata, so appropriate and typical use is using only this protocol to acquire metadata references (for example, retrieve member names using this protocol to create scorecard content then publish that content using the protocol.)

Although the server (2) does return authentication information (for example authenticated user name), it is not intended as an authentication protocol.

Although this protocol does provide content type extensibility, to the extent that any content for any purpose could be published via the protocol, it is not intended for publishing content other than that which makes up a dashboard.

## 1.7 Versioning and Capability Negotiation

In addition to specifying versioning issues in the following areas, this protocol does not provide specific mechanisms to handle versioning and capability negotiation other than what's provided by the standard [SOAP \[SOAP1.1\]](#) protocol:

- **Supported Transports:** This protocol uses multiple transports with SOAP as described in section Transport (see section [2.1](#))
- **Security and Authentication Methods:** The security and authentication methods supported by this protocol are described in section Security (see section [5](#)).
- **Localization:** This protocol includes text strings in various messages. Localization considerations for such strings are described in sections Common Message Syntax (see section [2.2](#)) and Message Processing Events and Sequencing Rules (see section [3.1.4](#)).

## 1.8 Vendor-Extensible Fields

None.

## 1.9 Standards Assignments

None.

## 2 Messages

Occasionally, instances occur where this web service's **Web Services Description Language (WSDL)** specifies optionality (for example, minOccurs="0" and maxOccurs="1") that conflicts with the stated behavior in this document, or the document doesn't contain the stated behavior. In such cases where the document and the WSDL conflict, the document takes precedence. In cases where the document doesn't specify optionality, the argument has to be present, even if the WSDL specifies that the argument is optional (for example, minOccurs="0").

In cases where an argument is optional and the WSDL specifies both "minOccurs=0" and "Nillable=true", treat the argument as only "minOccurs=0".

### 2.1 Transport

**Servers (1)** MUST support **SOAP** over **HTTP**. Servers (1) SHOULD also support SOAP over **HTTPS** to provide secure communication between protocol clients and servers (1).

Protocol messages MUST be formatted as specified either in [\[SOAP1.1\]](#), section 4 or in [\[SOAP1.2/1\]](#), section 5. Server faults MUST be returned either using HTTP Status Codes as specified in [\[RFC2616\]](#), section 10 or using **SOAP faults** as specified in [\[SOAP1.1\]](#), section 4.4. The version of the SOAP fault returned MUST correspond to the version of SOAP used for the request **WSDL message**

### 2.2 Common Message Syntax

This section contains common definitions that are used by this protocol. The syntax of the definitions uses **XML schema**, as specified in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and **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  |
|--------|---|--|
| http   | <a href="http://schemas.xmlsoap.org/wsd/http/">http://schemas.xmlsoap.org/wsd/http/</a>   |  |
| qdata  | <a href="http://performancepoint.microsoft.com/OLAPQueryData">http://performancepoint.microsoft.com/OLAPQueryData</a>                 |  |
| query  | <a href="http://schemas.microsoft.com/performancepoint/2007/03/query">http://schemas.microsoft.com/performancepoint/2007/03/query</a> |  |
| s1     | <a href="http://microsoft.com/wsd/types/">http://microsoft.com/wsd/types/</a>   |  |
| soap   | <a href="http://schemas.xmlsoap.org/wsd/soap/">http://schemas.xmlsoap.org/wsd/soap/</a>   | <a href="#">[SOAP1.1]</a>                                    |
| soap12 | <a href="http://schemas.xmlsoap.org/wsd/soap12/">http://schemas.xmlsoap.org/wsd/soap12/</a>   | <a href="#">[SOAP1.2/1]</a><br><a href="#">[SOAP1.2/2]</a>   |
| tns    | <a href="http://www.microsoft.com/performancepoint/scorecards">http://www.microsoft.com/performancepoint/scorecards</a>               |  |
| wSDL   | <a href="http://schemas.xmlsoap.org/wsd/">http://schemas.xmlsoap.org/wsd/</a>   | <a href="#">[WSDL]</a>                                       |
| xs     | <a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>   | <a href="#">[XMLSCHEMA1]</a><br><a href="#">[XMLSCHEMA2]</a> |

## 2.2.2 Messages

The following table summarizes common **WSDL messages** defined by this specification.

| Message    | Description  |
|------------|--|
| SOAP fault | The operations defined in section <a href="#">3.1.4</a> return a <b>SOAP fault</b> as specified in section <a href="#">2.2.2.1</a> . |

This specification does not define any common WSDL message definitions.

### 2.2.2.1 Faults

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

#### 2.2.2.1.1 SOAP Fault Detail Element

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 a **BpmException** ([2.2.4.61](#)).

#### 2.2.2.1.2 Full List of Possible Error Codes

In the event of an application error, the **server (2)** MUST return one of these values in the **ErrorCode** element of the **BpmException** ([2.2.4.61](#)), as specified in section [2.2.2.1.1](#).

The protocol client MUST NOT perform any logical operation on the value of the **ErrorCode**, unless it appears in section [2.2.2.1.3](#) or is explicitly specified for a message in section [3.1.4](#).

| Error code  | Description  |
|---|--|
| <b>AnnotationDeleteNotEnabled</b>                 | Deletion of scorecard annotations is not enabled.                          |
| <b>AnnotationNotEnabled</b>                       | Scorecard annotations are not enabled.                                     |
| <b>BIMonitoringApplicationProxyNotFound</b>       | The server (2) is not configured properly or is not functioning correctly. |
| <b>BIMonitoringApplicationProxyThreadAborted</b>  | The request has timed out or has been aborted.                             |
| <b>BIMonitoringApplicationUnavailable</b>         | The server (2) is not configured properly or is not functioning correctly. |
| <b>CannotGetWindowsIdentity</b>                   | The server (2) is not configured properly or is not functioning correctly. |
| <b>CannotGetWindowsIdentityForNonWindowsClaim</b> | The server (2) cannot locate credentials for the user.                     |
| <b>CannotPublishReadOnlyElement</b>               | The publish event of a read only element was aborted.                      |
| <b>CreateReturnedNull</b>                         | The server (2) is not configured properly or is not functioning correctly. |

| Error code                             | Description   |
|--|---|
| <b>DatabaseConnectionFailed</b>        | The server (2) is not configured properly or is not functioning correctly.  |
| <b>DataSourceConnectionFailed</b>      | See section 2.2.2.1.3.  |
| <b>DataSourceConnectionUnsupported</b> | See section 2.2.2.1.3.  |
| <b>DataSourceCubeNotFound</b>          | The user does not have access to the <b>cube</b> specified by a DataSource (section <a href="#">2.2.4.85</a> ) or the cube does not exist |
| <b>DataSourceDatabaseNotFound</b>      | See section 2.2.2.1.3.  |
| <b>DataSourceHostNotFound</b>          | See section 2.2.2.1.3.  |
| <b>DataSourceNotRegistered</b>         | The server (2) is not configured properly or is not functioning correctly.  |
| <b>DataSourceProviderMessage</b>       | An error occurred in a data source.   |
| <b>ErrorCode_InvalidNameInfo</b>       | An attribute of a NameInfo (section <a href="#">2.2.4.149</a> ) is invalid.   |
| <b>ExtInvalidSetting</b>               | A value for setting on the server (2) is invalid.   |
| <b>FCOCreateFailed</b>                 | See section 2.2.2.1.3.  |
| <b>FCOCreateFailedListAccess</b>       | See section 2.2.2.1.3.  |
| <b>FCOCreateFailedListType</b>         | See section 2.2.2.1.3.  |
| <b>FCOCreateFailedNameCollision</b>    | See section 2.2.2.1.3.  |
| <b>FCODeleteFailed</b>                 | See section 2.2.2.1.3.  |
| <b>FCODeleteFailedListAccess</b>       | See section 2.2.2.1.3.  |
| <b>FCOReadFailed</b>                   | See section 2.2.2.1.3.  |
| <b>FCOReadFailedListAccess</b>         | See section 2.2.2.1.3.  |
| <b>FCOUpdateFailed</b>                 | See section 2.2.2.1.3.  |
| <b>FCOUpdateFailedListAccess</b>       | See section 2.2.2.1.3.  |
| <b>FCOUpdateFailedListType</b>         | See section 2.2.2.1.3.  |
| <b>FCOUpdateFailedNameCollision</b>    | See section 2.2.2.1.3.  |
| <b>ImpersonationLoginFailure</b>       | The shared account credentials are not available.   |
| <b>ImportAsKpisException</b>           | An error occurred while importing a <b>KPI</b> from <b>Analysis Services</b> .  |
| <b>IncompatibleSiteDomain</b>          | The server (2) is not configured properly or is not functioning correctly.  |
| <b>InvalidAdomdDataSource</b>          | An attribute of an Analysis Services <b>DataSource</b> (section 2.2.4.85) is not valid.   |
| <b>InvalidAliasName</b>                | The <b>AliasName</b> attribute of a NameInfo (section <a href="#">2.2.4.13</a> ) is invalid.  |

| Error code                              | Description  |
|---|--|
| <b>InvalidAnnotation</b>                | An attribute of an Annotation (section <a href="#">2.2.4.18</a> ) is invalid.                                  |
| <b>InvalidBpmPropertyHyperlink</b>      | A <b>FirstClassElement</b> (section <a href="#">2.2.4.99</a> ) contains an invalid hyperlink property          |
| <b>InvalidBpmPropertyList</b>           | An attribute of a BpmPropertyList (section <a href="#">2.2.4.69</a> ) is invalid.                              |
| <b>InvalidBpmPropertyText</b>           | An attribute of a <b>BpmPropertyText</b> (section <a href="#">2.2.4.72</a> ) is invalid.                       |
| <b>InvalidBuiltinIndicatorOperation</b> | See section 2.2.2.1.3.   |
| <b>InvalidCategoryName</b>              | See section 2.2.2.1.3.   |
| <b>InvalidCharacters</b>                | The <b>UniqueName</b> of a <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> ) contains invalid characters. |
| <b>InvalidComment</b>                   | An attribute of an <b>Comment</b> (section <a href="#">2.2.4.76</a> ) is invalid                               |
| <b>InvalidConnectionString</b>          | Unable to connect to an Analysis Services data source.   |
| <b>InvalidDataSource</b>                | See section 2.2.2.1.3.   |
| <b>InvalidDefaultMemberName</b>         | The <b>DefaultMemberName</b> attribute of a Dimension (section <a href="#">2.2.4.90</a> ) is invalid.          |
| <b>InvalidElement</b>                   | See section 2.2.2.1.3.   |
| <b>InvalidElementField</b>              | See section 2.2.2.1.3.   |
| <b>InvalidEndPoint</b>                  | An attribute of an <b>EndPoint</b> (section <a href="#">2.2.4.95</a> ) is invalid.                             |
| <b>InvalidFirstClassElementField</b>    | See section 2.2.2.1.3.   |
| <b>InvalidId</b>                        | A KPI or <b>scorecard</b> is missing or not available to the <b>current user</b> .                             |
| <b>InvalidIndicator</b>                 | See section 2.2.2.1.3.   |
| <b>InvalidIndicatorBand</b>             | See section 2.2.2.1.3.   |
| <b>InvalidItemType</b>                  | See section 2.2.2.1.3.   |
| <b>InvalidKpi</b>                       | See section 2.2.2.1.3.   |
| <b>InvalidKpiMeasure</b>                | An attribute of a <b>KPIMeasure</b> (section <a href="#">2.2.4.129</a> ) is invalid.                           |
| <b>InvalidMember</b>                    | An attribute of a <b>Member</b> (section <a href="#">2.2.4.134</a> ) is invalid.                               |
| <b>InvalidNamedSet</b>                  | An attribute of a <b>NamedSet</b> (section <a href="#">2.2.4.147</a> ) is invalid.                             |
| <b>InvalidNamedSetSetting</b>           | A <b>named set</b> expression is invalid.  |
| <b>InvalidObject</b>                    | See section 2.2.2.1.3.   |

| Error code                                  | Description   |
|---|---|
| <b>InvalidOverrideFormatProperties</b>      | An attribute of a <b>KpiNumberFormatProperties</b> (section <a href="#">2.2.4.130</a> ) is invalid.   |
| <b>InvalidPermission</b>                    | See section 2.2.2.1.3.  |
| <b>InvalidPermissionAdmin</b>               | See section 2.2.2.1.3.  |
| <b>InvalidQueryChildMembers</b>             | The specified <b>member (2)</b> name is invalid.  |
| <b>InvalidQueryDimensionRootMembers</b>     | The specified <b>dimension</b> name is invalid.   |
| <b>InvalidReportView</b>                    | See section 2.2.2.1.3.  |
| <b>InvalidReportViewCubeName</b>            | The cube name in an <b>MDX</b> query is not equal to the cube specified in the Analysis Services <b>DataSource</b> (section 2.2.4.85) used to run the query.  |
| <b>InvalidSetting</b>                       | See section 2.2.2.1.3.  |
| <b>InvalidStatusFilterBandIndex</b>         | The <b>BandIndex</b> attribute of a <b>StatusFilter</b> (section <a href="#">2.2.4.167</a> ) is invalid.  |
| <b>InvalidTextLength</b>                    | A string attribute is null, empty or exceeds its specified maximum length.  |
| <b>InvalidTimeIntelligenceConfiguration</b> | The <b>time intelligence</b> configuration of a <b>data source (1)</b> is invalid.  |
| <b>InvalidTimeIntelligenceFormula</b>       | A time intelligence expression is invalid.  |
| <b>InvalidTimeIntelligenceSetting</b>       | An attribute of a <b>TimeIntelligenceDataSource</b> ( <a href="#">2.2.4.171</a> ), <b>TimeIntelligenceFormula</b> ( <a href="#">2.2.4.173</a> ), <b>TimeIntelligenceLevelBinding</b> ( <a href="#">2.2.4.174</a> ), or <b>TimeIntelligenceMdxSettings</b> ( <a href="#">2.2.4.175</a> ) is invalid. |
| <b>InvalidUrl</b>                           | The server (2) is not configured properly or is not functioning correctly.  |
| <b>InvalidVersion</b>                       | An attribute of a <b>ElementVersion</b> (section <a href="#">2.2.4.92</a> ) is invalid  |
| <b>MissingConnectionString</b>              | The server (2) is not configured properly or is not functioning correctly.  |
| <b>NewSetting</b>                           | An attempt was made to update a non-existent setting.   |
| <b>NotAParameterizableControl</b>           | The server (2) is not configured properly or is not functioning correctly.  |
| <b>NotTrustedLocation</b>                   | See section 2.2.2.1.3   |
| <b>OperationContextNull</b>                 | The server (2) is not configured properly or is not functioning correctly.  |
| <b>ParameterDataProviderNotRegistered</b>   | The parameter data provider is not registered.  |
| <b>QueryTimeout</b>                         | A timeout occurred while querying a data source (1).  |

| Error code                                     | Description  |
|--|--|
| <b>RepositoryLocationAbsoluteUrl</b>           | See section 2.2.2.1.3.   |
| <b>RepositoryLocationEmpty</b>                 | See section 2.2.2.1.3.   |
| <b>RepositoryLocationUrlLength</b>             | See section 2.2.2.1.3.   |
| <b>SharedAccountMisconfigured</b>              | The shared account credentials are not configured correctly.               |
| <b>TimeIntelligenceNotConfigured</b>           | A <b>DataSource</b> is not configured for time intelligence.               |
| <b>TimeIntelligenceNotSupported</b>            | A data source (1) does not support time intelligence.                      |
| <b>UnableToLoadCustomDataSource</b>            | The server (2) is not configured properly or is not functioning correctly. |
| <b>UnableToLoadCustomParameterDataProvider</b> | The server (2) is not configured properly or is not functioning correctly. |
| <b>UnableToLoadCustomViewTransform</b>         | The server (2) is not configured properly or is not functioning correctly. |
| <b>UnableToLoadFCODao</b>                      | The server (2) is not configured properly or is not functioning correctly. |
| <b>Unknown</b>                                 | See section 2.2.2.1.3.   |

### 2.2.2.1.3 Common List of Error Codes

In the event of an application error, these values are commonly returned by the **server (2)** in the **ErrorCode** element of the **BpmException** complex type (2.2.4.61), as specified in section 2.2.2.1.1. The protocol client MAY perform logical operations on these values of the **ErrorCode** element.

| Error code                             | Description  |
|--|--|
| <b>DataSourceConnectionFailed</b>      | A connection to the <b>data source (1)</b> could not be established.   |
| <b>DatabaseConnectionNotOpen</b>       | The connection to the data source (1) has been lost.   |
| <b>DataSourceConnectionUnsupported</b> | The host server (2) defined by the data source (1) is not a supported server (2), or the server (2) refused the connection.              |
| <b>DataSourceDatabaseNotFound</b>      | A connection to the database defined by the data source (1) could not be established.  |
| <b>DataSourceHostNotFound</b>          | A connection to the host server (2) defined by the data source (1) could not be established. This indicates a network or security issue. |
| <b>FCOCreateFailed</b>                 | There are inadequate permissions to create this object.  |
| <b>FCOCreateFailedListAccess</b>       | The content store <1> containing this object no longer exists. The object cannot be created.   |
| <b>FCOCreateFailedListType</b>         | The object cannot be created <2>.  |

| Error code                              | Description   |
|---|---|
| <b>FCOCreateFailedNameCollision</b>     | A data source (1) with the requested name already exists. Choose a different name.  |
| <b>FCODeleteFailed</b>                  | The content store<3> containing this object no longer exists, there are inadequate permissions to view the content store<4> or the object has already been deleted. |
| <b>FCODeleteFailedListAccess</b>        | There are inadequate permissions to delete this object. The object cannot be deleted.   |
| <b>FCOReadFailed</b>                    | There are inadequate permissions to read this object or it cannot be read.  |
| <b>FCOReadFailedListAccess</b>          | The content store<5> containing this object no longer exists or there are inadequate permissions to view it.  |
| <b>FCOUpdateFailed</b>                  | An update of this object failed.  |
| <b>FCOUpdateFailedListAccess</b>        | The content store<6> containing this object no longer exists or there are inadequate permissions to view it. The object cannot be updated.                          |
| <b>FCOUpdateFailedListType</b>          | The content store<7> containing this object does not support the type of object being updated. The object cannot be updated.  |
| <b>FCOUpdateFailedNameCollision</b>     | An update this object failed because of a name collision.   |
| <b>InvalidBuiltinIndicatorOperation</b> | Current operation on the indicator cannot be finished because the indicator's <b>URL</b> is invalid.  |
| <b>InvalidCategoryName</b>              | Current operation on the object cannot be finished because the object's containing folder is invalid.   |
| <b>InvalidDataSource</b>                | Current operation on the data source (1) cannot be finished because the data source (1) has failed validation.  |
| <b>InvalidElement</b>                   | Current operation on the Element cannot be finished because the Element has failed basic validation.  |
| <b>InvalidElementField</b>              | Current operation on the Element cannot be finished because the Element has an invalid identifier.  |
| <b>InvalidFirstClassElementField</b>    | Current operation on the object cannot be finished because some of the object's data fields are invalid.  |
| <b>InvalidIndicator</b>                 | Current operation on the indicator cannot be finished because the indicator has failed validation.  |
| <b>InvalidIndicatorBand</b>             | Current operation on the indicator cannot be finished because the indicator has failed validation.  |
| <b>InvalidItemType</b>                  | Current operation on the object cannot be finished because the object's corresponding SharePoint item does not have the expected content type.                      |
| <b>InvalidKpi</b>                       | Current operation on the <b>KPI</b> cannot be finished because the KPI has failed validation.   |

| Error code                           | Description   |
|--------------------------------------|---|
| <b>InvalidObject</b>                 | Current operation on the Element cannot be finished because the Element has failed validation.  |
| <b>InvalidPermission</b>             | The user does not have sufficient permissions to complete the request.  |
| <b>InvalidPermissionAdmin</b>        | The user does not have sufficient administrative permissions to complete the request.   |
| <b>InvalidReportView</b>             | Current operation on the <b>report view</b> cannot be finished because the report view has failed validation.                         |
| <b>InvalidSetting</b>                | Current operation on the object cannot be finished because some of the object's UI appearance data fields are invalid.                |
| <b>NotTrustedLocation</b>            | The location of the data source (1) or object is not configured as trusted.   |
| <b>RepositoryLocationEmpty</b>       | The URL address supplied in the RepositoryLocation (section <a href="#">2.2.4.161</a> ) contains the empty string.                    |
| <b>RepositoryLocationUrlLength</b>   | The URL address supplied in the RepositoryLocation exceeds the maximum length of 2048 characters.                                     |
| <b>RepositoryLocationAbsoluteUrl</b> | The URL address supplied in the RepositoryLocation is absolute, when it MUST be relative, as specified in <a href="#">[RFC1808]</a> . |
| <b>Unknown</b>                       | An unexpected error occurred. An error number is included in the message text.  |

### 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  |
|---------------------------|--|
| <b>AddAllMembersSetOp</b> | This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add all members, at the <b>level</b> specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ). |
| <b>AddCalcMemberSetOp</b> | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add a calculated <b>member (2)</b> , specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section 2.2.4.144).                                   |
| <b>AddChildrenSetOp</b>   | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add <b>child</b> members (2), of the member (2) specified by <b>Name</b> (see section 2.2.4.165), to a  |

| Complex type                      | Description  |
|-----------------------------------|--|
|                                   | <b>MemberSet</b> (see section 2.2.4.144).  |
| <b>AddDefaultMemberSetOp</b>      | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add the <b>default member</b> to a <b>MemberSet</b> (see section 2.2.4.144).  |
| <b>AddDescendantsLeavesSetOp</b>  | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add leaf <b>descendant</b> members (2), of the member (2) specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section 2.2.4.144).                                |
| <b>AddDescendantsSetOp</b>        | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add descendant members (2), at the level specified by <b>LevelName</b> to the member (2) specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section 2.2.4.144). |
| <b>AddDescendantsSubtreeSetOp</b> | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add descendant members (2), from all levels subordinate to the member specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section 2.2.4.144).                    |
| <b>AddFilterSetOp</b>             | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add a value <b>filter</b> set operation to a <b>MemberSet</b> (see section 2.2.4.144).  |
| <b>AddFilterTopBottomSetOp</b>    | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add a top or bottom filter set operation to a <b>MemberSet</b> (see section 2.2.4.144).   |
| <b>AddMemberSetOp</b>             | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add a member (2), specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section 2.2.4.144).  |
| <b>AddNamedSetSetOp</b>           | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add a named set, specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section 2.2.4.144).   |
| <b>AddParentSiblingsSetOp</b>     | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to add the parent's siblings (members (2)), of the member (2) specified by <b>Name</b> (see section 2.2.4.165), to a <b>MemberSet</b> (see section 2.2.4.144).                               |
| <b>AliasInfo</b>                  | The <b>AliasInfo</b> complex type maps a <b>KpiMeasure</b> complex type (section 2.2.4.129) to a string. This mapping defines an alias used to simplify the display, and the definition of formulas used in calculated metrics.  |
| <b>AnalyticBaseReportViewData</b> | The <b>AnalyticBaseReportViewData</b> is a complex type that contains the base <b>report view</b> details for analytic reports.  |
| <b>AnalyticChartLegend</b>        | The <b>AnalyticChartLegend</b> complex type specifies a chart legend.  |
| <b>AnalyticChartReportView</b>    | The <b>AnalyticChartReportView</b> is a complex type that contains the chart type report view details for analytic reports.  |
| <b>AnalyticGridReportView</b>     | The <b>AnalyticGridReportView</b> complex type defines how analytic grid reports are displayed to users.   |
| <b>Annotation</b>                 | The <b>Annotation</b> complex type associates a collection of comments to a <b>cell</b> in a particular <b>slice</b> of a <b>scorecard</b> . An annotation is  |

| Complex type                          | Description   |
|---------------------------------------|---|
|                                       | created using <b>CreateAnnotation</b> operation (section <a href="#">3.1.4.1</a> ), and updated using the <b>UpdateAnnotation</b> operation (section <a href="#">3.1.4.70</a> ).  |
| <b>AnnotationComment</b>              | This complex type specifies a comment for an <b>Annotation</b> (see section 2.2.4.18). This type extends <b>Comment</b> type (see section 2.2.4.76).  |
| <b>ArrayOfAliasInfo</b>               | This complex type specifies an array of <b>AliasInfo</b> complex types (see section 2.2.4.13).  |
| <b>ArrayOfAnnotationComment</b>       | The <b>ArrayOfAnnotationComment</b> complex type specifies an array of <b>AnnotationComment</b> elements (see section 2.2.4.19).  |
| <b>ArrayOfAxis</b>                    | A collection of axes used in a <b>QueryState</b> object (see section <a href="#">2.2.4.158</a> ).   |
| <b>ArrayOfBpmProperty</b>             | The <b>ArrayOfBpmProperty</b> complex type specifies an array of BpmProperty elements (see section 2.2.4.62).   |
| <b>ArrayOfBpmPropertyListItem</b>     | The <b>ArrayOfBpmPropertyListItem</b> complex type specifies an array of <b>items</b> in a list property.   |
| <b>ArrayOfChoice1</b>                 | The <b>ArrayOfChoice1</b> complex type specifies an array of property values. The type of the element in the array MUST be one of <b>decimal</b> , <b>ArrayOfMember</b> (section <a href="#">2.2.4.45</a> ), <b>ArrayOfMemberTransform</b> (section <a href="#">2.2.4.46</a> ), <b>dateTime</b> , <b>string</b> , <b>double</b> , <b>guid</b> , <b>char</b> , or <b>int</b> . |
| <b>ArrayOfComment</b>                 | The <b>ArrayOfComment</b> complex type specifies an array of comments.  |
| <b>ArrayOfConfiguredView</b>          | The <b>ArrayOfConfiguredView</b> complex type specifies an array of view definitions for a scorecard.   |
| <b>ArrayOfDashboardElement</b>        | The <b>ArrayOfDashboardElement</b> complex type specifies an array of DashboardElement (see section 2.2.4.80).  |
| <b>ArrayOfDataColumnMapping</b>       | The <b>ArrayOfDataColumnMapping</b> complex type specifies an array of <b>DataColumnMapping</b> (see section 2.2.4.84).   |
| <b>ArrayOfDecimal</b>                 | The <b>ArrayOfDecimal</b> complex type specifies an array of <b>Decimal</b> .   |
| <b>ArrayOfDefaultDimensionSetting</b> | The <b>ArrayOfDefaultDimensionSetting</b> complex type specifies an array of <b>DefaultDimensionSetting</b> (see section 2.2.4.87).   |
| <b>ArrayOfDimension</b>               | The <b>ArrayOfDimension</b> complex type specifies an array of <b>dimension</b> elements.   |
| <b>ArrayOfEndPoint</b>                | The <b>ArrayOfEndPoint</b> complex type specifies an array of connection termination points for a consumer <b>Web Part</b> such as a report view or a scorecard.  |
| <b>ArrayOfFirstClassElement</b>       | The <b>ArrayOfFirstClassElement</b> complex type specifies an array of first-class objects.   |
| <b>ArrayOfGridCell</b>                | The <b>ArrayOfGridCell</b> complex type specifies an array of cells used by a grid view such as the scorecard view (section <a href="#">2.2.4.121</a> ).  |
| <b>ArrayOfGridDisplayElement</b>      | An array of elements for a scorecard cell.  |
| <b>ArrayOfGridHeaderItem</b>          | The <b>ArrayOfGridHeaderItem</b> complex type specifies an array of headers for a scorecard.  |

| Complex type                               | Description   |
|--|---|
| <b>ArrayOfGridViewTransformReference</b>   | The <b>ArrayOfGridViewTransformReference</b> complex type specifies an array of references to a grid view transform.                                      |
| <b>ArrayOfHierarchy</b>                    | The <b>ArrayOfHierarchy</b> complex type specifies an array of hierarchy values for a dimension.  |
| <b>ArrayOfIndicatorBand</b>                | The <b>ArrayOfIndicatorBand</b> complex type specifies an array of indicator bands.   |
| <b>ArrayOfKpi</b>                          | The <b>ArrayOfKpi</b> complex type specifies an array of <b>Kpi</b> complex types (section <a href="#">2.2.4.128</a> ) for a scorecard.                   |
| <b>ArrayOfKpiMeasure</b>                   | The <b>ArrayOfKpiMeasure</b> complex type specifies an array of <b>KpiMeasure</b> complex types (section <a href="#">2.2.4.129</a> ).                     |
| <b>ArrayOfLevel</b>                        | The <b>ArrayOfLevel</b> complex type defines an array of <b>Level</b> (section <a href="#">2.2.4.131</a> ) complex type.                                  |
| <b>ArrayOfMeasure</b>                      | The <b>ArrayOfMeasure</b> complex type defines an array of <b>Measure</b> (section <a href="#">2.2.4.133</a> ) complex type.                              |
| <b>ArrayOfMember</b>                       | The <b>ArrayOfMember</b> complex type defines an array of <b>Member</b> (section <a href="#">2.2.4.134</a> ) complex type.                                |
| <b>ArrayOfMemberTransform</b>              | The <b>ArrayOfMemberTransform</b> complex type defines an array of <b>MemberTransform</b> (section <a href="#">2.2.4.146</a> ) complex type.              |
| <b>ArrayOfNamedSet</b>                     | The <b>ArrayOfNamedSet</b> complex type defines an array of <b>NamedSet</b> (section <a href="#">2.2.4.147</a> ) complex type.                            |
| <b>ArrayOfNameInfo</b>                     | The <b>ArrayOfNameInfo</b> complex type <a href="#">&lt;8&gt;</a> defines an array of <b>NameInfo</b> complex types (section <a href="#">2.2.4.149</a> ). |
| <b>ArrayOfParameter</b>                    | A collection of parameters used in an analytic <b>query</b> .   |
| <b>ArrayOfParameterDefinition</b>          | The <b>ArrayOfParameterDefinition</b> complex type defines an array of <b>ParameterDefinition</b> (section <a href="#">2.2.4.155</a> ) complex type.      |
| <b>ArrayOfParameterMapping</b>             | The <b>ArrayOfParameterMapping</b> complex type defines an array of <b>ParameterMapping</b> (section <a href="#">2.2.4.156</a> ) complex type.            |
| <b>ArrayOfPropertyBag</b>                  | The <b>ArrayOfPropertyBag</b> complex type defines an array of <b>PropertyBag</b> (section <a href="#">2.2.4.158</a> ) elements.                          |
| <b>ArrayOfSetOperation</b>                 | The <b>ArrayOfSetOperation</b> complex type specifies an array of <b>SetOperation</b> elements (see section <a href="#">2.2.4.165</a> )                   |
| <b>ArrayOfString</b>                       | The <b>ArrayOfString</b> complex type specifies an array of string.   |
| <b>ArrayOfTarget</b>                       | The <b>ArrayOfTarget</b> complex type specifies an array of <b>Target</b> (section <a href="#">2.2.4.170</a> ) complex types.                             |
| <b>ArrayOfTimeIntelligenceDataSource</b>   | A collection of <b>time intelligence</b> data source reference used in time intelligence parameter definitions.   |
| <b>ArrayOfTimeIntelligenceFormula</b>      | A collection of time intelligence parameter formulas.   |
| <b>ArrayOfTimeIntelligenceLevelBinding</b> | The <b>ArrayOfTimeIntelligenceLevelBinding</b> complex type specifies an array of time intelligence binding elements.                                     |
| <b>Axis</b>                                | The <b>Axis</b> complex type specifies information about an axis in a query result.   |

| Complex type                 | Description  |
|------------------------------|--|
| <b>Banding</b>               | The <b>Banding</b> complex type represents the <b>banding</b> settings of the <b>KPI target</b> .  |
| <b>BpmException</b>          | The <b>BpmException</b> complex type contains the details of a <b>server (2)</b> alert.  |
| <b>BpmProperty</b>           | This <b>BpmProperty</b> complex type is the abstract base type for <a href="#">BpmPropertyDate</a> , <a href="#">BpmPropertyDecimal</a> , <a href="#">BpmPropertyHyperlink</a> , <a href="#">BpmPropertyHyperlink2</a> , <a href="#">BpmPropertyLinkBase</a> , <a href="#">BpmPropertyList</a> , <a href="#">BpmPropertyListItem</a> , <a href="#">BpmPropertyLongText</a> , <a href="#">BpmPropertyText</a> and <a href="#">BpmPropertyUser</a> . |
| <b>BpmPropertyBool</b>       | The <b>BpmPropertyBool</b> complex type defines a Boolean property. It extends the <b>BpmProperty</b> (section 2.2.4.62) type.   |
| <b>BpmPropertyDate</b>       | The <b>BpmPropertyDate</b> complex type defines a <b>Date</b> property. It extends the <b>BpmProperty</b> (section 2.2.4.62) type.   |
| <b>BpmPropertyDecimal</b>    | The <b>BpmPropertyDecimal</b> complex type defines a <b>Decimal</b> property. It extends the <b>BpmProperty</b> (section 2.2.4.62) type.   |
| <b>BpmPropertyHyperlink</b>  | This complex type defines a <b>Hyperlink</b> property. This type extends <b>BpmPropertyLinkBase</b> (section 2.2.4.68).<br>This type is used to specify Hyperlinks as custom properties for types that extend <b>FirstClassElement</b> (section 2.2.4.99).   |
| <b>BpmPropertyHyperlink2</b> | The <b>BpmPropertyHyperlink2</b> complex type defines a Hyperlink property. This type extends <b>BpmPropertyLinkBase</b> (section 2.2.4.68).<br>This type is used to specify Hyperlinks as part of annotations for types that extend <b>FirstClassElement</b> complex type (section 2.2.4.99).   |
| <b>BpmPropertyLinkBase</b>   | The <b>BpmPropertyLinkBase</b> complex type defines a <b>Hyperlink</b> property. It extends the <b>BpmProperty</b> (section 2.2.4.62) type.  |
| <b>BpmPropertyList</b>       | The <b>BpmPropertyList</b> complex type specifies zero, or one item of the <b>ArrayOfBpmPropertyListItem</b> complex type (section <a href="#">2.2.4.24</a> ). It extends the <b>BpmProperty</b> complex type (section 2.2.4.62).  |
| <b>BpmPropertyListItem</b>   | The <b>BpmPropertyListItem</b> complex type specifies a name-value pair.   |
| <b>BpmPropertyLongText</b>   | This complex type defines a Long Text property. The type extends <b>BpmProperty</b> (section 2.2.4.62).  |
| <b>BpmPropertyText</b>       | This complex type defines a <b>Text</b> property. The type extends <b>BpmProperty</b> (section 2.2.4.62).  |
| <b>BpmPropertyUser</b>       | This complex type defines a <b>User</b> property. The type extends <b>BpmProperty</b> (section 2.2.4.62).  |
| <b>CalculatedFormulaInfo</b> | This complex type specifies a calculated <b>formula</b> in a <b>KpiMeasure</b> (section 2.2.4.129). This type is used to specify calculations as part of a KPI's calculated metric.  |
| <b>CalculatedMember</b>      | Represents an <b>OLAP calculated member</b> in a <b>Dimension</b> complex type (section <a href="#">2.2.4.90</a> ).<9>   |
| <b>Comment</b>               | This complex type represents a comment to be associated with a data entity. This class is the base class for <b>AnnotationComment</b>  |

| Complex type                                | Description   |
|---|---|
|   | (section 2.2.4.19).   |
| <b>ConfiguredView</b>                       | This complex type specifies the scorecard view and configuration settings of how the scorecard displays and what end user actions are allowed. The protocol client that renders the scorecard <b>MUST</b> use this configuration when displaying it.  |
| <b>Cube</b>                                 | The <b>Cube</b> complex type specifies the structure of a <b>cube</b> . It extends the complex type <b>NameInfo</b> complex type (section 2.2.4.149).   |
| <b>Dashboard</b>                            | The <b>Dashboard</b> complex type defines a <b>dashboard</b> . It specifies the layout and content of the pages in the dashboard and, if the dashboard has been deployed, its deployment location.<br>The <b>Dashboard</b> complex type extends the <b>FirstClassElement</b> type (section 2.2.4.99).   |
| <b>DashboardElement</b>                     | The <b>DashboardElement</b> complex type specifies the parts of a <b>Dashboard</b> (section 2.2.4.79) that have width and height.<br>The <b>DashboardElement</b> complex type extends the <b>SecondClassElement</b> type (section 2.2.4.163) and is the base type for <b>DashboardElementContainer</b> (section 2.2.4.81) and <b>DashboardItem</b> (section 2.2.4.83).  |
| <b>DashboardElementContainer</b>            | The <b>DashboardElementContainer</b> complex type specifies a group of <b>DashboardElement</b> complex types (section 2.2.4.80) that are displayed vertically or horizontally.<br>Each dashboard page is specified by a <b>DashboardElementContainer</b> .<br>Each zone on a dashboard page is specified by a <b>DashboardElementContainer</b> .<br>The <b>DashboardElementContainer</b> complex type extends the <b>DashboardElement</b> . |
| <b>DashboardElementSize</b>                 | This complex type specifies the width or height of a <b>DashboardElement</b> (section 2.2.4.80).  |
| <b>DashboardItem</b>                        | The <b>DashboardItem</b> complex type specifies a single <b>report</b> , scorecard, or filter on a dashboard page. <b>DashboardItem</b> extends the <b>DashboardElement</b> (section 2.2.4.80).   |
| <b>DataColumnMapping</b>                    | The <b>DataColumnMapping</b> complex type specifies dimensional mapping information for a column of data.   |
| <b>DataSource</b>                           | The <b>DataSource</b> complex type specifies a connection to an external data provider.   |
| <b>DataTableMapping</b>                     | The <b>DataTableMapping</b> complex type specifies how data from tabular data sources is mapped to multidimensional data.   |
| <b>DefaultDimensionSetting</b>              | Specifies a default set of members in a dimension. It extends the Dimension (see section 2.2.4.90) type.  |
| <b>DictionaryWrapperOfStringGridCell</b>    | This complex type specifies a collection of <b>ArrayOfGridCells</b> (see section 2.2.4.35) with associated string keys.   |
| <b>DictionaryWrapperOfStringPropertyBag</b> | This complex type specifies a collection of <b>ArrayOfPropertyBags</b> with associated string keys.   |
| <b>Dimension</b>                            | The <b>Dimension</b> complex type specifies the structure of a dimension. It extends the complex type <b>NameInfo</b> (section  |

| Complex type                         | Description   |
|--------------------------------------|---|
|                                      | 2.2.4.149).   |
| <b>Element</b>                       | This abstract class specifies basic metadata about an item. This class is the base class for FirstClassElement and SecondClassElement.  |
| <b>ElementVersion</b>                | This complex type specifies the version information used to distinguish different instances of a FirstClassElement.   |
| <b>EliminateDescendantsSetOp</b>     | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to eliminate descendant members (2), of the member (2) specified by <b>Name</b> (see section 2.2.4.165), from a <b>MemberSet</b> (see section 2.2.4.144).   |
| <b>EliminateMemberSetOp</b>          | This complex type extends the <b>SetOperation</b> (section 2.2.4.165) type. It defines an operation to eliminate a member (2), specified by <b>Name</b> (see section 2.2.4.165), from a <b>MemberSet</b> (see section 2.2.4.144).   |
| <b>EndPoint</b>                      | This complex type defines the receiving end of a connection between a Web Part that provides parameter values such as a filter or a scorecard, and a Web Part that consumes parameter values, such as a report view or a scorecard.   |
| <b>ExcelDataSet</b>                  | Specifies the Excel <b>workbook</b> ( <a href="#">[MS-XLS]</a> ) data for an <b>ExcelWorkbook</b> data source.  |
| <b>ExcelServicesData</b>             | Describes an Excel Services ( <a href="#">[MS-ESP]</a> ) data connection used by Excel Services data sources and Excel Services reports.  |
| <b>Filter</b>                        | The <b>Filter</b> complex type specifies a filter.  |
| <b>FirstClassElement</b>             | The <b>FirstClassElement</b> complex type is an abstract class that represents an object that is versionable. This is the base class for the complex types <b>Dashboard</b> (section 2.2.4.79), <b>DataSource</b> (section <a href="#">2.2.4.85</a> ), <b>Scorecard</b> (section <a href="#">2.2.4.162</a> ), <b>ReportView</b> (section <a href="#">2.2.4.160</a> ), <b>Kpi</b> (section 2.2.4.128) and <b>Indicator</b> (section <a href="#">2.2.4.125</a> ). |
| <b>GridCell</b>                      | Specifies a single cell used by the scorecard grid view and the analytic grid view.   |
| <b>GridCellSet</b>                   | This class specifies the cells used to represent a scorecard or analytic grid. The representation is based on a two dimensional array of <a href="#">GridCell</a> elements indexed by objects of type <a href="#">GridHeaderItem</a> .  |
| <b>GridColor</b>                     | This class represents the grid color for the GridCell contents.   |
| <b>GridDisplayElement</b>            | Specifies an element in a scorecard cell.   |
| <b>GridDisplayElementActual</b>      | Specifies the <a href="#">GridDisplayElement</a> of a KPI's actual value in a scorecard cell.   |
| <b>GridDisplayElementAggregation</b> | Specifies the GridDisplayElement of an aggregated value in a scorecard cell.  |
| <b>GridDisplayElementHyperLink</b>   | Specifies the GridDisplayElement of a KPI's hyperlink property in a cell.   |
| <b>GridDisplayElementIndicator</b>   | Specifies the image of an <b>indicator</b> for the GridDisplayElement in a scorecard cell.  |

| Complex type                           | Description  |
|--|--|
| <b>GridDisplayElementIndicatorText</b> | Specifies the descriptive name of an <b>indicator</b> for the GridDisplayElement in a scorecard cell. The descriptive name of the <b>IndicatorBand</b> is the <b>ToolTip</b> property of the <a href="#">IndicatorBand</a> , for example: "off target".                                      |
| <b>GridDisplayElementNumber</b>        | Specifies a numeric GridDisplayElement in a scorecard cell. This is a base class for the following complex types <a href="#">GridDisplayElementsActual</a> , <a href="#">GridDisplayElementTarget</a> , <a href="#">GridDisplayElementScore</a> , <a href="#">GridDisplayElementVariance</a> |
| <b>GridDisplayElementScore</b>         | Specifies the GridDisplayElement of the KPI target's score in a scorecard cell. Inherits from the <a href="#">GridDisplayElementNumber</a> .   |
| <b>GridDisplayElementTarget</b>        | Specifies the GridDisplayElement of a KPI's target value in a scorecard cell. Inherits from the GridDisplayElementNumber.  |
| <b>GridDisplayElementText</b>          | Specifies the GridDisplayElement of a text value in a scorecard cell. Inherits from the GridDisplayElement.  |
| <b>GridDisplayElementVariance</b>      | Specifies the GridDisplayElement of a KPI target's variance value in a scorecard cell. Inherits from the GridDisplayElementNumber.   |
| <b>GridFontInfo</b>                    | This class represents the font display options for the GridCell contents.  |
| <b>GridFormatInfo</b>                  | This class represents the display format settings for the GridCell contents.   |
| <b>GridHeaderItem</b>                  | The <b>GridHeaderItem</b> complex type specifies the header that represents a row or a column node in a scorecard.   |
| <b>GridIndicatorSettings</b>           | Defines the settings for the Indicator in the Target field.  |
| <b>GridScoreSettings</b>               | Defines the settings for the <b>score</b> in the Target field.   |
| <b>GridTargetSettings</b>              | Defines the display settings for the Target column.  |
| <b>GridVarianceSettings</b>            | Defines the settings for the <b>variance</b> in the Target column.   |
| <b>GridViewData</b>                    | The <b>GridViewData</b> complex type specifies the data structure that represents the scorecard view.  |
| <b>GridViewDefinition</b>              | The <b>GridViewDefinition</b> complex type specifies the definition of a grid-based scorecard view.  |
| <b>GridViewTransformReference</b>      | The <b>GridViewTransformReference</b> complex type specifies one <b>transform</b> operation to be applied to a <b>GridViewData</b> complex type (section 2.2.4.121) instance.  |
| <b>Hierarchy</b>                       | The <b>Hierarchy</b> complex type specifies a <b>hierarchy</b> . It extends the complex type <b>NameInfo</b> (section 2.2.4.149).  |
| <b>Indicator</b>                       | A set of visualizations that represent how the actual value of a KPI compares against its target value.  |
| <b>IndicatorBand</b>                   | This is a visualization representing one state of an <b>indicator</b> .  |
| <b>Item</b>                            | Represents a key-value pair in a <b>SerializableDictionary</b> (section 2.2.4.164).  |
| <b>Kpi</b>                             | A key performance indicator (KPI) is contained in a scorecard.   |
| <b>KpiMeasure</b>                      | The <b>KpiMeasure</b> complex type is contained in a KPI.  |

| Complex type                          | Description   |
|---------------------------------------|---|
| <b>KpiNumberFormatProperties</b>      | Used for custom formatting of KPI <b>measure</b> values.  |
| <b>Level</b>                          | This complex type specifies a level. It extends the complex type <b>NameInfo</b> (section 2.2.4.149).   |
| <b>MDXParameterDefinition</b>         | The <b>MDXParameterDefinition</b> is a complex type that specifies a custom <b>MDX</b> used to retrieve data.   |
| <b>Measure</b>                        | The <b>Measure</b> complex type specifies a measure. It extends the complex type <b>NameInfo</b> (section 2.2.4.149).   |
| <b>Member</b>                         | The <b>Member</b> complex type represents an <b>OLAP</b> member in a <b>Dimension</b> complex type (section 2.2.4.90).  |
| <b>MemberList</b>                     | The <b>MemberList</b> complex type specifies the members (2) of an OLAP hierarchy. This type extends <b>MemberSet</b> complex type (section 2.2.4.144), and can be used with any axis type.                             |
| <b>MemberOperation</b>                | Represents the basic member operations that can be performed on an OLAP dimension member.   |
| <b>MemberOperationAllDescendants</b>  | A <b>MemberOperation</b> complex type (section <a href="#">2.2.4.136</a> ) that represents all descendants of a referred member in the dimension <a href="#">hierarchy</a> . This type extends <b>MemberOperation</b> . |
| <b>MemberOperationChildren</b>        | A <b>MemberOperation</b> that represents all child members of a referred member in a dimension hierarchy. This type extends <b>MemberOperation</b> .  |
| <b>MemberOperationDescendants</b>     | A <b>MemberOperation</b> that represents all descendants of a referred member at a specified level in the hierarchy. This type extends <b>MemberOperation</b> .   |
| <b>MemberOperationDrillUp</b>         | A <b>MemberOperation</b> that represents the parent of a referred member. This type extends <b>MemberOperation</b> .  |
| <b>MemberOperationHide</b>            | A <b>MemberOperation</b> that hides a referred member. This type extends <b>MemberOperation</b> .   |
| <b>MemberOperationLeafDescendants</b> | A <b>MemberOperation</b> that represents all descendants of a referred member that are also leaf members in the dimension hierarchy. This type extends <b>MemberOperation</b> .   |
| <b>MemberParameterDefinition</b>      | The <b>MemberParameterDefinition</b> is a complex type that represents a group of members (2) used to retrieve data.  |
| <b>MemberSet</b>                      | Specifies the properties of an OLAP member hierarchy.   |
| <b>MemberSetFormula</b>               | Specifies a collection of operations on the members (2) of an OLAP hierarchy. This type extends <b>MemberSet</b> and can be used with any axis type.  |
| <b>MemberTransform</b>                | Represents a transform, such as <b>drilldown</b> , applied to a member, hierarchy group or KPI.   |
| <b>NamedSet</b>                       | An OLAP <b>named set</b> .  |
| <b>NamedSetParameterDefinition</b>    | The <b>NamedSetParameterDefinition</b> is a complex type representing a set of members (2) used to retrieve data.   |
| <b>NameInfo</b>                       | The <b>NameInfo</b> complex type specifies the names and the description of a cube, dimension, hierarchy, level, or measure. It is the base type for the complex types <b>Cube</b> (section <a href="#">2.2.4.78</a> ), |

| Complex type                   | Description   |
|--------------------------------|---|
|                                | <b>Dimension</b> (section 2.2.4.90), <b>Hierarchy</b> (section 2.2.4.124), <b>Level</b> (section 2.2.4.131), and <b>Measure</b> (section 2.2.4.133).  |
| <b>NumericFormat</b>           | The <b>NumericFormat</b> is a complex type that represents the numeric format setting for an <b>Analysis Services</b> measure numeric value within an analytic grid report.   |
| <b>NumericFormatsHashtable</b> | An array of <b>NumericFormat</b> objects.   |
| <b>OLAPQueryData</b>           | Represents an analytic query.   |
| <b>OLAPReportView</b>          | The <b>OLAPReportView</b> complex type contains all the state information for an analytic report.   |
| <b>Parameter</b>               | Specifies a logical element of an analytic query whose value can be changed independently of the analytic query.  |
| <b>ParameterDefinition</b>     | This class represents the non-visual portion of the metadata to describe a parameter. This class carries the state necessary to generate a parameter list representing possible connections that can be originated from a first-class element.  |
| <b>ParameterMapping</b>        | Provides the mapping information between a <b>ParameterDefinition</b> (section 2.2.4.155) and a <b>DashboardItem</b> (section 2.2.4.83).  |
| <b>PasReportViewData</b>       | Contains all the state information for a ProClarity Analytics Server report.  |
| <b>PropertyBag</b>             | The <b>PropertyBag</b> complex type MUST contain a pairing of keys and values.  |
| <b>QueryState</b>              | An alternate representation of a MDX query that includes the member selections of each axis.  |
| <b>ReportView</b>              | The <b>ReportView</b> complex type controls the visual display of data in a dashboard and can be coordinated with other report views using filters. Report views include analytic grids and charts, <b>PivotTable</b> and <b>PivotChart</b> reports, Excel spreadsheets [MS-XLSX], SQL Server Reporting Services reports, <b>strategy maps</b> , trend charts, web pages, and custom reports. |
| <b>RepositoryLocation</b>      | The <b>RepositoryLocation</b> complex type specifies the location of a <b>FirstClassElement</b> (section 2.2.4.99) stored on the server (2).  |
| <b>Scorecard</b>               | This complex type represents a scorecard.   |
| <b>SecondClassElement</b>      | This abstract class is the base class for <b>ConfiguredView</b> (section 2.2.4.77), <b>DashboardElement</b> (section 2.2.4.80), and <b>KpiMeasure</b> (section 2.2.4.129).  |
| <b>SerializableDictionary</b>  | This complex type specifies an ordered collection of elements of complex type <b>MemberSetFormula</b> (section 2.2.4.145), <b>MemberList</b> (section 2.2.4.135), or <b>Member</b> (section 2.2.4.134), with their associated string keys.  |
| <b>SetOperation</b>            | This complex type specifies a set operation.  |
| <b>SqlReportViewData</b>       | The <b>SqlReportViewData</b> complex type contains all the state information for a SQL Reporting Services report.   |
| <b>StatusFilter</b>            | This complex type specifies an <b>indicator</b> to be filtered.   |

| Complex type                                 | Description   |
|--|---|
| <b>StrategyMapViewData</b>                   | The <b>StrategyMapViewData</b> complex type class specifies metadata information about a strategy map.  |
| <b>StringCollection</b>                      | The StringCollection complex type specifies a collection of dimension properties.   |
| <b>Target</b>                                | The target of a KPI used to measure against actual data.  |
| <b>TimeIntelligenceDataSource</b>            | A time intelligence data source reference used in time intelligence parameter definitions.  |
| <b>TimeIntelligenceDefinition</b>            | The <b>TimeIntelligenceDefinition</b> complex type specifies time intelligence formulas and data sources. It is used in <b>CustomDefinition</b> of the <b>ParameterDefinition</b> complex type (section 2.2.4.155).                                     |
| <b>TimeIntelligenceFormula</b>               | This complex type specifies a time intelligence parameter formula.  |
| <b>TimeIntelligenceLevelBinding</b>          | Specifies the mapping of internal cube dimensions to their time aggregation level.  |
| <b>TimeIntelligenceMdxSettings</b>           | Specifies how a dimension in an Analysis Services data source maps to a time intelligence filter when running <b>Simple Time Period Specification (STPS)</b> formulas against the data source.  |
| <b>TimeIntelligencePostFormulaDefinition</b> | This complex type specifies a time intelligence post formula filter definition.   |
| <b>TimeIntelligenceSettings</b>              | Specifies additional time intelligence settings for a data source.  |
| <b>Title</b>                                 | This complex type represents a title for an analytic chart.   |
| <b>ToolbarOptions</b>                        | Contains the configuration settings of the toolbar of a <b>ConfiguredView</b> (section 2.2.4.77).   |
| <b>Tuple</b>                                 | The <b>Tuple</b> complex type<10> represents an ordered collection of one or more <b>Member</b> complex types (section 2.2.4.134) from different dimensions. It contains an instance of <b>SerializableDictionary</b> complex type (section 2.2.4.164). |
| <b>XmlFont</b>                               | Specifies a set of attributes that define a font.   |

### 2.2.4.1 AddAllMembersSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add all members, at the **level** specified by **Name** (see section 2.2.4.165), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddAllMembersSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

### 2.2.4.2 AddCalcMemberSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add a calculated **member (2)**, specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddCalcMemberSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Aggregate" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Caption" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Aggregate:** Specifies whether the aggregate function will be used when the member set definition is generated. When the aggregate element is not present, the default value for the aggregate member is set to **TRUE** if the calculated member definition is not yet already aggregated. If the calculated member definition is aggregated, it is set to **FALSE** to avoid double aggregation.

**Caption:** The display name of the calculated member. This element **MUST** be present.

### 2.2.4.3 AddChildrenSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add **child members (2)**, of the member (2) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddChildrenSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

### 2.2.4.4 AddDefaultMemberSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add the **default member** to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddDefaultMemberSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

### 2.2.4.5 AddDescendantsLeavesSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add leaf **descendant members (2)**, of the member (2) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddDescendantsLeavesSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.6 AddDescendantsSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add **descendant members (2)**, at the **level** specified by **LevelName** to the member (2) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddDescendantsSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelName" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**LevelName:** A level name from the **hierarchy** associated with the **MemberSet** (see section [2.2.4.144](#)). It MUST exist and MUST NOT be empty.

#### 2.2.4.7 AddDescendantsSubtreeSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add **descendant members (2)**, from all **levels** subordinate to the member specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddDescendantsSubtreeSetOp"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.8 AddFilterSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add a value **filter** set operation to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddFilterSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

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

#### 2.2.4.9 AddFilterTopBottomSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add a top or bottom **filter** set operation to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddFilterTopBottomSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.10 AddMemberSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add a **member (2)**, specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddMemberSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.11 AddNamedSetSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add a named set, specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddNamedSetSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.12 AddParentSiblingsSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add the parent's siblings (**members (2)**), of the member (2) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddParentSiblingsSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

### 2.2.4.13 AliasInfo

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **AliasInfo** complex type maps a **KpiMeasure** complex type (section [2.2.4.129](#)) to a string. This mapping defines an alias used to simplify the display, and the definition of formulas used in calculated metrics.

The format **MUST** be as follows:

```
<xs:complexType name="AliasInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AliasCalculationInfo"
type="tns:KpiMeasure"/>
  </xs:sequence>
  <xs:attribute name="AliasName" type="xs:string"/>
</xs:complexType>
```

**AliasCalculationInfo:** **MUST** specify the **KpiMeasure** used in the calculated metric. This element **MUST NOT** be null and **MUST** conform to the schema of the **KpiMeasure** complex type.

**AliasName:** Is the display name of the **AliasCalculationInfo** instance. This value **MUST NOT** be null and **MUST NOT** be empty. It **MUST** be less than or equal to 31 characters in length.

### 2.2.4.14 AnalyticBaseReportViewData

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **AnalyticBaseReportViewData** is a complex type that contains the base **report view** details for analytic reports.

```
<xs:complexType name="AnalyticBaseReportViewData"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="NumericFormats"
type="tns:NumericFormatsHashtable"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BackgroundColor" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**NumericFormats:** Numeric format settings for row or column measures of the analytic report as specified in the **NumericFormatsHashtable** (see section [2.2.4.151](#)).

**Font:** Grid font used for rendering the analytic report and specified by **XmlFont** (see section [2.2.4.181](#)).

**FontColor:** The color of the grid font used for rendering the analytic report. The font color is specified by a string. This **MUST** be one of the following formats:

- "NamedColor:<name>" where:
  - "<name>" is the name of a predefined color, specified by a string. Values **MUST** be the same as the names of the elements in Color Table, which follows.
  - Example: "NamedColor:Black".
- "ARGBColor:<A>:<R>:<G>:<B>" where:

- "<A>" is the alpha component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
- "<R>" is the red component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
- "<G>" is the green component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
- "<B>" is the blue component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
- Example: "ARGBColor:255:255:255:255".

## Color Table

| Member name              | Description   |
|--------------------------|---|
| <b>ActiveBorder</b>      | The system-defined color of the active window's border.   |
| <b>ActiveCaption</b>     | The system-defined color of the background of the active window's title bar.  |
| <b>ActiveCaptionText</b> | The system-defined color of the text in the active window's title bar.  |
| <b>AppWorkspace</b>      | The system-defined color of the application workspace. The application workspace is the area in a multiple-document view that is not being occupied by documents.   |
| <b>Control</b>           | The system-defined face color of a 3-D element.   |
| <b>ControlDark</b>       | The system-defined shadow color of a 3-D element. The shadow color is applied to parts of a 3-D element that face away from the light source.                       |
| <b>ControlDarkDark</b>   | The system-defined color that is the dark shadow color of a 3-D element. The dark shadow color is applied to the parts of a 3-D element that are the darkest color. |
| <b>ControlLight</b>      | The system-defined color that is the light color of a 3-D element. The light color is applied to parts of a 3-D element that face the light source.                 |
| <b>ControlLightLight</b> | The system-defined highlight color of a 3-D element. The highlight color is applied to the parts of a 3-D element that are the lightest color.                      |
| <b>ControlText</b>       | The system-defined color of text in a 3-D element.  |
| <b>Desktop</b>           | The system-defined color of the desktop.  |
| <b>GrayText</b>          | The system-defined color of dimmed text. <b>Items</b> in a list (1) that are disabled are displayed in dimmed text.   |
| <b>Highlight</b>         | The system-defined color of the background of selected items. This includes selected menu items as well as selected text.   |
| <b>HighlightText</b>     | The system-defined color of the text of selected items.   |
| <b>HotTrack</b>          | The system-defined color used to designate a hot-tracked item. Single-clicking a hot-tracked item runs the item.  |
| <b>InactiveBorder</b>    | The system-defined color of an inactive window's border.  |

| <b>Member name</b>         | <b>Description</b>  |
|----------------------------|---|
| <b>InactiveCaption</b>     | The system-defined color of the background of an inactive window's title bar. |
| <b>InactiveCaptionText</b> | The system-defined color of the text in an inactive window's title bar.       |
| <b>Info</b>                | The system-defined color of the background of a <b>ToolTip</b> .              |
| <b>InfoText</b>            | The system-defined color of the text of a ToolTip.                            |
| <b>Menu</b>                | The system-defined color of a menu's background.                              |
| <b>MenuText</b>            | The system-defined color of a menu's text.                                    |
| <b>ScrollBar</b>           | The system-defined color of the background of a scroll bar.                   |
| <b>Window</b>              | The system-defined color of the background in the client area of a window.    |
| <b>WindowFrame</b>         | The system-defined color of a window frame.                                   |
| <b>WindowText</b>          | The system-defined color of the text in the client area of a window.          |
| <b>Transparent</b>         | A system-defined color.   |
| <b>AliceBlue</b>           | A system-defined color.   |
| <b>AntiqueWhite</b>        | A system-defined color.   |
| <b>Aqua</b>                | A system-defined color.   |
| <b>Aquamarine</b>          | A system-defined color.   |
| <b>Azure</b>               | A system-defined color.   |
| <b>Beige</b>               | A system-defined color.   |
| <b>Bisque</b>              | A system-defined color.   |
| <b>Black</b>               | A system-defined color.   |
| <b>BlanchedAlmond</b>      | A system-defined color.   |
| <b>Blue</b>                | A system-defined color.   |
| <b>BlueViolet</b>          | A system-defined color.   |
| <b>Brown</b>               | A system-defined color.   |
| <b>BurlyWood</b>           | A system-defined color.   |
| <b>CadetBlue</b>           | A system-defined color.   |
| <b>Chartreuse</b>          | A system-defined color.   |
| <b>Chocolate</b>           | A system-defined color.   |
| <b>Coral</b>               | A system-defined color.   |
| <b>CornflowerBlue</b>      | A system-defined color.   |
| <b>Cornsilk</b>            | A system-defined color.   |

| <b>Member name</b>    | <b>Description</b>      |
|-----------------------|-------------------------|
| <b>Crimson</b>        | A system-defined color. |
| <b>Cyan</b>           | A system-defined color. |
| <b>DarkBlue</b>       | A system-defined color. |
| <b>DarkCyan</b>       | A system-defined color. |
| <b>DarkGoldenrod</b>  | A system-defined color. |
| <b>DarkGray</b>       | A system-defined color. |
| <b>DarkGreen</b>      | A system-defined color. |
| <b>DarkKhaki</b>      | A system-defined color. |
| <b>DarkMagenta</b>    | A system-defined color. |
| <b>DarkOliveGreen</b> | A system-defined color. |
| <b>DarkOrange</b>     | A system-defined color. |
| <b>DarkOrchid</b>     | A system-defined color. |
| <b>DarkRed</b>        | A system-defined color. |
| <b>DarkSalmon</b>     | A system-defined color. |
| <b>DarkSeaGreen</b>   | A system-defined color. |
| <b>DarkSlateBlue</b>  | A system-defined color. |
| <b>DarkSlateGray</b>  | A system-defined color. |
| <b>DarkTurquoise</b>  | A system-defined color. |
| <b>DarkViolet</b>     | A system-defined color. |
| <b>DeepPink</b>       | A system-defined color. |
| <b>DeepSkyBlue</b>    | A system-defined color. |
| <b>DimGray</b>        | A system-defined color. |
| <b>DodgerBlue</b>     | A system-defined color. |
| <b>Firebrick</b>      | A system-defined color. |
| <b>FloralWhite</b>    | A system-defined color. |
| <b>ForestGreen</b>    | A system-defined color. |
| <b>Fuchsia</b>        | A system-defined color. |
| <b>Gainsboro</b>      | A system-defined color. |
| <b>GhostWhite</b>     | A system-defined color. |
| <b>Gold</b>           | A system-defined color. |
| <b>Goldenrod</b>      | A system-defined color. |
| <b>Gray</b>           | A system-defined color. |

| <b>Member name</b>          | <b>Description</b>      |
|-----------------------------|-------------------------|
| <b>Green</b>                | A system-defined color. |
| <b>GreenYellow</b>          | A system-defined color. |
| <b>Honeydew</b>             | A system-defined color. |
| <b>HotPink</b>              | A system-defined color. |
| <b>IndianRed</b>            | A system-defined color. |
| <b>Indigo</b>               | A system-defined color. |
| <b>Ivory</b>                | A system-defined color. |
| <b>Khaki</b>                | A system-defined color. |
| <b>Lavender</b>             | A system-defined color. |
| <b>LavenderBlush</b>        | A system-defined color. |
| <b>LawnGreen</b>            | A system-defined color. |
| <b>LemonChiffon</b>         | A system-defined color. |
| <b>LightBlue</b>            | A system-defined color. |
| <b>LightCoral</b>           | A system-defined color. |
| <b>LightCyan</b>            | A system-defined color. |
| <b>LightGoldenrodYellow</b> | A system-defined color. |
| <b>LightGray</b>            | A system-defined color. |
| <b>LightGreen</b>           | A system-defined color. |
| <b>LightPink</b>            | A system-defined color. |
| <b>LightSalmon</b>          | A system-defined color. |
| <b>LightSeaGreen</b>        | A system-defined color. |
| <b>LightSkyBlue</b>         | A system-defined color. |
| <b>LightSlateGray</b>       | A system-defined color. |
| <b>LightSteelBlue</b>       | A system-defined color. |
| <b>LightYellow</b>          | A system-defined color. |
| <b>Lime</b>                 | A system-defined color. |
| <b>LimeGreen</b>            | A system-defined color. |
| <b>Linen</b>                | A system-defined color. |
| <b>Magenta</b>              | A system-defined color. |
| <b>Maroon</b>               | A system-defined color. |
| <b>MediumAquamarine</b>     | A system-defined color. |
| <b>MediumBlue</b>           | A system-defined color. |

| <b>Member name</b>       | <b>Description</b>      |
|--------------------------|-------------------------|
| <b>MediumOrchid</b>      | A system-defined color. |
| <b>MediumPurple</b>      | A system-defined color. |
| <b>MediumSeaGreen</b>    | A system-defined color. |
| <b>MediumSlateBlue</b>   | A system-defined color. |
| <b>MediumSpringGreen</b> | A system-defined color. |
| <b>MediumTurquoise</b>   | A system-defined color. |
| <b>MediumVioletRed</b>   | A system-defined color. |
| <b>MidnightBlue</b>      | A system-defined color. |
| <b>MintCream</b>         | A system-defined color. |
| <b>MistyRose</b>         | A system-defined color. |
| <b>Moccasin</b>          | A system-defined color. |
| <b>NavajoWhite</b>       | A system-defined color. |
| <b>Navy</b>              | A system-defined color. |
| <b>OldLace</b>           | A system-defined color. |
| <b>Olive</b>             | A system-defined color. |
| <b>OliveDrab</b>         | A system-defined color. |
| <b>Orange</b>            | A system-defined color. |
| <b>OrangeRed</b>         | A system-defined color. |
| <b>Orchid</b>            | A system-defined color. |
| <b>PaleGoldenrod</b>     | A system-defined color. |
| <b>PaleGreen</b>         | A system-defined color. |
| <b>PaleTurquoise</b>     | A system-defined color. |
| <b>PaleVioletRed</b>     | A system-defined color. |
| <b>PapayaWhip</b>        | A system-defined color. |
| <b>PeachPuff</b>         | A system-defined color. |
| <b>Peru</b>              | A system-defined color. |
| <b>Pink</b>              | A system-defined color. |
| <b>Plum</b>              | A system-defined color. |
| <b>PowderBlue</b>        | A system-defined color. |
| <b>Purple</b>            | A system-defined color. |
| <b>Red</b>               | A system-defined color. |
| <b>RosyBrown</b>         | A system-defined color. |

| <b>Member name</b>           | <b>Description</b>  |
|------------------------------|---|
| <b>RoyalBlue</b>             | A system-defined color.   |
| <b>SaddleBrown</b>           | A system-defined color.   |
| <b>Salmon</b>                | A system-defined color.   |
| <b>SandyBrown</b>            | A system-defined color.   |
| <b>SeaGreen</b>              | A system-defined color.   |
| <b>SeaShell</b>              | A system-defined color.   |
| <b>Sienna</b>                | A system-defined color.   |
| <b>Silver</b>                | A system-defined color.   |
| <b>SkyBlue</b>               | A system-defined color.   |
| <b>SlateBlue</b>             | A system-defined color.   |
| <b>SlateGray</b>             | A system-defined color.   |
| <b>Snow</b>                  | A system-defined color.   |
| <b>SpringGreen</b>           | A system-defined color.   |
| <b>SteelBlue</b>             | A system-defined color.   |
| <b>Tan</b>                   | A system-defined color.   |
| <b>Teal</b>                  | A system-defined color.   |
| <b>Thistle</b>               | A system-defined color.   |
| <b>Tomato</b>                | A system-defined color.   |
| <b>Turquoise</b>             | A system-defined color.   |
| <b>Violet</b>                | A system-defined color.   |
| <b>Wheat</b>                 | A system-defined color.   |
| <b>White</b>                 | A system-defined color.   |
| <b>WhiteSmoke</b>            | A system-defined color.   |
| <b>Yellow</b>                | A system-defined color.   |
| <b>YellowGreen</b>           | A system-defined color.   |
| <b>ButtonFace</b>            | The system-defined face color of a 3-D element.   |
| <b>ButtonHighlight</b>       | The system-defined color that is the highlight color of a 3-D element. This color is applied to parts of a 3-D element that face the light source.        |
| <b>ButtonShadow</b>          | The system-defined color that is the shadow color of a 3-D element. This color is applied to parts of a 3-D element that face away from the light source. |
| <b>GradientActiveCaption</b> | The system-defined color of the lightest color in the color gradient of an active window's title bar.   |

| Member name                    | Description   |
|--------------------------------|---|
| <b>GradientInactiveCaption</b> | The system-defined color of the lightest color in the color gradient of an inactive window's title bar. |
| <b>MenuBar</b>                 | The system-defined color of the background of a menu bar.   |
| <b>MenuHighlight</b>           | The system-defined color used to highlight menu items when the menu appears as a flat menu.             |

**BackgroundColor:** The background color for the grid data values of the analytic report. The font color is specified by a string. This MUST be one of the following formats:

- "NamedColor: <name>" where:
  - "<name>" is the name of a predefined color, specified by a string. Values MUST be the same as the names of the elements in Color Table, which precedes this section.
- "ARGBColor: <A>:<R>:<G>:<B>" where:
  - "<A>" is the alpha component, specified by a string. Values MUST NOT be less than zero and MUST NOT be greater than 255.
  - "<R>" is the red component, specified by a string. Values MUST NOT be less than zero and MUST NOT be greater than 255.
  - "<G>" is the green component, specified by a string. Values MUST NOT be less than zero and MUST NOT be greater than 255.
  - "<B>" is the blue component, specified by a string. Values MUST NOT be less than zero and MUST NOT be greater than 255.

#### 2.2.4.15 AnalyticChartLegend

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **AnalyticChartLegend** complex type specifies a chart legend.

```
<xs:complexType name="AnalyticChartLegend" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string"/>
  </xs:sequence>
  <xs:attribute default="true" name="Visible" type="xs:boolean"/>
  <xs:attribute default="false" name="BorderVisible" type="xs:boolean"/>
  <xs:attribute default="Right" name="Location" type="tns:AnalyticLegendLocation"/>
</xs:complexType>
```

**BackColor:** The background color of the legend, specified by a string. This MUST be present and MUST be one of the following formats:

- "NamedColor: <name>" where:
  - "<name>" is the name of a predefined color, specified by a string. Values MUST be the same as the names of the elements listed in the color table in section 2.2.4.14.
- "ARGBColor: <A>:<R>:<G>:<B>" where:

- "<A>" is the alpha component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
- "<R>" is the red component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
- "<G>" is the green component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
- "<B>" is the blue component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.

**Font:** The font of the chart legend as specified in XmlFont (see section 2.2.4.181). This MUST be present.

**FontColor:** The font color of the chart legend, specified by a string. This MUST be present and MUST be one of the following formats:

- "NamedColor:<name>" where:
  - "<name>" is the name of a predefined color, specified by a string. Values MUST be the same as the names of the elements listed in the color table in section 2.2.4.14.
- "ARGBColor:<A>:<R>:<G>:<B>" where:
  - "<A>" is the alpha component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<R>" is the red component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<G>" is the green component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<B>" is the blue component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.

**Visible:** This attribute MUST be present and MUST be **true** if the chart legend is visible; otherwise, **false**.

**BorderVisible:** This attribute MUST be present MUST be **true** if the chart legend border is visible; otherwise, **false**.

**Location:** The location of the chart legend as specified in **AnalyticLegendLocation** (see section 2.2.5.4). This MUST be present and has a default value of "Right".

## 2.2.4.16 AnalyticChartReportView

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **AnalyticChartReportView** is a complex type that contains the chart type **report view** details for analytic reports.

```
<xs:complexType name="AnalyticChartReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AnalyticBaseReportViewData">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Title" type="tns:Title"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PlotAreaBackColor" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Legend"
          type="tns:AnalyticChartLegend"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

</xs:sequence>
<xs:attribute default="Column" name="ChartType" type="tns:AnalyticChartType"/>
<xs:attribute default="None" name="LineMarkerStyle" type="tns:AnalyticMarkerStyle"/>
<xs:attribute default="true" name="ChartColorVisible" type="xs:boolean"/>
<xs:attribute default="false" name="ChartPointersVisible" type="xs:boolean"/>
<xs:attribute default="2" name="LineWidth" type="xs:int"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

**Title:** The title for the analytic chart as specified in **Title** complex type (section [2.2.4.178](#)).

**PlotAreaBackColor:** The plot area background color for the grid data values of the analytic report. The background color is specified by a string. This MUST be one of the following formats:

- "NamedColor: <name>" where:
  - "<name>" is the name of a predefined color, specified by a string. Values MUST be the same as the names of the elements listed in Color Table 1 (see section [2.2.4.2](#)).
- "ARGBColor: <A>:<R>:<G>:<B>" where:
  - "<A>" is the alpha component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<R>" is the red component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<G>" is the green component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<B>" is the blue component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.

**Legend:** The chart legend as specified in **AnalyticChartLegend** complex type (section [2.2.4.15](#)).

**ChartType:** The type of analytic chart, as specified in **AnalyticChartType** simple type (section [2.2.5.3](#)). This element MUST be present and the default value is of **Column** type.

**LineMarkerStyle:** The style for the line markers in the analytic chart as specified in **AnalyticMarkerStyle** (section [2.2.5.5](#)). This element MUST be present and the default value is "None".

**ChartColorVisible:** This attribute MUST be present and MUST be **TRUE** if the analytic chart color is visible; otherwise, the attribute is **FALSE**.

**ChartPointersVisible:** This attribute MUST be present and MUST be **TRUE** if the pointers of the analytic chart are visible; otherwise, the attribute is **FALSE**.

**LineWidth:** This element is a deprecated property, and MUST NOT be used.

## 2.2.4.17 AnalyticGridReportView

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **AnalyticGridReportView** complex type defines how analytic grid reports are displayed to users.

```

<xs:complexType name="AnalyticGridReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AnalyticBaseReportViewData">

```

```

<xs:sequence>
  <xs:element minOccurs="1" maxOccurs="1" name="ReportLayout" type="tns:ReportLayout"/>
  <xs:element minOccurs="1" maxOccurs="1" name="ShortenRowLabels" type="xs:boolean"/>
  <xs:element minOccurs="1" maxOccurs="1" name="MaxRowLabelLength" type="xs:int"/>
  <xs:element minOccurs="1" maxOccurs="1" name="ShortenColumnLabels"
type="xs:boolean"/>
  <xs:element minOccurs="1" maxOccurs="1" name="MaxColumnLabelLength" type="xs:int"/>
</xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

**ReportLayout:** A **ReportLayout** simple type object (section [2.2.5.40](#)) that specifies the manner in which row and column headers are displayed.

**ShortenRowLabels:** Specifies whether long row labels are truncated to save space. A value of **TRUE** indicates that long labels will be truncated. A value of **FALSE** indicates that they will not.

**MaxRowLabelLength:** Specifies the maximum length for row labels. **ShortenRowLabels** MUST be set to **TRUE** for this property to be used.

**ShortenColumnLabels:** Specifies whether long column labels are truncated to save space. A value of **TRUE** indicates that long labels will be truncated. A value of **FALSE** indicates that they will not.

**MaxColumnLabelLength:** Specifies the maximum length for column labels. **ShortenColumnLabels** MUST be set to **TRUE** for this property to be used.

## 2.2.4.18 Annotation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Annotation** complex type associates a collection of comments to a **cell** in a particular **slice** of a **scorecard**. An annotation is created using **CreateAnnotation** operation (section [3.1.4.1](#)), and updated using the **UpdateAnnotation** operation (section [3.1.4.70](#)).

```

<xs:complexType name="Annotation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Comments"
type="tns:ArrayOfAnnotationComment"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Properties" type="tns:ArrayOfBpmProperty"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Owner" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LastUpdatedBy" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Slice" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CreatedOn" type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastUpdatedOn" type="xs:dateTime"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ConfiguredViewID"
xmlns:s1="http://microsoft.com/wsd1/types/" type="s1:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Guid"
xmlns:s1="http://microsoft.com/wsd1/types/" type="s1:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellpathCoordinates" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="tns:AnnotationVersions"/>
  </xs:sequence>
</xs:complexType>

```

**Comments:** Specifies the comment collection contained by the annotation. This element MUST conform to the schema of the **ArrayOfAnnotationComment** complex type (section [2.2.4.21](#)).

**Properties:** Specifies the properties of the annotation. This element MUST conform to the schema of the **ArrayOfBpmProperty** complex type (section [2.2.4.23](#)).

**Owner:** Specifies the identity of the person responsible for the creation of the annotation. This element **MUST** be present. The value **MUST NOT** be empty, and **MUST NOT** consist of only whitespace characters.

**LastUpdatedBy:** Specifies the last person to update the annotation. This element **MUST** be present.

**Slice:** Specifies an aggregation context of the **PageFilters** element as defined in the **GridViewData** complex type (section [2.2.4.121](#)) corresponding to the cell or cells in the scorecard for which this annotation is applicable. The value **MUST** be a sorted string of page filter member names, where each member name in the string is separated by a comma. The page filter member names are sorted using the current **UI culture**.

**CreatedOn:** Specifies the **dateTime** at which this annotation instance was created.

**LastUpdatedOn:** Specifies the **dateTime** at which this annotation was last updated.

**ScorecardLocation:** Specifies the location of the scorecard referenced by this annotation. This element **MUST** be present. This element **MUST** conform to the schema of the **RepositoryLocation** complex type (section [2.2.4.161](#)).

**ConfiguredViewID:** Specifies the identity of the **ConfiguredView** complex type (section [2.2.4.77](#)) for this annotation. This element **MUST** be formatted as a **GUID** and its value **MUST NOT** be {0000000000-0000000-00000-0000000}.

**Guid:** Specifies the identity for this annotation. This element **MUST** be formatted as a GUID and its value **MUST NOT** be {00000000000-0000000-00000-0000000}.

**CellpathCoordinates:** Specifies the coordinates of the scorecard cell that this annotation is associated with. The value **MUST** be the **MD5** hash of the **dimension** values of all the headers of a cell, sorted by their dimension names. This value **MUST NOT** be null or empty. The header cells **MUST** conform to the schema of **GridHeaderItem** complex type (section [2.2.4.116](#)). This value for the checked cell in the following example scorecard is calculated as follows:

|                         | All Geographies |        |        |        |            |        |
|-------------------------|-----------------|--------|--------|--------|------------|--------|
|                         |                 |        | Oregon |        | Washington |        |
|                         | Actual          | Target | Actual | Target | Actual     | Target |
| Internet Order Quantity |                 |        |        |        |            |        |
| Accessories             | X               |        |        |        |            |        |
| Bikes                   |                 |        |        |        |            |        |
| Clothing                |                 |        |        |        |            |        |

- The column and row headers for the cell are extracted and are used to compute the **CellPathCoordinates** for the cell. The **CellPathCoordinates** is a collection of headers of the cell and is computed as follows:
  1. For each row and column header of the cell its parent path is computed and represented as a collection of headers.
  2. The corresponding path is then reversed and appended to the **CellPathCoordinates**.
  3. The **CellPathCoordinates** for the checked cell is shown in the following table. The **DimensionValue**, **DimensionName** and **DisplayText** values of the **GridHeaderItem** complex type (section [2.2.4.116](#)) for each header cell in the **CellPathCoordinates** are also listed in the table.

| GridHeaderItem                | DimensionValue   | DimensionName              | DisplayText               |
|-------------------------------|--|----------------------------|---------------------------|
| Row Header Parent             | "/PerformancePoint/Lists/PerformancePoint Content/10_.000" | "Scorecard_"               | "Internet Order Quantity" |
| Row Header                    | "[Product].[Category].&[4]"                                | "Product.Category"         | "Accessories"             |
| Column Header Parent's Parent | "[Geography].[State-Province].[All Geographies]"           | "Geography.State-Province" | "All Geographies"         |
| Column Header Parent          | "[Geography].[State-Province].[All Geographies]"           | "Geography.State-Province" | ""                        |
| Column Header                 | "Actual"   | "Scorecard_Measures_"      | "Actual"                  |

- A sorted dictionary containing one entry per element in the **CellPathCoordinates** is then created.
- The sorted dictionary key is the header.DimensionName concatenated with header.Guid. The corresponding value in the dictionary is the header.DimensionValue.
- The dictionary keys MUST be sorted alphabetically in ascending order.
- The string representation of the coordinates of the path is then created by concatenating each of the values in the dictionary. This value for the example is:
  - "[Geography].[State-Province].[All Geographies][Geography].[State-Province].[All Geographies][Product].[Category].&[4]/PerformancePoint/Lists/PerformancePoint Content/10\_.000Actual"
- A MD5 hash value (128-bit number) represented as a 32-digit hexadecimal number. The final output is the string "2BB92D0CE8F91E3E5FA5FB402EEE0E5C".

**Version:** Specifies the product version used to create this annotation. This element MUST conform to the schema of the **AnnotationVersions** simple type (section [2.2.5.6](#)).

### 2.2.4.19 AnnotationComment

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies a comment for an **Annotation** (see section 2.2.4.18). This type extends **Comment** type (see section 2.2.4.76).

```
<xs:complexType name="AnnotationComment" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Comment">
      <xs:attribute name="Title" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Title:** Specifies the title for the comment. This element MUST be present. The value MUST NOT be empty and MUST NOT consist of only white-space characters.

#### 2.2.4.20 **ArrayOfAliasInfo**

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies an array of **AliasInfo** complex types (see section 2.2.4.13).

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

**AliasInfo:** This element MUST NOT be null and MUST conform to the schema of the **AliasInfo** (section 2.2.4.13) complex type.

#### 2.2.4.21 **ArrayOfAnnotationComment**

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfAnnotationComment** complex type specifies an array of **AnnotationComment** elements (see section 2.2.4.19).

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

**AnnotationComment:** This element MUST NOT be null and MUST conform to the schema of the **AnnotationComment** (section 2.2.4.19) complex type.

#### 2.2.4.22 **ArrayOfAxis**

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

A collection of axes used in a **QueryState** object (see section [2.2.4.158](#)).

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

**Axis:** An **Axis** object (see section 2.2.4.59).

#### 2.2.4.23 **ArrayOfBpmProperty**

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfBpmProperty** complex type specifies an array of **BpmProperty** elements (see section 2.2.4.62).

```

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

```

**BpmProperty:** This element MUST NOT be null and MUST conform to the schema of the **BpmProperty** (section 2.2.4.62) complex type.

#### 2.2.4.24 ArrayOfBpmPropertyListItem

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfBpmPropertyListItem** complex type specifies an array of **items** in a list property.

```

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

```

**BpmPropertyListItem:** This element MUST NOT be null and MUST conform to the schema of the **BpmPropertyListItem** (section [2.2.4.70](#)) complex type.

#### 2.2.4.25 ArrayOfChoice1

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfChoice1** complex type specifies an array of property values. The type of the element in the array MUST be one of **decimal**, **ArrayOfMember** (section [2.2.4.45](#)), **ArrayOfMemberTransform** (section [2.2.4.46](#)), **dateTime**, **string**, **double**, **guid**, **char**, or **int**.

```

<xs:complexType name="ArrayOfChoice1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element minOccurs="1" maxOccurs="1" name="char"
xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:char"/>
    <xs:element minOccurs="1" maxOccurs="1" name="int" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="double" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="string" nillable="true" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="dateTime" type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMemberTransform" nillable="true"
type="tns:ArrayOfMemberTransform"/>
    <xs:element minOccurs="1" maxOccurs="1" name="guid"
xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfString" nillable="true"
type="tns:ArrayOfString"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMember" nillable="true"
type="tns:ArrayOfMember"/>
    <xs:element minOccurs="1" maxOccurs="1" name="decimal" type="xs:decimal"/>
  </xs:choice>
</xs:complexType>

```

**char:** A character value.

**int:** An **integer** value.

**double:** A **double** numeric value.

**string:** A **string** value and MUST NOT be null.

**dateTime:** A **dateTime** value.

**ArrayOfMemberTransform:** This element MUST NOT be null and MUST conform to the schema of the **ArrayOfMemberTransform** (section 2.2.4.46) complex type.

**guid:** An identity value.

**ArrayOfString:** This element MUST NOT be null and MUST conform to the schema of the **ArrayOfString** (section 2.2.4.54) complex type.

**ArrayOfMember:** This element MUST NOT be null and MUST conform to the schema of the **ArrayOfMember** (section 2.2.4.45) complex type.

**decimal:** A **decimal** value.

#### 2.2.4.26 ArrayOfComment

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfComment** complex type specifies an array of comments.

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

**Comment:** This element MUST NOT be null and MUST conform to the schema of the **Comment** (section 2.2.4.76) complex type.

#### 2.2.4.27 ArrayOfConfiguredView

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfConfiguredView** complex type specifies an array of view definitions for a scorecard.

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

**ConfiguredView:** This element MUST NOT be null and MUST conform to the schema of the **ConfiguredView** (section 2.2.4.77) complex type.

#### 2.2.4.28 ArrayOfDashboardElement

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfDashboardElement** complex type specifies an array of DashboardElement (see section 2.2.4.80).

```

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

```

**DashboardElement:** This element MUST NOT be null and MUST conform to the schema of the **DashboardElement** (section 2.2.4.80) complex type.

#### 2.2.4.29 ArrayOfDataColumnMapping

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfDataColumnMapping** complex type specifies an array of **DataColumnMapping** (see section 2.2.4.84).

```

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

```

**DataColumnMapping:** This element MUST NOT be null and MUST conform to the schema of the **DataColumnMapping** (section 2.2.4.84) complex type.

#### 2.2.4.30 ArrayOfDecimal

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfDecimal** complex type specifies an array of **Decimal**.

```

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

```

**decimal:** A valid **Decimal** value.

#### 2.2.4.31 ArrayOfDefaultDimensionSetting

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfDefaultDimensionSetting** complex type specifies an array of **DefaultDimensionSetting** (see section 2.2.4.87).

```

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

```

**DefaultDimensionSetting:** This element MUST NOT be null and MUST conform to the schema of the **DefaultDimensionSetting** (section 2.2.4.87) complex type.

### 2.2.4.32 ArrayOfDimension

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfDimension** complex type specifies an array of **dimension** elements.

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

**Dimension:** This element MUST NOT be null and MUST conform to the schema of the **Dimension** complex type (section [2.2.4.90](#)).

### 2.2.4.33 ArrayOfEndPoint

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfEndPoint** complex type specifies an array of connection termination points for a consumer **Web Part** such as a **report view** or a **scorecard**.

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

**EndPoint:** This element MUST NOT be null and MUST conform to the schema of the **EndPoint** (section [2.2.4.95](#)) complex type.

### 2.2.4.34 ArrayOfFirstClassElement

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfFirstClassElement** complex type specifies an array of first-class objects.

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

**FirstClassElement:** This element MUST NOT be null and MUST conform to the schema of the **FirstClassElement** (section [2.2.4.99](#)) complex type.

### 2.2.4.35 ArrayOfGridCell

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfGridCell** complex type specifies an array of cells used by a grid view such as the scorecard view (section [2.2.4.121](#)).

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

**GridCell:** This element MUST NOT be null and MUST conform to the schema of the **GridCell** (section 2.2.4.100) complex type.

### 2.2.4.36 ArrayOfGridDisplayElement

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

An array of elements for a **scorecard cell**.

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

**GridDisplayElement:** This element MUST NOT be null and MUST conform to the schema of the **GridDisplayElement** (section [2.2.4.103](#)) complex type.

### 2.2.4.37 ArrayOfGridHeaderItem

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfGridHeaderItem** complex type specifies an array of headers for a scorecard.

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

**GridHeaderItem:** This element MUST NOT be null and MUST conform to the schema of the **GridHeaderItem** (section [2.2.4.116](#)) complex type.

### 2.2.4.38 ArrayOfGridViewTransformReference

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfGridViewTransformReference** complex type specifies an array of references to a grid view transform.

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

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

**GridViewTransformReference:** This element MUST NOT be null and MUST conform to the schema of the **GridViewTransformReference** (section [2.2.4.123](#)) complex type.

### 2.2.4.39 ArrayOfHierarchy

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfHierarchy** complex type specifies an array of hierarchy values for a **dimension**.

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

**Hierarchy:** This element MUST NOT be null and MUST conform to the schema of the **Hierarchy** complex type (section [2.2.4.124](#)).

### 2.2.4.40 ArrayOfIndicatorBand

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfIndicatorBand** complex type specifies an array of indicator bands.

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

**IndicatorBand:** This element MUST NOT be null and MUST conform to the schema of the **IndicatorBand** (section [2.2.4.126](#)) complex type.

### 2.2.4.41 ArrayOfKpi

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfKpi** complex type specifies an array of **Kpi** complex types (section [2.2.4.128](#)) for a **scorecard**.

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

**Kpi:** This element MUST NOT be null, and MUST conform to the schema of the **Kpi**.

#### 2.2.4.42 ArrayOfKpiMeasure

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfKpiMeasure** complex type specifies an array of **KpiMeasure** complex types (section [2.2.4.129](#)).

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

**KpiMeasure:** This element MUST NOT be null and MUST conform to the schema of the **KpiMeasure**.

#### 2.2.4.43 ArrayOfLevel

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfLevel** complex type defines an array of **Level** (section 2.2.4.131) complex type.

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

**Level:** This element MUST NOT be null and MUST conform to the schema of the **Level** (section 2.2.4.131) complex type.

#### 2.2.4.44 ArrayOfMeasure

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfMeasure** complex type defines an array of **Measure** (section 2.2.4.133) complex type.

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

**Measure:** This element MUST NOT be null and MUST conform to the schema of the **Measure** (section 2.2.4.133) complex type.

#### 2.2.4.45 ArrayOfMember

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfMember** complex type defines an array of **Member** (section 2.2.4.134) complex type.

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

```
<xs:element minOccurs="0" maxOccurs="unbounded" name="Member" nillable="true"
type="tns:Member"/>
</xs:sequence>
</xs:complexType>
```

**Member:** This element MUST NOT be null and MUST conform to the schema of the **Member** (section 2.2.4.134) complex type.

#### 2.2.4.46 ArrayOfMemberTransform

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfMemberTransform** complex type defines an array of **MemberTransform** (section 2.2.4.146) complex type.

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

**MemberTransform:** This element MUST NOT be null and MUST conform to the schema of the **MemberTransform** (section 2.2.4.146) complex type.

#### 2.2.4.47 ArrayOfNamedSet

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfNamedSet** complex type defines an array of **NamedSet** (section 2.2.4.147) complex type.

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

**NamedSet:** This element MUST NOT be null and MUST conform to the schema of the **NamedSet** (section 2.2.4.147) complex type.

#### 2.2.4.48 ArrayOfNameInfo

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfNameInfo** complex type [<11>](#) defines an array of **NameInfo** complex types (section [2.2.4.149](#)).

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

**NameInfo:** This element MUST NOT be null and MUST conform to the schema of **NameInfo**.

#### 2.2.4.49 ArrayOfParameter

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A collection of parameters used in an analytic **query**.

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

**Parameter:** A **Parameter** object (see section [2.2.4.154](#)).

#### 2.2.4.50 ArrayOfParameterDefinition

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfParameterDefinition** complex type defines an array of **ParameterDefinition** (section 2.2.4.155) complex type.

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

**ParameterDefinition:** This element MUST NOT be null and MUST conform to the schema of the **ParameterDefinition** (section 2.2.4.155) complex type.

#### 2.2.4.51 ArrayOfParameterMapping

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfParameterMapping** complex type defines an array of **ParameterMapping** (section 2.2.4.156) complex type.

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

**ParameterMapping:** This element MUST NOT be null and MUST conform to the schema of the **ParameterMapping** (section 2.2.4.156) complex type.

#### 2.2.4.52 ArrayOfPropertyBag

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfPropertyBag** complex type defines an array of **PropertyBag** (section 2.2.4.158) elements.

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

**PropertyBag:** This element MUST NOT be null and MUST conform to the schema of the **PropertyBag** (section 2.2.4.158) complex type.

### 2.2.4.53 ArrayOfSetOperation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfSetOperation** complex type specifies an array of **SetOperation** elements (see section [2.2.4.165](#))

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

**SetOperation:** This element MUST NOT be null and MUST conform to the schema of the **SetOperation** (section 2.2.4.165) complex type.

### 2.2.4.54 ArrayOfString

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfString** complex type specifies an array of string.

```
<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:** This element MUST NOT be null and MUST be an **xs:string** ([\[XMLSCHEMA2\]](#) section 3.2.1).

### 2.2.4.55 ArrayOfTarget

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfTarget** complex type specifies an array of **Target** (section 2.2.4.170) complex types.

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

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

**Target:** This element MUST NOT be null and MUST conform to the schema of the **Target** (section 2.2.4.170) complex type.

### 2.2.4.56 ArrayOfTimeIntelligenceDataSource

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A collection of **time intelligence** data source reference used in time intelligence parameter definitions.

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

**TimeIntelligenceDataSource:** See **TimeIntelligenceDataSource** (section 2.2.4.171).

### 2.2.4.57 ArrayOfTimeIntelligenceFormula

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A collection of **time intelligence** parameter formulas.

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

**TimeIntelligenceFormula:** See **TimeIntelligenceFormula** (section 2.2.4.173).

### 2.2.4.58 ArrayOfTimeIntelligenceLevelBinding

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ArrayOfTimeIntelligenceLevelBinding** complex type specifies an array of **time intelligence** binding elements.

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

**TimeIntelligenceLevelBinding:** This element MUST NOT be null and MUST conform to the schema of the **TimeIntelligenceLevelBinding** complex type (section [2.2.4.174](#)).

## 2.2.4.59 Axis

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **Axis** complex type specifies information about an axis in a query result.

```
<xs:complexType name="Axis" mixed="true" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:AxisType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterEmpty" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PropertyList" type="tns:StringCollection"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MemberSets"
type="tns:SerializableDictionary"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortMode" type="tns:SortType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortIndex" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SortTuple" type="tns:Tuple"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortDescending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortPreservePeerGroups" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

**Type:** Specifies an **AxisType** simple type (section [2.2.5.7](#)).

**FilterEmpty:** This value MUST be **TRUE** if the axis is not permitted to use empty values; otherwise, the value is **false**. The default is **false**.

**PropertyList:** Specifies a **StringCollection** complex type (section [2.2.4.169](#)) of **dimension** properties. Each value in this **StringCollection** MUST be a valid intrinsic or custom **Multidimensional Expressions (MDX)** dimension properties.

**MemberSets:** Specifies a collection of **MemberSet** complex type objects (section [2.2.4.144](#)).

**SortMode:** Specifies a **SortType** simple type (section [2.2.5.47](#)).

**SortIndex:** Specifies a column index to sort by.

**SortTuple:** Specifies a **Tuple** complex type (section [2.2.4.180](#)) to sort by.

**SortDescending:** This value MUST be **TRUE** if the filter axis MUST be sorted in descending order; otherwise, the value is **FALSE**.

**SortPreservePeerGroups:** This value MUST be **TRUE** if peer groups MUST be preserved during sorting; otherwise, the value is **FALSE**. Preserving peer groups includes hierarchical relationships and sorting is constrained to a parent's **child** objects. Alternatively, breaking peer groups ignore hierarchical relationships.

## 2.2.4.60 Banding

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **Banding** complex type represents the **banding** settings of the **KPI target**.

```
<xs:complexType name="Banding" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CustomBoundary" type="tns:ArrayOfDecimal"/>
  </xs:sequence>
  <xs:attribute name="Type" type="tns:BandType" use="required"/>
  <xs:attribute name="BandValue" type="xs:string"/>
  <xs:attribute name="ActualWorst" type="xs:decimal" use="required"/>
  <xs:attribute name="SpreadMinimum" type="xs:decimal" use="required"/>
  <xs:attribute name="SpreadMaximum" type="xs:decimal" use="required"/>
</xs:complexType>
```

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

**CustomBoundary:** The list (1) of boundaries for bands. It does not include the minimum and maximum boundaries.

**Type:** The type of banding. See **BandType** simple type (section [2.2.5.8](#)) for details.

**BandValue:** This attribute is reserved and MUST NOT be used.

**ActualWorst:** The worst value in the scale of actual values.

**SpreadMinimum:** The minimum boundary for values.

**SpreadMaximum:** The maximum boundary for values.

#### 2.2.4.61 BpmException

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **BpmException** complex type contains the details of a **server (2)** alert.

```
<xs:complexType name="BpmException" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ErrorCode" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="EventLogged" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Message" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**ErrorCode:** Identifies the alert type. MUST be one of the values specified in section [2.2.2.1.2](#).

**EventLogged:** MUST be **true** if the alert was logged by the server (2), **false** otherwise.

**Message:** A text description of the alert. The text MUST be included. The text MUST NOT be empty. The text MUST be in the language of the **UI culture** of the session.

#### 2.2.4.62 BpmProperty

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This **BpmProperty** complex type is the abstract base type for [BpmPropertyDate](#), [BpmPropertyDecimal](#), [BpmPropertyHyperlink](#), [BpmPropertyHyperlink2](#), [BpmPropertyLinkBase](#), [BpmPropertyList](#), [BpmPropertyListItem](#), [BpmPropertyLongText](#), [BpmPropertyText](#) and [BpmPropertyUser](#).

```
<xs:complexType name="BpmProperty" abstract="true"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="DisplayName" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
  <xs:attribute name="Required" type="xs:boolean" use="required"/>
  <xs:attribute name="Visible" type="xs:boolean" use="required"/>
</xs:complexType>
```

**UniqueName:** The **UniqueName** attribute MUST be set to a string that is distinct from UniqueNames used for other instances of BpmProperty and derived types. It MUST NOT contain any of the following

characters: [ ] . ' ~ # % & \* { } | \ : " / ? < > and the string length MUST be less than 1000 characters.

**DisplayName:** The **DisplayName** attribute is the string that is provided to the user. It MUST be shorter than 1000 characters.

**Description:** The **Description** attribute describes the property. It MUST be shorter than 1000 characters.

**Required:** This attribute MUST be present and MUST be **true** if this property MUST be specified when an instance of the type is used; otherwise, **false**.

**Visible:** This attribute MUST be present and MUST be **true** if this attribute is presented to the user; otherwise, **false**.

#### 2.2.4.63 BpmPropertyBool

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **BpmPropertyBool** complex type defines a Boolean property. It extends the **BpmProperty** (section 2.2.4.62) type.

```
<xs:complexType name="BpmPropertyBool" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Value" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Value:** A Boolean value.

#### 2.2.4.64 BpmPropertyDate

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **BpmPropertyDate** complex type defines a **Date** property. It extends the **BpmProperty** (section 2.2.4.62) type.

```
<xs:complexType name="BpmPropertyDate" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Date" type="xs:dateTime" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Date:** A required **dateTime** value. The property MUST be considered empty if set to 0001-01-01T00:00:00.

#### 2.2.4.65 BpmPropertyDecimal

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **BpmPropertyDecimal** complex type defines a **Decimal** property. It extends the **BpmProperty** (section 2.2.4.62) type.

```

<xs:complexType name="BpmPropertyDecimal" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Decimal" type="xs:decimal" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**Decimal:** A decimal value.

#### 2.2.4.66 BpmPropertyHyperlink

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type defines a **Hyperlink** property. This type extends **BpmPropertyLinkBase** (section 2.2.4.68).

This type is used to specify Hyperlinks as custom properties for types that extend **FirstClassElement** (section 2.2.4.99).

```

<xs:complexType name="BpmPropertyHyperlink" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmPropertyLinkBase"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.67 BpmPropertyHyperlink2

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **BpmPropertyHyperlink2** complex type defines a **Hyperlink** property. This type extends **BpmPropertyLinkBase** (section 2.2.4.68).

This type is used to specify Hyperlinks as part of annotations for types that extend **FirstClassElement** complex type (section 2.2.4.99).

```

<xs:complexType name="BpmPropertyHyperlink2" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmPropertyLinkBase"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.68 BpmPropertyLinkBase

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **BpmPropertyLinkBase** complex type defines a **Hyperlink** property. It extends the **BpmProperty** (section 2.2.4.62) type.

```

<xs:complexType name="BpmPropertyLinkBase" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Hyperlink" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**Hyperlink:** Hyperlink **URL**. The attribute MUST NOT be null and MUST be a valid [\[RFC1738\]](#) URL or a string constant: "about:blank".

#### 2.2.4.69 BpmPropertyList

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **BpmPropertyList** complex type specifies zero, or one item of the **ArrayOfBpmPropertyListItem** complex type (section [2.2.4.24](#)). It extends the **BpmProperty** complex type (section [2.2.4.62](#)).

```
<xs:complexType name="BpmPropertyList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ListItems"
type="tns:ArrayOfBpmPropertyListItem"/>
      </xs:sequence>
      <xs:attribute name="SelectedIndex" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**ListItems:** This element MUST NOT be null and MUST conform to the schema of the **ArrayOfBpmPropertyListItem**.

**SelectedIndex:** An integer value that MUST fall between zero and the length of **ListItems**.

#### 2.2.4.70 BpmPropertyListItem

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **BpmPropertyListItem** complex type specifies a name-value pair.

```
<xs:complexType name="BpmPropertyListItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="Value" type="xs:string"/>
</xs:complexType>
```

**Name:** The string that MUST be present, MUST be shorter than 1000 characters, MUST NOT be empty after trimming leading and trailing **whitespaces**, and MUST NOT be null.

**Value:** The string that MUST be present, MUST be shorter than 1000 characters, MUST NOT be empty after trimming leading and trailing whitespaces, and MUST NOT be null.

#### 2.2.4.71 BpmPropertyLongText

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type defines a Long Text property. The type extends **BpmProperty** (section [2.2.4.62](#)).

```
<xs:complexType name="BpmPropertyLongText" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Text" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

**Text:** The long text value. If the **BpmProperty** (section 2.2.4.62) Required field is set to **true**, the value MUST NOT be empty after trimming leading and trailing **whitespaces** and MUST NOT be **null**. The text MUST contain fewer than 4000 characters.

#### 2.2.4.72 BpmPropertyText

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type defines a **Text** property. The type extends **BpmProperty** (section 2.2.4.62).

```
<xs:complexType name="BpmPropertyText" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Text" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Text:** The text value. If the **BpmProperty** (section 2.2.4.62) Required field is set to **true**, the value MUST NOT be empty after trimming leading and trailing **whitespaces** and MUST NOT be null. The text MUST be less than 1000 characters.

#### 2.2.4.73 BpmPropertyUser

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type defines a **User** property. The type extends **BpmProperty** (section 2.2.4.62).

```
<xs:complexType name="BpmPropertyUser" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Login" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Login:** The user **login name** in domain\user format. If the **BpmProperty** (section 2.2.4.62) Required field is set to **true**, the value MUST NOT be empty after trimming leading and trailing white space and MUST NOT be null. It MUST contain less than 1000 characters.

#### 2.2.4.74 CalculatedFormulaInfo

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type specifies a calculated **formula** in a **KpiMeasure** (section [2.2.4.129](#)). This type is used to specify calculations as part of a **KPI**'s calculated metric.

```
<xs:complexType name="CalculatedFormulaInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AliasInfoCollection"
      type="tns:ArrayOfAliasInfo"/>
  </xs:sequence>
  <xs:attribute name="Formula" type="xs:string"/>
</xs:complexType>
```

**AliasInfoCollection:** Specifies the array of **AliasInfo** elements used in the formula. This is of type **ArrayOfAliasInfo** (section 2.2.4.20) and MUST contain 0 or more valid **AliasInfo** (section 2.2.4.13) elements. If any of the **AliasInfo** objects fails validation, the **ErrorCode** MUST be one of the values specified in section [2.2.2.1.2](#).

A detailed specification of how exceptions are reported by the protocol **server (2)** is in section [2.2.2.1](#).

**Formula:** Specifies the formula for calculation using the aliases specified in **AliasInfoCollection**. Formula is of type string and MUST be no more than 1000 characters in length.

#### 2.2.4.75 CalculatedMember

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Represents an **OLAP calculated member** in a **Dimension** complex type (section [2.2.4.90](#)).[<12>](#)

```
<xs:complexType name="CalculatedMember" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Member">
      <xs:attribute name="Expression" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Expression:** A string containing the **MDX** statement for the OLAP calculated member.

#### 2.2.4.76 Comment

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type represents a comment to be associated with a data entity. This class is the base class for **AnnotationComment** (section 2.2.4.19).

```
<xs:complexType name="Comment" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Guid" xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"
  use="required"/>
  <xs:attribute name="CreatedBy" type="xs:string"/>
  <xs:attribute name="CreatedDate" type="xs:dateTime" use="required"/>
  <xs:attribute name="Message" type="xs:string"/>
</xs:complexType>
```

**Guid:** Specifies the identity for this comment. MUST be formatted as a **GUID**.

**CreatedBy:** The name of the user who created this comment. MUST be shorter than 1000 characters.

**CreatedDate:** The data and time when this comment was created.

**Message:** The message body of this comment. MUST be shorter than 4000.

#### 2.2.4.77 ConfiguredView

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies the **scorecard** view and configuration settings of how the scorecard displays and what end user actions are allowed. The protocol client that renders the scorecard MUST use this configuration when displaying it.

```

<xs:complexType name="ConfiguredView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SecondClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="StatusFilters"
type="tns:StatusFilter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ToolbarOptions"
type="tns:ToolbarOptions"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="GridViewDefinition"
type="tns:GridViewDefinition"/>
      </xs:sequence>
      <xs:attribute name="AllowStatusFilter" type="xs:boolean" use="required"/>
      <xs:attribute name="AllowFilter" type="xs:boolean" use="required"/>
      <xs:attribute name="AllowSort" type="xs:boolean" use="required"/>
      <xs:attribute name="AllowAnnotations" type="xs:boolean" use="required"/>
      <xs:attribute name="EmptyRowsFilterMode" type="tns:ScorecardEmptyRowsFilterMode"
use="required"/>
      <xs:attribute name="AllowShowDetails" type="xs:boolean" use="required"/>
      <xs:attribute name="EnableTextwrap" type="xs:boolean" use="required"/>
      <xs:attribute name="AllowDynamicRowMemberExpansion" type="xs:boolean" use="required"/>
      <xs:attribute name="AllowDynamicColumnMemberExpansion" type="xs:boolean"
use="required"/>
      <xs:attribute name="AllowRowDrill" type="xs:boolean" use="required"/>
      <xs:attribute name="AllowColumnDrill" type="xs:boolean" use="required"/>
      <xs:attribute name="AlwaysShowAnnotationCellFlags" type="xs:boolean" use="required"/>
      <xs:attribute name="ExpandToFitWidth" type="xs:boolean" use="required"/>
      <xs:attribute name="HideScorecard" type="xs:boolean" use="required"/>
      <xs:attribute name="ShowStatusFiltersByDefault" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**StatusFilters:** Contains an array of 0 or more **StatusFilter** (section [2.2.4.167](#)) **items**. Specifies the list (1) of status filters that can be applied to the scorecard.

**ToolbarOptions:** This element is of type **ToolbarOptions** (section [2.2.4.179](#)) and specifies the configuration for the toolbar displayed in column headers of the scorecard.

**DataSourceLocation:** This element is of type **RepositoryLocation** (section [2.2.4.161](#)) and specifies the location of the **data source (1)** the scorecard connects to for retrieving and displaying data.

**GridViewDefinition:** This element is of type **GridViewDefinition** (section [2.2.4.122](#)) and specifies the definition of the grid based view displayed in the scorecard.

**AllowStatusFilter:** This attribute MUST be present and MUST be set to **true** if filtering by status is allowed in the scorecard; otherwise, **false**.

**AllowFilter:** This attribute MUST be present and MUST be set to **true** if filtering of rows is allowed in the scorecard; otherwise, **false**.

**AllowSort:** This attribute MUST be present and MUST be set to **true** if sorting of rows is allowed in the scorecard; otherwise, **false**.

**AllowAnnotations:** This attribute MUST be present and MUST be set to **true** if annotations are allowed to be entered in **cells** in the scorecard; otherwise, **false**.

**EmptyRowsFilterMode:** This attribute MUST be present. It is of type **ScorecardEmptyRowsFilterMode** (section [2.2.5.42](#)) and specifies how empty rows MUST be handled in the scorecard.

**AllowShowDetails:** This attribute MUST be present and MUST be set to **true** if the protocol client MUST display the **Show Details** menu option in the scorecard; otherwise, **false**.

**EnableTextwrap:** This attribute MUST be present and MUST be set to **true** if the protocol client MUST wrap the text in the scorecard cells; otherwise, **false**.

**AllowDynamicRowMemberExpansion:** This attribute MUST be present and MUST be set to **true** if row members in a scorecard are allowed to dynamically expand or collapse; otherwise, **false**.

**AllowDynamicColumnMemberExpansion:** This attribute MUST be present and MUST be set to **true** if column members in a scorecard are allowed to dynamically expand or collapse; otherwise, **false**.

**AllowRowDrill:** This attribute MUST be present and MUST be set to **true** if **drilldown** is allowed for members in rows; otherwise, **false**.

**AllowColumnDrill:** This attribute MUST be present and MUST be set to **true** if drilldown is allowed for members in columns; otherwise, **false**.

**AlwaysShowAnnotationCellFlags:** Reserved. MUST be set to **false** and MUST be ignored by the protocol client.

**ExpandToFitWidth:** This attribute MUST be present and MUST be set to **true** if the scorecard is expanded to fit the width of its container; otherwise, **false**.

**HideScorecard:** This attribute MUST be present and MUST be set to **true** if the scorecard MUST NOT be displayed; otherwise, **false**.

**ShowStatusFiltersByDefault:** This attribute MUST be present and MUST be set to **true** if filtering by status MUST be enabled by default; otherwise, **false**.

## 2.2.4.78 Cube

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Cube** complex type specifies the structure of a **cube**. It extends the complex type **NameInfo** complex type (section [2.2.4.149](#)).

```
<xs:complexType name="Cube" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Dimensions"
          type="tns:ArrayOfDimension"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MeasureGroups"
          type="tns:ArrayOfNameInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Measures" type="tns:ArrayOfMeasure"/>
        <xs:element minOccurs="0" maxOccurs="1" name="NamedSets" type="tns:ArrayOfNamedSet"/>
      </xs:sequence>
      <xs:attribute name="Version" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Dimensions:** Specifies the **dimensions** in the cube. This is an array of **Dimension** (see section 2.2.4.90) **items** as defined in **ArrayOfDimension** (see section [2.2.4.19](#)). This element MUST be present.

**MeasureGroups:** Specifies the **measure groups** in the cube. This is an array of **NameInfo** (see section 2.2.4.149) **items** as defined in **ArrayOfNameInfo** (see section [2.2.4.33](#)). This element MUST be present.

**Measures:** Specifies the **measures** in the cube. This is an array of **Measure** (see section 2.2.4.133) **items** as defined in **ArrayOfMeasure** (see section 2.2.4.44). This element MUST be present.

**NamedSets:** Specifies the **named sets** in the cube. This is an array of **NamedSet** (see section 2.2.4.147) items as defined in **ArrayOfNamedSet** (see section 2.2.4.47). This element **MUST** be present.

**Version:** Species the **major version** of the software on the **server (2)** that hosts the cube. **MUST** be a non-negative integer. This element **MUST** be 0 when the dimension is part of a non-**OLAP** data source. This element **MUST** be present.

## 2.2.4.79 Dashboard

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Dashboard** complex type defines a **dashboard**. It specifies the layout and content of the pages in the dashboard and, if the dashboard has been deployed, its deployment location.

The **Dashboard** complex type extends the **FirstClassElement** type (section [2.2.4.99](#)).

```
<xs:complexType name="Dashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Pages"
type="tns:ArrayOfDashboardElement"/>
      </xs:sequence>
      <xs:attribute name="TemplateType" type="xs:string"/>
      <xs:attribute name="DeploymentPath" type="xs:string"/>
      <xs:attribute name="SitePath" type="xs:string"/>
      <xs:attribute name="MasterPagePath" type="xs:string"/>
      <xs:attribute name="MasterPageDisplayName" type="xs:string"/>
      <xs:attribute name="PageList" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Pages:** Specifies the layout and content of pages in the dashboard. It is an array of **DashboardElement items** (section [2.2.4.80](#)). This **MUST** be present.

**TemplateType:** Specifies the initial layout of the first page of the dashboard. This **MUST** be present and **MUST** be one of the values from the following table.

| Value          | Example   | Meaning   |
|----------------|---|---|
| Blank          |  | A blank dashboard page.                                     |
| Header2Columns |  | A dashboard page with a header zone above two column zones. |
| 1Zone          |  | A dashboard page with one zone.                             |
| 2Columns       |  | A dashboard page with two column zones.                     |
| 3Columns       |  | A dashboard page with three column zones.                   |
| 2Rows          |  | A dashboard page with two row zones.                        |

| Value             | Example   | Meaning  |
|-------------------|---|--|
| 3Rows             |  | A dashboard page with three row zones.                                 |
| ColumnSplitColumn |  | A dashboard page a column on the right and two rows zones on the left. |

**DeploymentPath:** Specifies the **URL** where the dashboard is deployed. This **MUST** be a relative URL on the **site (2)** identified by the **SitePath** attribute.

**SitePath:** Specifies the URL of the site (2) where the dashboard will be deployed. This **MUST** be a relative URL on the protocol **server (2)** to which to deploy.

**MasterPagePath:** Specifies the URL of the **master page** used when the dashboard will be deployed. This **MUST** be a relative URL on the protocol server (2) to which to deploy.

**MasterPageDisplayName:** Specifies the display name of the master page used when the dashboard will be deployed.

**PageList:** Specifies whether or not each page in the deployed dashboard includes a page list.

| Value | Meaning   |
|-------|---|
| True  | A list (1) of pages will be displayed at the top of each deployed dashboard page, enabling users to switch between pages. |
| False | A list (1) of pages will not be displayed at the top of each deployed dashboard page.                                     |

### 2.2.4.80 DashboardElement

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DashboardElement** complex type specifies the parts of a **Dashboard** (section [2.2.4.79](#)) that have width and height.

The **DashboardElement** complex type extends the **SecondClassElement** type (section [2.2.4.163](#)) and is the base type for **DashboardElementContainer** (section [2.2.4.81](#)) and **DashboardItem** (section [2.2.4.83](#)).

```
<xs:complexType name="DashboardElement" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SecondClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Height"
type="tns:DashboardElementSize"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Width"
type="tns:DashboardElementSize"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Height:** Specifies the height of the **DashboardElement**. This MUST be present. This MUST be a **DashboardElementSize** (see section [2.2.4.82](#)).

**Width:** Specifies the width of the **DashboardElement**. This MUST be present. This MUST be a **DashboardElementSize**.

### 2.2.4.81 DashboardElementContainer

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DashboardElementContainer** complex type specifies a group of **DashboardElement** complex types (section [2.2.4.80](#)) that are displayed vertically or horizontally.

Each **dashboard** page is specified by a **DashboardElementContainer**.

Each zone on a dashboard page is specified by a **DashboardElementContainer**.

The **DashboardElementContainer** complex type extends the **DashboardElement**.

```
<xs:complexType name="DashboardElementContainer" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:DashboardElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DashboardElements"
type="tns:ArrayOfDashboardElement"/>
      </xs:sequence>
      <xs:attribute name="Orientation" type="tns:LayoutOrientation" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**DashboardElements:** Specifies the **DashboardElements** in the **DashboardElementContainer**. This is an array of **DashboardElements** (section [2.2.4.28](#)).

**Orientation:** Specifies the orientation of the **DashboardElementContainer**. This is a **LayoutOrientation** complex type (section [2.2.5.33](#)). This MUST be present.

### 2.2.4.82 DashboardElementSize

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies the width or height of a **DashboardElement** (section [2.2.4.80](#)).

```
<xs:complexType name="DashboardElementSize" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Measurement" type="xs:int" use="required"/>
  <xs:attribute name="Units" type="tns:SizeType" use="required"/>
</xs:complexType>
```

**Measurement:** Specifies the number of size units. This number MUST be positive and MUST be less than or equal to 2,147,483,647. This MUST be present.

**Units:** Specifies the type of size units specified by the **Measurement** attribute. This MUST be a **SizeType** (section [2.2.5.46](#)). This MUST be present.

### 2.2.4.83 DashboardItem

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DashboardItem** complex type specifies a single **report**, **scorecard**, or **filter** on a dashboard page. **DashboardItem** extends the **DashboardElement** (section [2.2.4.80](#)).

```
<xs:complexType name="DashboardItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:DashboardElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="InboundParameters"
type="tns:ArrayOfParameterMapping"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UnderlyingElementLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="UnderlyingElementTypeName" type="xs:string"/>
      <xs:attribute name="AutoSizeWidth" type="xs:boolean" use="required"/>
      <xs:attribute name="AutoSizeHeight" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**InboundParameters:** Specifies an array of zero or more **ParameterMapping** (section [2.2.4.156](#)) **items** which indicate any parameters coming from other elements on the **dashboard**. This element **MUST** be present.

**UnderlyingElementLocation:** Specifies the **RepositoryLocation** (section [2.2.4.161](#)) for the contained element. This element **MUST** be present.

**UnderlyingElementTypeName:** Specifies the fully qualified name for the assembly class that provides the implementation of the element. This attribute **MUST** be present. [<13>](#)

**AutoSizeWidth:** Specifies whether the **DashboardItem** width is automatically set by the containing zone or uses a specific width. **true** indicates the **DashboardItem** width is controlled by the zone. **false** indicates the **DashboardItem** width is set by the **DashboardElement** (section [2.2.4.80](#)) base. This element **MUST** be present.

**AutoSizeHeight:** Specifies whether the **DashboardItem** height is automatically set by the containing zone or uses a specific height. **true** indicates the **DashboardItem** width is controlled by the zone. **false** indicates **DashboardItem** width is set by the **DashboardElement** (section [2.2.4.80](#)) base. This element **MUST** be present.

## 2.2.4.84 DataColumnMapping

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DataColumnMapping** complex type specifies dimensional mapping information for a column of data.

```
<xs:complexType name="DataColumnMapping" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="KeyColumnName" type="xs:string"/>
  <xs:attribute name="SourceColumnName" type="xs:string"/>
  <xs:attribute name="FriendlyColumnName" type="xs:string"/>
  <xs:attribute name="ColumnType" type="tns:MappedColumnTypes" use="required"/>
  <xs:attribute name="FactAggregation" type="tns:FactAggregations" use="required"/>
  <xs:attribute name="ColumnDataType" type="tns:MappedColumnDataTypes" use="required"/>
</xs:complexType>
```

**UniqueName:** This attribute **MUST** be present. **UniqueName** specifies the unique name of the **dimension** that a column represents. The value **MUST NOT** be empty.

| ColumnType    | Content  |
|---------------|--|
| Ignore        | The value MUST be an empty string.   |
| Fact          | The value MUST be an empty string.   |
| Dimension     | The value MUST be an empty string.   |
| TimeDimension | The value MUST be an empty string.   |
| Key           | UniqueName specifies the unique name of the dimension that a column represents. It is used when referenced by another column mapping via the KeyColumnName. The value MUST NOT be empty. |

**KeyColumnName:** This attribute MUST be present. The content of **KeyColumnName** is determined by the **ColumnType** as designated in the following table:

| ColumnType    | Content   |
|---------------|---|
| Ignore        | The attribute MUST be ignored.  |
| Fact          | The attribute MUST be ignored.  |
| Dimension     | KeyColumnName specifies the name of the tabular column that contains the UniqueName for the dimension. If this attribute is not present, the UniqueName of this column is used as the UniqueName for the dimension. |
| TimeDimension | KeyColumnName specifies the name of the tabular column that contains the UniqueName for the dimension. If this attribute is not present, the UniqueName of this column is used as the UniqueName for the dimension. |
| Key           | The attribute MUST be ignored.  |

**SourceColumnName:** Specifies the tabular data source column name of the source for this mapping. This attribute MUST be present and MUST be a string of 1 or more characters.

**FriendlyColumnName:** Specifies a descriptive string for the tabular column name of the source for this mapping. This attribute MUST be present. The value MUST be a string of 1 or more characters.

**ColumnType:** Specifies the mapped column type. This attribute MUST be present. The value MUST conform to the **MappedColumnTypes** (Section [2.2.5.35](#)) simple type.

**FactAggregation:** Specifies the aggregation method. This attribute MUST be present. If the **ColumnType** is not "Fact", the value is not used and MUST be "None". Otherwise, the value MUST conform to the **FactAggregations** (Section [2.2.5.18](#)) simple type.

**ColumnDataType:** Specifies the type of data contained within the mapped column. This attribute MUST be present. The value MUST conform to the **MappedColumnDataTypes** (Section [2.2.5.34](#)) simple type.

#### 2.2.4.85 DataSource

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DataSource** complex type specifies a connection to an external data provider.

```

<xs:complexType name="DataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomTimeIntelligenceSettings"
type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataTableMapping"
type="tns:DataTableMapping"/>
      </xs:sequence>
      <xs:attribute name="SourceName" type="xs:string"/>
      <xs:attribute name="ServerName" type="xs:string"/>
      <xs:attribute name="DatabaseName" type="xs:string"/>
      <xs:attribute name="CubeName" type="xs:string"/>
      <xs:attribute name="CubeDisplayName" type="xs:string"/>
      <xs:attribute name="FormattingDimensionName" type="xs:string"/>
      <xs:attribute name="FormattingDimensionDisplayName" type="xs:string"/>
      <xs:attribute name="FormattingDimensionType" type="tns:DimensionTypeEnum"
use="required"/>
      <xs:attribute name="ConnectionString" type="xs:string"/>
      <xs:attribute name="Roles" type="xs:string"/>
      <xs:attribute name="UseConnectionString" type="xs:boolean" use="required"/>
      <xs:attribute name="ConnectionContext" type="tns:ConnectionContext" use="required"/>
      <xs:attribute name="PassUserNameAsAdomdCustomData" type="xs:boolean" use="required"/>
      <xs:attribute name="ReadOnly" type="xs:boolean" use="required"/>
      <xs:attribute name="MinutesToCache" type="xs:int" use="required"/>
      <xs:attribute name="ServerMajorVersion" type="xs:int" use="required"/>
      <xs:attribute name="SubTypeId" type="xs:string"/>
      <xs:attribute name="TargetApplicationId" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**CustomData:** String of custom data for the **data source (1)**. This element MUST be present.

For **ExcelServicesWorkbook** data sources, **CustomData** MUST contain an **ExcelServicesData** complex type object (section [2.2.4.97](#)) serialized as an **XML document** and XML encoded.

For **ExcelWorkbook** data sources, **CustomData** MUST contain an **ExcelDataSet** complex type object (section [2.2.4.96](#)) serialized as an XML document and XML encoded.

For all other data source types, **CustomData** MUST be an empty string.

**CustomTimeIntelligenceSettings:** Contains a string of custom **time intelligence** data for the data source. This element MUST be present.

For **ADOMD.NET** data sources, **CustomTimeIntelligenceSettings** MUST be a **TimeIntelligenceMdxSettings** complex type object (section [2.2.4.175](#)) serialized as an XML document and XML encoded.

For all other data source types, this element MUST be an empty string.

**DataTableMapping:** Specifies how tabular data is mapped to multidimensional data for table-based data sources. This element MUST be present. This element is used for **ExcelServicesWorkbook**, **ExcelWorkbook**, **SqlTabularDataSource**, and **SpListDataSource** types. For other data source types, it MUST be set to **NULL** and MUST be ignored by the protocol **server (2)**.

**SourceName:** Specifies the type of the data source. This attribute MUST be present and MUST be one of the values specified in the following table.

| Value     | Meaning                                  |
|-----------|--|
| ADOMD.NET | An <b>Analysis Services</b> data source. |

| Value                 | Meaning   |
|-----------------------|---|
| SqlTabularDataSource  | A SQL Server table data source.                 |
| ExcelServicesWorkbook | An Excel Services <b>workbook</b> .             |
| ExcelWorkbook         | An embedded Excel workbook.                     |
| SpListDataSource      | A list data source <a href="#">&lt;14&gt;</a> . |

**ServerName:** Specifies the name of the server (2) used by the data source. This attribute MUST be present. The content of **ServerName** is determined by the type of the data source as specified in the following table.

| Type                  | Contents  |
|-----------------------|---|
| ADOMD.NET             | <b>ServerName</b> MUST be the host name of the server (2) running Analysis Services.                      |
| SqlTabularDataSource  | <b>ServerName</b> MUST be the host name of the server (2) instance that hosts the tabular data source.    |
| ExcelServicesWorkbook | <b>ServerName</b> MUST be the <b>URL</b> of the <b>site (2)</b> which hosts the data source.              |
| ExcelWorkbook         | <b>ServerName</b> MUST be an empty string.  |
| SpListDataSource      | <b>ServerName</b> MUST be the URL of the site (2) containing the <b>list (1)</b> used by the data source. |

**DatabaseName:** Specifies the name of the database used by the data source. This attribute MUST be present. The content of **DatabaseName** is determined by the type of the data source as designated in the following table.

| Type                  | Contents   |
|-----------------------|--|
| ADOMD.NET             | <b>DatabaseName</b> MUST be the name of the multidimensional database used by the data source.                 |
| SqlTabularDataSource  | <b>DatabaseName</b> MUST be the name of the database used by the data source.                                  |
| ExcelServicesWorkbook | <b>DatabaseName</b> MUST be the name of the <b>document library</b> containing the workbook.                   |
| ExcelWorkbook         | <b>DatabaseName</b> MUST be an empty string.   |
| SpListDataSource      | <b>DatabaseName</b> MUST be the name of the site (2) list which contains the list (1) used by the data source. |

**CubeName:** Specifies the name of the **cube** used by the data source. This attribute MUST be present. The content of **CubeName** is determined by the type of the data source as designated in the following table.

| Type                  | Contents  |
|-----------------------|---|
| ADOMD.NET             | <b>CubeName</b> MUST be the name of the cube used by the data source.   |
| SqlTabularDataSource  | <b>CubeName</b> MUST be the name of the table in the database used by the data source. <b>CubeName</b> MUST be in the form <code>[schema].[table]</code> , where <i>schema</i> is the name of the table schema and <i>table</i> is the name of the table. |
| ExcelServicesWorkbook | <b>CubeName</b> MUST be the path and file name of the Excel Services workbook to be used.   |
| ExcelWorkbook         | <b>CubeName</b> MUST be an empty string.  |
| SpListDataSource      | <b>CubeName</b> MUST be the <b>GUID</b> of the list (1) used as the data source.  |

**CubeDisplayName:** Provides a display name for the **CubeName** used by the data source. This attribute MUST be present. The content of **CubeDisplayName** is determined by the type of the data source as designated in the following table.

| Type                  | Contents  |
|-----------------------|---|
| ADOMD.NET             | <b>CubeDisplayName</b> is the name of the selected cube that is displayed to the user.                    |
| SqlTabularDataSource  | <b>CubeDisplayName</b> is the name of the selected SQL table that is displayed to the user.               |
| ExcelServicesWorkbook | <b>CubeDisplayName</b> is the name of the selected Excel Services workbook that is displayed to the user. |
| ExcelWorkbook         | <b>CubeDisplayName</b> MUST be an empty string.   |
| SpListDataSource      | <b>CubeDisplayName</b> SHOULD be the name of the list (1).  |

**FormattingDimensionName:** Specifies the initial value for the **dimension** in the cube which contains the numerical formats for analytic grids or charts using the data source. This element is only used for **ADOMD.NET** data sources. It MUST be present for all data source types.

For non-**ADOMD.NET** data sources, this attribute MUST be an empty string.

For **ADOMD.NET** data sources, this attribute MAY be an empty string.

**FormattingDimensionDisplayName:** Provides a display name for the **FormattingDimensionName** used for **ADOMD.NET** data sources. This attribute MUST be present for all data source types. For non-**ADOMD.NET** data sources, this element MUST be an empty string.

**FormattingDimensionType:** Specifies the **DimensionTypeEnum** simple type (section [2.2.5.13](#)) of the dimension used in **FormattingDimensionName**. This attribute MUST be present for all data source types. For non-**ADOMD.NET** data sources, this element MUST be set to "Other".

**ConnectionString:** Specifies the user-defined connection string used to connect to the data source when **UseConnectionString** is set to **TRUE**. This attribute MUST be present and MUST NOT be an empty string. The content of **ConnectionString** is determined by the type of the data source as designated in the following table.

| Type                  | Contents   |
|-----------------------|--|
| ADOMD.NET             | <b>ConnectionString</b> MUST be a valid connection string which connects to the <b>OLAP</b> data source. If the <b>ReadOnly</b> attribute is set to "true", <b>ConnectionString</b> MUST be an empty string. |
| SqlTabularDataSource  | <b>ConnectionString</b> MUST be a valid SQL table connection string. If the <b>ReadOnly</b> attribute is set to "true", the <b>ConnectionString</b> MUST be empty.   |
| ExcelServicesWorkbook | <b>ConnectionString</b> MUST be an empty string.   |
| ExcelWorkbook         | <b>ConnectionString</b> MUST be an empty string.   |
| SpListDataSource      | <b>ConnectionString</b> MUST be an empty string.   |

**Roles:** Specifies the database roles used when connecting to an **ADOMD.NET** data source. This attribute MUST be present for all data source types. For non-**ADOMD.NET** data sources, this attribute MUST be an empty string.

**UseConnectionString:** If **TRUE**, **ConnectionString** is used to connect to the data source. If **FALSE**, the contents of the **ConnectionString** property are ignored and the connection string is built internally. This attribute MUST be present, and is only used for **ADOMD.NET** and **SqlTabularDataSource** data source types.

**ConnectionContext:** Specifies the user **ConnectionContext** simple type (section [2.2.5.10](#)) to be used for authentication to the data source. This attribute MUST be present, and MUST be ignored for **ExcelWorkbook** data source types.

**PassUserNameAsAdomdCustomData:** Specifies whether to pass the user name to **ADOMD.NET** as part of the **CustomData** property of the connection string. **CustomData** is sometimes used as an alternative identity, distinct from the connection identity. This attribute MUST be present, is only used by **ADOMD.NET** data sources and MUST be ignored by all other data source types.

**ReadOnly:** This attribute MUST be present and MUST be set to **TRUE** if the data source object is read-only for the **current user**; otherwise, this attribute is **FALSE**. When calling the **CreateDataSource** operation (section [3.1.4.3](#)), if this attribute is set to **TRUE**, the server (2) responds with a **SOAP fault** containing the **ErrorCode** "CannotPublishReadOnlyElement"; otherwise, if this attribute is set to **FALSE**, the creation is successful.

**MinutesToCache:** Specifies the timeout in minutes for caching data source requests. This attribute MUST be present and the value MUST be a non-negative integer. If **MinutesToCache** is set to zero, the data source MUST NOT be cached.

**ServerMajorVersion:** Indicates the major version of the data source being used. This attribute MUST be present.

**SubTypeId:** Specifies the subtype of the data source. This attribute MUST be present and MUST be the same value as the **SourceName** element.

**TargetApplicationId:** Specifies the Secure Store ([\[MS-SSWPS\]](#)) **target application** identifier containing the credentials that MUST be used for authentication to the data source when **ConnectionContext** is set to **SecureStoreCredentials**. When **ConnectionContext** IS NOT set to **SecureStoreCredentials**, this attribute MUST be ignored. This attribute MUST be present.

## 2.2.4.86 DataTableMapping

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DataTableMapping** complex type specifies how data from tabular data sources is mapped to multidimensional data.

```
<xs:complexType name="DataTableMapping" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ColumnMappings"
type="tns:ArrayOfDataColumnMapping"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MasterTimeColumn"
type="tns:DataColumnMapping"/>
  </xs:sequence>
  <xs:attribute name="DateAggregationType" type="tns:DateAggregationTypes" use="required"/>
  <xs:attribute name="CalendarStartMonth" type="xs:int" use="required"/>
</xs:complexType>
```

**ColumnMappings:** Specifies the **ArrayOfDataColumnMapping** (section [2.2.4.29](#)) **items** that provide the mapping information for each of the tabular columns. This element **MUST** be present.

If an item in **ColumnMappings** has a **Dimension** or **TimeDimension** **MappedColumnType** (see section [2.2.5.35](#)), the item's **KeyColumnName** (section [2.2.4.84](#)) **MUST** be either an empty string or **MUST** be equal to the **UniqueName** (section [2.2.4.84](#)) of one of the other columns in the array with a **MappedColumnType** equal to **Key** (section [2.2.5.35](#)).

**MasterTimeColumn:** Specifies the mapped **DateTime** column (section [2.2.5.34](#)) in the tabular data source that is used as the time **dimension** for **time intelligence** calculations.

**DateAggregationType:** Specifies the list (1) of **DateAggregationTypes** (see section [2.2.5.12](#)) that specifies which time period levels are used for the mapped time dimensions. This attribute **MUST** be present and **MUST** contain at least one **DateAggregationType**.

**CalendarStartMonth:** Specifies the fiscal year start month used for the time dimensions. This element **MUST** be present and **MUST** be one of these values: 0 for January, 1 for February, 2 for March, 3 for April, 4 for May, 5 for June, 6 for July, 7 for August, 8 for September, 9 for October, 10 for November, or 11 for December.

## 2.2.4.87 DefaultDimensionSetting

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies a default set of members in a **dimension**. It extends the **Dimension** (see section [2.2.4.90](#)) type.

```
<xs:complexType name="DefaultDimensionSetting" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Dimension">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Members" type="tns:Member"/>
      </xs:sequence>
      <xs:attribute name="IsVisible" type="xs:boolean" use="required"/>
      <xs:attribute name="ShowAsSlider" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Members:** Specifies a default set of **members (2)** in a dimension. Contains an array of 0 or more **Member** (see section [2.2.4.134](#)) **items**. This element **MUST** be present.

**IsVisible:** This attribute is deprecated from the protocol and **MUST NOT** be used.

**ShowAsSlider:** This type is deprecated from the protocol and **MUST NOT** be used.

### 2.2.4.88 DictionaryWrapperOfStringGridCell

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type specifies a collection of `ArrayOfGridCells` (see section [2.2.4.35](#)) with associated string keys.

```
<xs:complexType name="DictionaryWrapperOfStringGridCell"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfGridCell"/>
  </xs:sequence>
</xs:complexType>
```

**Keys:** An array of strings representing keys for addressing the contents of the **Values** array (see section [2.2.4.54](#)).

**Values:** An array of **GridCells** (see section [2.2.4.100](#)). This element MUST conform to the schema of the **ArrayOfGridCell** complex type (see section [2.2.4.35](#)).

The **Keys** and **Values** MUST conform to the following:

- The number of **items** in **Keys** and the number of items in **Values** MUST be the same.
- Each item in **Values** MUST NOT be null.
- Each item in **Keys** MUST be a unique, non-null string.
- Each value in **Values** MUST have a corresponding key in **Keys** (that is, for each `Values[i]`, the corresponding key is `Keys[i]`).

### 2.2.4.89 DictionaryWrapperOfStringPropertyBag

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type specifies a collection of **ArrayOfPropertyBags** with associated string keys.

```
<xs:complexType name="DictionaryWrapperOfStringPropertyBag"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfPropertyBag"/>
  </xs:sequence>
</xs:complexType>
```

**Keys:** An array of strings serving as keys for addressing the contents of the **Values** array. See **ArrayOfString**, section [2.2.4.54](#).

**Values:** An array of **PropertyBags**. See **ArrayOfPropertyBag**, section [2.2.4.52](#).

The **Keys** and **Values** MUST conform to the following:

- The number of **items** in **Keys** and the number of items in **Values** MUST be the same.
- Each item in **Values** MUST NOT be null.
- Each item in **Keys** MUST be a unique, non-null string.

- Each value in **Values** MUST have a corresponding key in **Keys** (that is, for each `Values[i]`, the corresponding key is `Keys[i]`).

### 2.2.4.90 Dimension

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Dimension** complex type specifies the structure of a **dimension**. It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```
<xs:complexType name="Dimension" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="MeasureGroupNames"
type="tns:ArrayOfString"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:DimensionTypeEnum"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Hierarchies"
type="tns:ArrayOfHierarchy"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
      </xs:sequence>
      <xs:attribute name="IsMeasureDimension" type="xs:boolean" use="required"/>
      <xs:attribute name="DefaultMemberName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**MeasureGroupNames:** Specifies a **list (1)** of the names of groupings of the **measures** in the dimension. This element MUST be present.

**Type:** Specifies the type of the dimension in the form of the simple type **DimensionTypeEnum** (section [2.2.5.13](#)). This element MUST be present.

**Hierarchies:** Specifies the **hierarchies** in the dimension. A list (1) of the **Hierarchy** elements as defined in the complex type **ArrayOfHierarchy** (section [2.2.4.39](#)). The **Hierarchy.Levels** collection will contain only the **Levels** that are used in that **Hierarchy**. This element MUST be present.

**Levels:** Specifies the **levels** in the dimension. A list (1) of the **Level** elements as defined in the complex type **ArrayOfLevel** (section [2.2.4.43](#)). The **Dimension.Levels** collection will contain all of the **Levels** that are used in all of the **Hierarchies** in a **Dimension**. This element MUST be present.

**IsMeasureDimension:** Specifies if the dimension is a measure dimension. This value MUST be **TRUE** when the value of **Type** is "Measure"; otherwise, it is **FALSE**. This element MUST be present.

**DefaultMemberName:** Specifies the unique name of the **default member** for the dimension. The length of the value MUST NOT exceed 1000 characters. This element MUST be present.

### 2.2.4.91 Element

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This abstract class specifies basic metadata about an **item**. This class is the base class for [FirstClassElement](#) and [SecondClassElement](#).

```
<xs:complexType name="Element" abstract="true" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Properties" type="tns:ArrayOfBpmProperty"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Comments" type="tns:ArrayOfComment"/>
  </xs:sequence>
```

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

**Properties:** Specifies properties associated with the Element. This element MUST be present. Contains an array of 0 or more [BpmProperty](#) items.

**Comments:** Specifies comments associated with the Element. This element MUST be present. Contains an array of 0 or more [Comment](#) items.

#### 2.2.4.92 ElementVersion

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies the version information used to distinguish different instances of a [FirstClassElement](#).

```
<xs:complexType name="ElementVersion" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Major" type="xs:int" use="required"/>
  <xs:attribute name="Minor" type="xs:int" use="required"/>
</xs:complexType>
```

**Major:** The major version number of the **FirstClassElement**. This attribute MUST be present and MUST be 0 or greater and MUST be less than or equal to 2,147,483,647.

**Minor:** The minor version number of the **FirstClassElement**. This attribute MUST be present and MUST be 0 or greater and MUST be less than or equal to 2,147,483,647.

#### 2.2.4.93 EliminateDescendantsSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to eliminate **descendant members (2)**, of the member (2) specified by **Name** (see section [2.2.4.165](#)), from a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="EliminateDescendantsSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.94 EliminateMemberSetOp

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to eliminate a **member (2)**, specified by **Name** (see section [2.2.4.165](#)), from a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="EliminateMemberSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

## 2.2.4.95 EndPoint

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type defines the receiving end of a connection between a **Web Part** that provides parameter values such as a **filter** or a **scorecard**, and a Web Part that consumes parameter values, such as a report view or a scorecard.

```
<xs:complexType name="EndPoint" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Category" type="tns:EndPointCategory" use="required"/>
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="DisplayName" type="xs:string"/>
  <xs:attribute name="AcceptsMultipleFilterLinks" type="xs:boolean" use="required"/>
</xs:complexType>
```

**Category:** This attribute describes the category of the **EndPoint** as defined in [EndPointCategory](#). It MUST be present.

**UniqueName:** This attribute is a string that represents the unique name of the **EndPoint**. It MUST be present.

**DisplayName:** This attribute is a string that represents the display name of the **EndPoint**. It MUST be present.

**AcceptsMultipleFilterLinks:** This attribute MUST be present and MUST be **true** if the **EndPoint** can accept multiple connections from a filter or a scorecard; otherwise, **false**.

## 2.2.4.96 ExcelDataSet

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Specifies the Excel **workbook** ([\[MS-XLS\]](#)) data for an **ExcelWorkbook** data source.

```
<xs:complexType name="ExcelDataSet" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CompressedDataTable" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcelFileBlob" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TableMapping" type="tns:DataTableMapping"/>
  </xs:sequence>
  <xs:attribute name="UseFirstRowHeaders" type="xs:boolean" use="required"/>
</xs:complexType>
```

**CompressedDataTable:** An ADO.NET **DataTable** object (as described in [\[DataTable\]](#)), which contains all of the rows and columns of data in the embedded workbook. The **DataTable** object MUST be serialized into binary format as specified in [\[MS-NRBF\]](#), then compressed using GZIP compression as specified in [\[RFC1952\]](#), and then encoded with **base64 encoding**.

**ExcelFileBlob:** Contains the embedded Excel workbook. This element MUST be present and MUST contain a valid workbook file containing the data for the data source. The file contents MUST be compressed using GZIP compression as specified in [\[RFC1952\]](#) and then MUST be encoded with base64 encoding.

**TableMapping:** This attribute is deprecated from the protocol and MUST NOT be used.

**UseFirstRowHeaders:** This attribute MUST be present and MUST be **true** if the first row in the embedded spreadsheet consists of headers; otherwise, **false**.

## 2.2.4.97 ExcelServicesData

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Describes an Excel Services ([\[MS-ESP\]](#)) data connection used by Excel Services data sources and Excel Services reports.

```
<xs:complexType name="ExcelServicesData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookParameters"
type="tns:PropertyBag"/>
  </xs:sequence>
  <xs:attribute name="SharePointSite" type="xs:string"/>
  <xs:attribute name="DocumentLibrary" type="xs:string"/>
  <xs:attribute name="DocumentLibraryRootFolder" type="xs:string"/>
  <xs:attribute name="DocumentLibraryDisplay" type="xs:string"/>
  <xs:attribute name="FolderFileName" type="xs:string"/>
  <xs:attribute name="FileName" type="xs:string"/>
  <xs:attribute name="ItemName" type="xs:string"/>
  <xs:attribute name="ViewOptions" type="tns:ExcelServicesViewOptions" use="required"/>
  <xs:attribute name="ToolbarType" type="tns:ExcelServicesToolbarType" use="required"/>
  <xs:attribute name="ToolbarOptions" type="tns:ExcelServicesToolbarOptions" use="required"/>
</xs:complexType>
```

**WorkbookParameters:** Specifies the **PropertyBag** (section [2.2.4.158](#)) containing the parameters that are passed to the **workbook** when opening the data source. This element **MUST** be present.

**SharePointSite:** Specifies the **URL** of the **site (2)** containing an Excel Services data source. This attribute **MUST** be present. **SharePointSite** **MUST** only be used for Excel Services reports.

**DocumentLibrary:** Specifies the **GUID** of the **document library** that contains the data source. This attribute **MUST** be present.

**DocumentLibraryRootFolder:** Specifies the root folder of the document library. This attribute **MUST** be present.

**DocumentLibraryDisplay:** Specifies the display name of the document library. This attribute **MUST** be present.

**FolderFileName:** Specifies the path and file name of the Excel Services workbook. This attribute **MUST** be present. **FolderFileName** **MUST** only be used for Excel Services reports.

**FileName:** Specifies the file name of the Excel Services workbook. This attribute **MUST** be present. **FileName** **MUST** only be used for Excel Services reports.

**ItemName:** Specifies the name of the **published item** in the Excel Service workbook used as the data source. This attribute **MUST** be present.

**ViewOptions:** Specifies the combination of one or more **ExcelServicesViewOptions** (section [2.2.5.17](#)) that control how the user is allowed to interact with the Excel Services report. This attribute **MUST** be present.

**ToolbarType:** Specifies the **ExcelServicesToolbarType** (section [2.2.5.16](#)) that controls which toolbar is shown in the Excel Services report. This attribute **MUST** be present.

**ToolbarOptions:** Specifies the combination of one or more **ExcelServicesToolbarOptions** (section [2.2.5.15](#)) for the toolbar displayed on the report. This attribute **MUST** be present.

## 2.2.4.98 Filter

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **Filter** complex type specifies a **filter**.

```
<xs:complexType name="Filter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="EndPoints" type="tns:ArrayOfEndPoint"/>
      </xs:sequence>
      <xs:attribute name="SubTypeId" type="xs:string"/>
      <xs:attribute name="ReadOnly" type="xs:boolean" use="required"/>
      <xs:attribute name="SelectionMode" type="tns:FilterSelectionMode" use="required"/>
      <xs:attribute name="Visualization" type="xs:string"/>
      <xs:attribute name="RendererClassName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**BeginPoints:** Specifies the available connection sources to filter and set conditions for the display of other reports and **scorecards**. This element **MUST** be present, and the array **MUST** contain at least one **ParameterDefinition** complex type (section [2.2.4.155](#)). This element **MUST** conform to the schema of the **ArrayOfParameterDefinition** complex type (section [2.2.4.50](#)).

**DataSourceLocation:** Specifies the **data source (1)** for the selectable filter values. This element **MUST** be present. This element **MUST** conform to the schema of the **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** contain the **RepositoryLocation** of a data source (1).

**CustomData:** Specifies custom data for the filter. This element **MUST** be present. If **SubTypeId** does not contain a custom value, **CustomData** **MUST** contain an empty string. If **SubTypeId** does contain a custom value, **CustomData** **MAY** be used depending on the implementation of the third-party filter. The specific content will be defined by the implementer of the custom filter.

**EndPoints:** Specifies available connections destinations for filtering and controlling the conditional visibility of the filter. This element **MUST** be present, and the array **MUST** be empty if the **SubTypeId** is not a custom value. This element **MUST** conform to the schema of the **ArrayOfEndPoint** complex type (section [2.2.4.33](#)).

**SubTypeId:** Specifies the identifier for the type of the filter. This attribute **MUST** be present. The value **MUST NOT** be empty. It **MUST NOT** be longer than 60 characters. It **MUST NOT** contain the characters ', ", or \. Each **ParameterDefinition** in the **BeginPoints** of the filter **MUST** have a **CustomDefinition** that is valid for the specified **SubTypeId**. If the filter is a third-party filter, the value **MUST NOT** be one of the values in the following table. Otherwise, the value of **SubTypeId** **MUST** be one of the values specified in the following table.

| Value           | Content   |
|-----------------|---|
| FixedValues     | Specifies a filter that contains selections provided from a tabular data source (1).              |
| MDXQuery        | Specifies a filter that contains selections provided by an <b>MDX</b> query.                      |
| MemberSelection | Specifies a filter that contains selections provided by selecting members from a data source (1). |
| NamedSets       | Specifies a filter that contains selections provided from a <b>named set</b> definition.          |

| Value                       | Content   |
|-----------------------------|---|
| TimeIntelligence            | Specifies a filter that contains selections provided by a <b>time intelligence</b> mapped data source (1).                                  |
| TimeIntelligencePostFormula | Specifies a filter that contains selections provided by a custom <b>formula</b> applied against a time intelligence mapped data source (1). |

**ReadOnly:** This element is ignored if **SubTypeId** is "FixedValues", "MDXQuery", "MemberSelection", "NamedSets", "TimeIntelligence", or "TimeIntelligencePostFormula". It MAY be used by any other **SubTypeId**. This attribute MUST be present and MUST be **TRUE** if the filter is read-only; otherwise, this element is **FALSE**.

**SelectionMode:** Specifies the selection mode that the filter supports. The attribute MUST be present. The value MUST be one of the enumerated values specified in the **FilterSelectionMode** simple type (section [2.2.5.19](#)).

**Visualization:** Specifies the type of visualization for the filter. The attribute MUST be present. The value MUST be one of the following: "SingleSelectList", "SingleSelectTree", "MultiSelectTree", "TimeIntelligenceCalendar", or "Custom".

**RendererClassName:** Specifies the fully qualified name for the assembly class that provides the rendering for the filter. This attribute MUST be present. If **SubTypeId** is "FixedValues", "MDXQuery", "MemberSelection", "NamedSets", "TimeIntelligence", or "TimeIntelligencePostFormula" the value MUST NOT be empty; otherwise, this element MUST be the assembly-qualified name of the custom type.

### 2.2.4.99 FirstClassElement

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **FirstClassElement** complex type is an abstract class that represents an object that is versionable. This is the base class for the complex types **Dashboard** (section [2.2.4.79](#)), **DataSource** (section [2.2.4.85](#)), **Scorecard** (section [2.2.4.162](#)), **ReportView** (section [2.2.4.160](#)), **Kpi** (section [2.2.4.128](#)) and **Indicator** (section [2.2.4.125](#)).

```
<xs:complexType name="FirstClassElement" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Element">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Version" type="tns:ElementVersion"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Location"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="Folder" type="xs:string"/>
      <xs:attribute name="CreatedBy" type="xs:string"/>
      <xs:attribute name="CreatedDate" type="xs:dateTime" use="required"/>
      <xs:attribute name="ContentType" type="tns:FCOContentType" use="required"/>
      <xs:attribute name="LastModified" type="xs:dateTime" use="required"/>
      <xs:attribute name="ModifiedBy" type="xs:string"/>
      <xs:attribute name="CheckedOutTo" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Version:** The **ElementVersion** complex type (section [2.2.4.92](#)) information of the object. This value is optional, and has a default value of zero for the major and minor version. The major version will

increase when the **child** classes **Dashboard**, **DataSource**, **Scorecard**, **ReportView**, **Kpi**, and **Indicator** are created and updated.

**Location:** The location information of the object, as specified by the **RepositoryLocation** complex type (section [2.2.4.161](#)).

**Folder:** The folder that the object belongs to, in the form of "folder1\subfolder2\subfolder3". This value is optional, and has a default value of empty string.

**CreatedBy:** The user who initially created the object. This value is optional, and if it is set to the value of null, the **server (2)** will set it to the value of the actual user creating it.

**CreatedDate:** The date the object was initially created. This value MUST be set by the server (2) upon **FirstClassElement** creation.

**ContentType:** The content type of the object in the form of **FCOContentType** simple type (section [3.1.4.36.4.1](#)). This value MUST be set by the server (2) upon **FirstClassElement** creation.

**LastModified:** The date this version of the object was last modified. This value MUST be set by the server (2) upon **FirstClassElement** creation and modification.

**ModifiedBy:** The user who last modified the object. This value is optional, and if it is set to the value of null, the server (2) will set it the value of the actual user modifying it.

**CheckedOutTo:** The user who currently has the object checked out. This value is optional and has a default value of empty string.

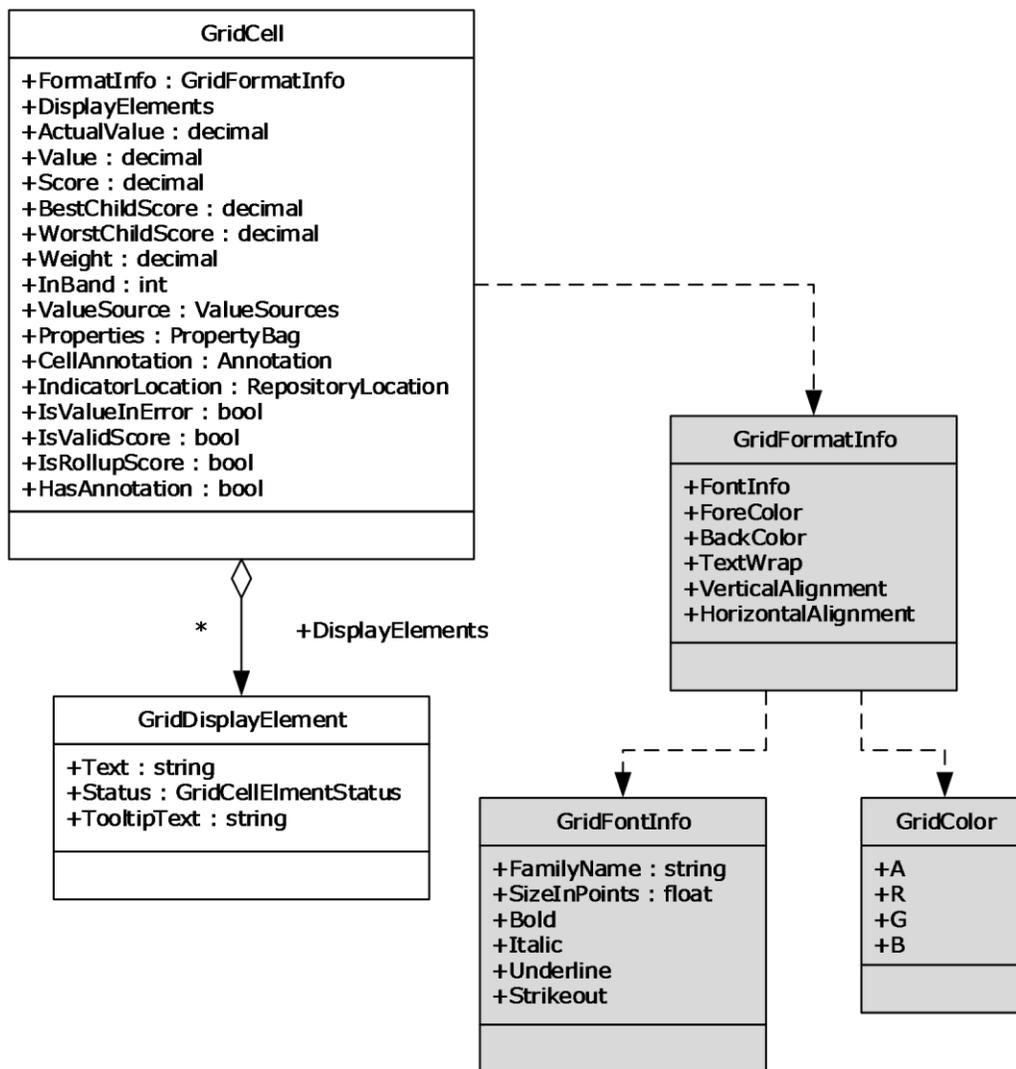
When creating **dashboard** content in a content store, the dashboard content SHOULD contain at least one **BpmProperty** complex type (section [2.2.4.62](#)). The **BpmProperty's UniqueName** property is "8dd07d4d87794510afdb1f07664359bc\_Element\_Name" which maps to the SharePoint list property "Title", required for a SharePoint list item. The Description property is "8dd07d4d87794510afdb1f07664359bc\_Element\_Description" and maps to the SharePoint list property "Description", which is optional. "8dd07d4d87794510afdb1f07664359bc\_Element\_Owner" maps to the SharePoint list property "Person Responsible", which is also optional.

## 2.2.4.100 GridCell

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies a single **cell** used by the **scorecard** grid view and the analytic grid view.

The following **Unified Modeling Language (UML)** class diagram shows the **GridCell** and its relationship with other classes.



**Figure 2: GridCell in relation to other classes**

```

<xs:complexType name="GridCell" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FormatInfo" type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Properties" type="tns:PropertyBag"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayElements"
type="tns:ArrayOfGridDisplayElement"/>
    <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="1" maxOccurs="1" name="InBand" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellAnnotation" type="tns:Annotation"/>
  </xs:sequence>
  <xs:attribute name="Value" type="xs:decimal" use="required"/>
  <xs:attribute name="ActualValue" type="xs:decimal" use="required"/>
  <xs:attribute name="Score" type="xs:decimal" use="required"/>
  <xs:attribute name="Weight" type="xs:decimal" use="required"/>
  <xs:attribute name="BestChildScore" type="xs:decimal" use="required"/>
  <xs:attribute name="WorstChildScore" type="xs:decimal" use="required"/>
  <xs:attribute name="IsValueInError" type="xs:boolean" use="required"/>
  <xs:attribute name="HasAnnotation" type="xs:boolean" use="required"/>
  <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
  <xs:attribute name="ValueSource" type="tns:ValueSources" use="required"/>

```

```
<xs:attribute name="IsValidScore" type="xs:boolean" use="required"/>
</xs:complexType>
```

**FormatInfo:** Specifies overriding styles applied to the **GridCell**, as defined in [GridFormatInfo](#). Any style changed on the GridFormatInfo overrides the default style.

**Properties:** This is a property bag as defined in [PropertyBag](#). This property allows third parties to specify custom properties for a single grid view cell.

**DisplayElements:** Specifies a collection of [GridDisplayElement](#) as defined in [ArrayOfGridDisplayElement](#). Each cell MUST contain zero or more visible elements such as **actual**, **target**, **variance**, **indicator**, and **score**. Each visible element is represented as a GridDisplayElement in this collection.

**IndicatorLocation:** If the **GridCell** contains an **indicator**, this property MUST point to the indicator location, as defined in [RepositoryLocation](#). For built-in indicators, define only the **RepositoryLocation's ItemUrl** attribute (section 2.2.4.161) as `"/PPSBUILTININDICATORS/000_.00"`, replacing the **000** with the Indicator ID.

| Indicator                       | ID |
|---------------------------------|----|
| Stoplight                       | 0  |
| Stoplight (Centered)            | 1  |
| 2 light - Small                 | 2  |
| 2 light - Small (Centered)      | 3  |
| 2 light - Medium                | 4  |
| 2 light - Medium (Centered)     | 5  |
| 2 light - Large                 | 6  |
| 2 light - Large (Centered)      | 7  |
| Stoplight - Small               | 8  |
| Stoplight - Small (Centered)    | 9  |
| Stoplight - Medium              | 10 |
| Stoplight - Medium (Centered)   | 11 |
| Stoplight - Large               | 12 |
| Stoplight - Large (Centered)    | 13 |
| Stoplight E - Small             | 14 |
| Stoplight E - Small (Centered)  | 15 |
| Stoplight D - Small (Centered)  | 16 |
| Stoplight D - Medium            | 17 |
| Stoplight D - Medium (Centered) | 18 |
| Stoplight A - Small             | 19 |
| Stoplight A - Small (Centered)  | 20 |

| <b>Indicator</b>                | <b>ID</b> |
|---------------------------------|-----------|
| Stoplight A – Medium            | 21        |
| Stoplight A - Medium (Centered) | 22        |
| Stoplight A - Medium (Centered) | 23        |
| Stoplight A – Large             | 24        |
| Stoplight A - Large (Centered)  | 25        |
| Stoplight B - Small             | 26        |
| Stoplight B - Small (Centered)  | 27        |
| Stoplight B - Medium            | 28        |
| Stoplight B - Medium (Centered) | 29        |
| Stoplight B - Large             | 30        |
| Stoplight B - Large (Centered)  | 31        |
| Cylinder                        | 32        |
| Cylinder (Centered)             | 33        |
| Gradient                        | 34        |
| Gradient (Centered)             | 35        |
| Thermometer                     | 36        |
| Thermometer (Centered)          | 37        |
| Half Gauge                      | 38        |
| Half Gauge (Centered)           | 39        |
| Reverse Half Gauge              | 40        |
| Reverse Half Gauge (Centered)   | 41        |
| Progress 4 Bar                  | 42        |
| Progress 4 Bar (Centered)       | 43        |
| Progress 5 Bar                  | 44        |
| Progress 5 Bar (Centered)       | 45        |
| Progress 6 Bar                  | 46        |
| Progress 6 Bar (Centered)       | 47        |
| Progress 7 Bar                  | 48        |
| Progress 7 Bar (Centered)       | 49        |
| Progress 8 Bar                  | 50        |
| Progress 8 Bar (Centered)       | 51        |
| Progress 9 Bar                  | 52        |

| <b>Indicator</b>                    | <b>ID</b> |
|-------------------------------------|-----------|
| Progress 9 Bar (Centered)           | 53        |
| Progress 10 Bar                     | 54        |
| Progress 10 Bar (Centered)          | 55        |
| Progress 4 Bar - Medium             | 56        |
| Progress 4 Bar - Medium (Centered)  | 57        |
| Progress 5 Bar - Medium             | 58        |
| Progress 5 Bar - Medium (Centered)  | 59        |
| Progress 6 Bar - Medium             | 60        |
| Progress 6 Bar - Medium (Centered)  | 61        |
| Progress 7 Bar - Medium             | 62        |
| Progress 7 Bar - Medium (Centered)  | 63        |
| Progress 8 Bar - Medium             | 64        |
| Progress 8 Bar - Medium (Centered)  | 65        |
| Progress 9 Bar - Medium             | 66        |
| Progress 9 Bar - Medium (Centered)  | 67        |
| Progress 10 Bar - Medium            | 68        |
| Progress 10 Bar - Medium (Centered) | 69        |
| Progress 4 Bar - Large              | 70        |
| Progress 4 Bar - Large (Centered)   | 71        |
| Progress 5 Bar - Large              | 72        |
| Progress 5 Bar - Large (Centered)   | 73        |
| Progress 6 Bar - Large              | 74        |
| Progress 6 Bar - Large (Centered)   | 75        |
| Progress 7 Bar - Large              | 76        |
| Progress 7 Bar - Large (Centered)   | 77        |
| Progress 8 Bar - Large              | 78        |
| Progress 8 Bar - Large (Centered)   | 79        |
| Progress 9 Bar - Large              | 80        |
| Progress 9 Bar - Large (Centered)   | 81        |
| Progress 10 Bar - Large             | 82        |
| Progress 10 Bar - Large (Centered)  | 83        |
| Vertical Bar - Small                | 84        |

| <b>Indicator</b>                | <b>ID</b> |
|---------------------------------|-----------|
| Vertical Bar - Small (Centered) | 85        |
| Vertical Bar -Medium            | 86        |
| Vertical Bar -Medium (Centered) | 87        |
| Vertical Bar - Large            | 88        |
| Vertical Bar - Large (Centered) | 89        |
| Smiley - Small                  | 90        |
| Smiley - Small (Centered)       | 91        |
| Smiley - Medium                 | 92        |
| Smiley - Medium (Centered)      | 93        |
| Smiley B - Small                | 94        |
| Smiley B - Small (Centered)     | 95        |
| Smiley B -Medium                | 96        |
| Smiley B -Medium (Centered)     | 97        |
| Smiley B - Large                | 98        |
| Smiley B - Large (Centered)     | 99        |
| Road Sign                       | 100       |
| Road Sign (Centered)            | 101       |
| Weather                         | 102       |
| Weather (Centered)              | 103       |
| Operators                       | 104       |
| Operators (Centered)            | 105       |
| Flags - Small                   | 106       |
| Flags - Small (Centered)        | 107       |
| Flags - Medium                  | 108       |
| Flags - Medium (Centered)       | 109       |
| Flags - Large                   | 110       |
| Flags - Large (Centered)        | 111       |
| Check - Small                   | 112       |
| Check - Small (Centered)        | 113       |
| Check - Medium                  | 114       |
| Check - Medium (Centered)       | 115       |
| Check - Large                   | 116       |

| <b>Indicator</b>                 | <b>ID</b> |
|----------------------------------|-----------|
| Check - Large (Centered)         | 117       |
| Check A - Small                  | 118       |
| Check A - Small (Centered)       | 119       |
| Check - Medium                   | 120       |
| Check - Medium (Centered)        | 121       |
| Check - Large                    | 122       |
| Check - Large (Centered)         | 123       |
| Quarters - Small                 | 124       |
| Quarters - Small (Centered)      | 125       |
| Quarters - Medium                | 126       |
| Quarters - Medium (Centered)     | 127       |
| Quarters - Large                 | 128       |
| Quarters - Large (Centered)      | 129       |
| Red To Black - Small             | 130       |
| Red To Black - Small (Centered)  | 131       |
| Red To Black - Medium            | 132       |
| Red To Black - Medium (Centered) | 133       |
| Red To Black - Large             | 134       |
| Red To Black - Large (Centered)  | 135       |
| Up Trend B - Small               | 136       |
| Up Trend B - Small (Centered)    | 137       |
| Down Trend B - Small             | 138       |
| Down Trend B - Small (Centered)  | 139       |
| Gray Trend B - Small             | 140       |
| Gray Trend B - Small (Centered)  | 141       |
| Up Trend - Small                 | 142       |
| Up Trend - Small (Centered)      | 143       |
| Down Trend -Small                | 144       |
| Down Trend -Small (Centered)     | 145       |
| Gray Trend - Small               | 146       |
| Gray Trend - Small (Centered)    | 147       |
| Up Trend - Medium                | 148       |

| Indicator                      | ID  |
|--------------------------------|-----|
| Up Trend - Medium (Centered)   | 149 |
| Down Trend - Medium            | 150 |
| Down Trend - Medium (Centered) | 151 |
| Gray Trend - Medium            | 152 |
| Gray Trend- Medium (Centered)  | 153 |
| Up Trend - Large               | 154 |
| Up Trend - Large (Centered)    | 155 |
| Down Trend - Large             | 156 |
| Down Trend - Large (Centered)  | 157 |
| Gray Trend - Large             | 158 |
| Gray Trend - Large (Centered)  | 159 |

**InBand:** If the GridCell contains an **indicator**, this property MUST contain the index to the indicator band (see [Indicator.IndicatorBands](#)) or -1 if the cell contains no data (see [Indicator.NoDataIndicatorBand](#)).

**CellAnnotation:** If the property HasAnnotation is set to **true**, **CellAnnotation** MUST NOT be null and it MUST contain a valid [Annotation](#) instance.

**Value:** Specifies the numeric value for the metric associated with the GridCell. The value represents the decimal value of the metric from a column or row that contains that cell. If the metric is a **Target**, Value contains the Target value for that cell. The same happens for other metric types, like **Actual** and **Aggregation**.

**ActualValue:** The cell can either be a **target** or an **actual** and corresponds to the value of the recorded fact. Otherwise, this value **MUST** be zero.

**Score:** Specifies the calculated **score** for a target cell.

**Weight:** Specifies the weight of the GridCell on weighted **rollup** calculations.

**BestChildScore:** This property keeps track of the best score on cells that are located below the current GridCell on the same column.

**WorstChildScore:** This property keeps track of the worst score on cells that are located below the GridCell on the same column.

**IsValueInError:** This attribute MUST be **true** if the value for the **GridCell** could not be retrieved from the **data source (1)** or could not be calculated; otherwise, **false**.

**HasAnnotation:** This attribute MUST be **true** if the **GridCell** contains annotations; otherwise, **false**. The annotations are stored on the **CellAnnotation** property.

**IsRollupScore:** This attribute MUST be **true** if the **GridCell** has a calculated rollup score; otherwise, **false**.

**ValueSource:** Represents the type of calculation used to compute the value of the **GridCell**, as defined in [ValueSources](#).

**IsValidScore:** This attribute MUST be **true** if the scoring engine was able to calculate the score for this cell; otherwise, **false**.

#### 2.2.4.101 GridCellSet

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This class specifies the cells used to represent a scorecard or analytic grid. The representation is based on a two dimensional array of [GridCell](#) elements indexed by objects of type [GridHeaderItem](#).

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

**Table:** Specifies a dictionary that maps strings to GridCell objects, as defined in [DictionaryWrapperOfStringGridCell](#).

The key string used on this dictionary is derived from the two GridHeaderItem instances used to index this two dimensional array, and MUST be created as follows:

1. Build an auxiliary dictionary
  - The dictionary MUST be created with one entry for each GridHeaderItem instance.
  - The keys MUST be the GridHeaderItem.DimensionValue values. If DimensionValue is null or empty, GridHeaderItem.DisplayText MUST be used.
  - The value MUST be the dictionary key concatenated with GridHeaderItem.Id.
  - The dictionary keys MUST be sorted alphabetically in descending order.
2. Build the **Table** key based on the previous described dictionary
  - The key to the **Table** dictionary MUST be generated by concatenating the following string pattern for each entry on the auxiliary dictionary:

[entry key] + ":" + [entry value] + "\_"

Example:

Given two GridHeaderItems

- Header 1 (KPI named Internet Sales Amount):
  - Id = 1;
  - DimensionValue = "/PerformancePoint/Lists/Dashboard Content/1\_.000";
  - DisplayName = "Internet Sales Amount"
- Header 2 (Target metric):
  - Id = 2;
  - DimensionValue = "Target";
  - DisplayName = "Target"

The generated Key is: "/PerformancePoint/Lists/Dashboard  
Content/1\_.000:/PerformancePoint/Lists/Dashboard Content/1\_.0001\_Target:Target2\_"

#### 2.2.4.102 GridColor

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This class represents the grid color for the [GridCell](#) contents.

```
<xs:complexType name="GridColor" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:attribute name="A" type="xs:unsignedByte" use="required"/>  
  <xs:attribute name="R" type="xs:unsignedByte" use="required"/>  
  <xs:attribute name="G" type="xs:unsignedByte" use="required"/>  
  <xs:attribute name="B" type="xs:unsignedByte" use="required"/>  
</xs:complexType>
```

**A:** The alpha color channel. The value MUST be between 0 and 255. A value of 0 means that the **pixel** does not have any coverage information (transparent). A value of 255 means that the pixel is completely overlapped (opaque).

**R:** The red color channel. The value MUST be between 0 and 255.

**G:** The green color channel. The value MUST be between 0 and 255.

**B:** The blue color channel. The value MUST be between 0 and 255.

#### 2.2.4.103 GridDisplayElement

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Specifies an element in a **scorecard cell**.

This is a base class for the following complex types:

[GridDisplayElementNumber](#), [GridDisplayElementIndicator](#), [GridDisplayElementText](#),  
[GridDisplayElementHyperLink](#).

Also see following diagram:

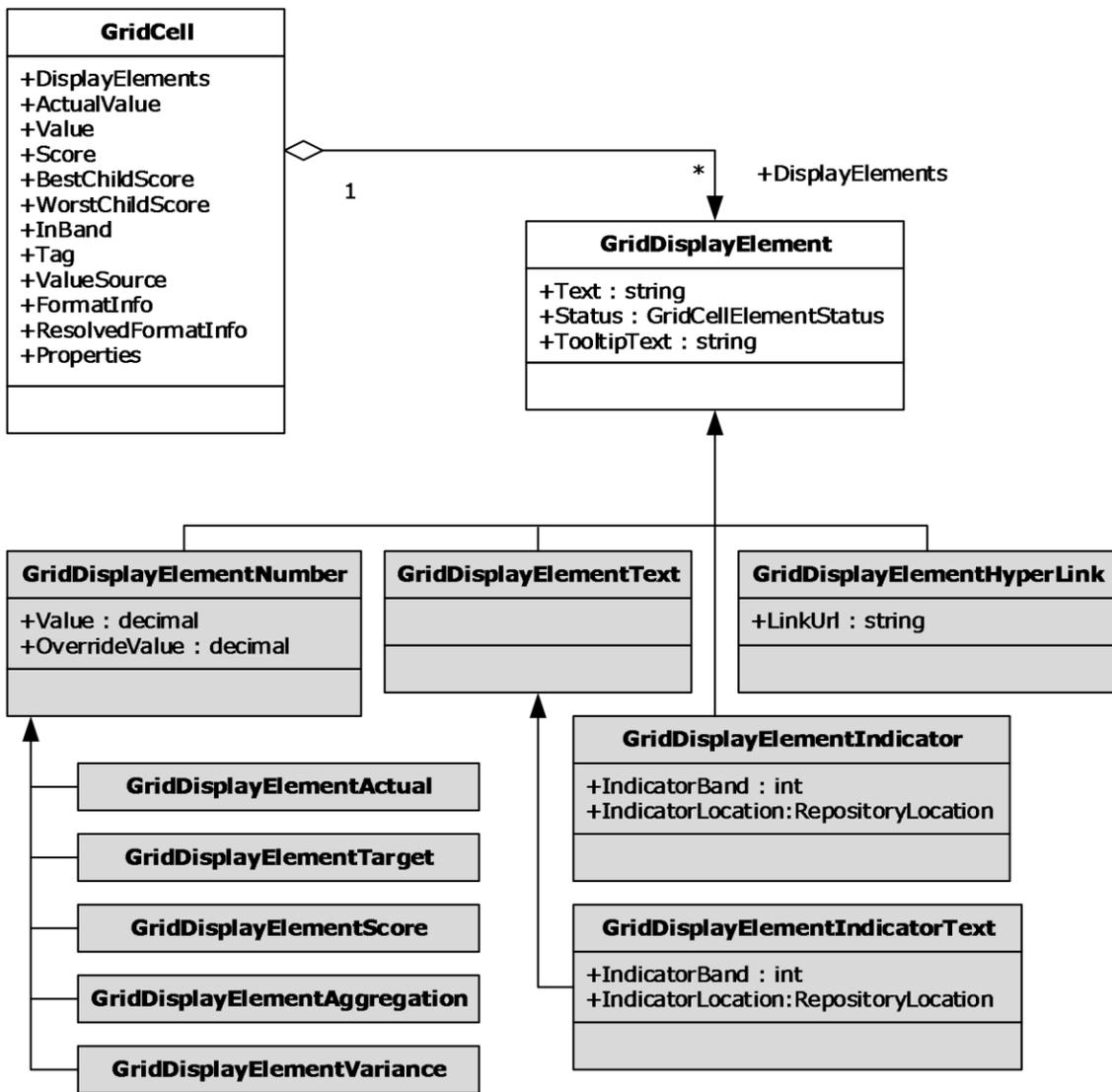


Figure 3: GridDisplayElement

```

<xs:complexType name="GridDisplayElement" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Text" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TooltipText" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Status" type="tns:GridCellElementStatus" use="required"/>
</xs:complexType>
  
```

**Text:** Specifies the text of the element in the cell.

**TooltipText:** Specifies the text that will appear when users hover with the mouse over the element in the cell.

**Status:** Specifies the status of the element in a scorecard cell. MUST be one of the values defined in [GridCellElementStatus](#)

#### 2.2.4.104 GridDisplayElementActual

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the [GridDisplayElement](#) of a **KPI**'s actual value in a **scorecard cell**.

Inherits from the [GridDisplayElementNumber](#).

```
<xs:complexType name="GridDisplayElementActual" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.105 GridDisplayElementAggregation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the [GridDisplayElement](#) of an aggregated value in a **scorecard cell**.

Inherits from the [GridDisplayElementNumber](#).

```
<xs:complexType name="GridDisplayElementAggregation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.106 GridDisplayElementHyperLink

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the [GridDisplayElement](#) of a **KPI**'s hyperlink property in a **cell**.

Inherits from the [GridDisplayElement](#).

```
<xs:complexType name="GridDisplayElementHyperLink"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement">
      <xs:attribute name="LinkUrl" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**LinkUrl:** Hyperlink **URL** that will appear in the cell. The attribute MUST be a valid [RFC1738](#) URL.

#### 2.2.4.107 GridDisplayElementIndicator

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the image of an **indicator** for the [GridDisplayElement](#) in a **scorecard cell**.

Inherits from the [GridDisplayElement](#).

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

```

<xs:complexContent mixed="false">
  <xs:extension base="tns:GridDisplayElement">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
    <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

**IndicatorLocation:** Specifies the [RepositoryLocation](#) of the [Indicator](#) object for the scorecard cell. MUST NOT be null and MUST reference an Indicator stored in the **server (2)**. See [RepositoryLocation](#).

**IndicatorBand:** Specifies the one based index of the **IndicatorBand** that is displayed in the scorecard cell. The image defined by the **Indicator** property **NoDataIndicatorBand** is used in the cell if the value is less than one, or if the value is greater than the total number of [IndicatorBands](#).

#### 2.2.4.108 GridDisplayElementIndicatorText

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the descriptive name of an **indicator** for the [GridDisplayElement](#) in a **scorecard cell**. The descriptive name of the **IndicatorBand** is the **ToolTip** property of the [IndicatorBand](#), for example: "off target".

```

<xs:complexType name="GridDisplayElementIndicatorText"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementText">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**IndicatorLocation:** Specifies the [RepositoryLocation](#) of the [Indicator](#) object for the scorecard cell. MUST NOT be null and MUST reference an Indicator stored in the **server (2)**. See [RepositoryLocation](#).

**IndicatorBand:** Specifies the one based index of the indicator band that its descriptive name is displayed in the scorecard cell. The descriptive name defined by the **Indicator** property **NoDataIndicatorBand** is used in the cell if the value is less than one, or if the value is greater than the total number of [IndicatorBands](#).

#### 2.2.4.109 GridDisplayElementNumber

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies a numeric [GridDisplayElement](#) in a **scorecard cell**. This is a base class for the following complex types [GridDisplayElementsActual](#), [GridDisplayElementTarget](#), [GridDisplayElementScore](#), [GridDisplayElementVariance](#)

```

<xs:complexType name="GridDisplayElementNumber" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement">

```

```

    <xs:attribute name="Value" type="xs:decimal" use="required"/>
    <xs:attribute name="OverrideValue" type="xs:decimal" use="required"/>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

**Value:** Specifies the decimal value of the cell element.

**OverrideValue:** Specifies the decimal value equivalent to the formatted value of the cell.

Example is shown in following table:

| Property      | Value  |
|---------------|--------|
| Text          | 55%    |
| Value         | 0.5498 |
| OverrideValue | 55     |

#### 2.2.4.110 GridDisplayElementScore

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the [GridDisplayElement](#) of the **KPI** target's score in a **scorecard cell**. Inherits from the [GridDisplayElementNumber](#).

```

<xs:complexType name="GridDisplayElementScore" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.111 GridDisplayElementTarget

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the [GridDisplayElement](#) of a **KPI**'s target value in a **scorecard cell**. Inherits from the [GridDisplayElementNumber](#).

```

<xs:complexType name="GridDisplayElementTarget" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.112 GridDisplayElementText

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the [GridDisplayElement](#) of a text value in a **scorecard cell**. Inherits from the [GridDisplayElement](#).

```

<xs:complexType name="GridDisplayElementText" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement"/>
  </xs:complexContent>
</xs:complexType>

```

### 2.2.4.113 GridDisplayElementVariance

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the [GridDisplayElement](#) of a **KPI** target's variance value in a **scorecard cell**. Inherits from the [GridDisplayElementNumber](#).

```

<xs:complexType name="GridDisplayElementVariance"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>

```

### 2.2.4.114 GridFontInfo

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This class represents the font display options for the [GridCell](#) contents.

```

<xs:complexType name="GridFontInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="FamilyName" type="xs:string"/>
  <xs:attribute name="SizeInPoints" type="xs:float" use="required"/>
  <xs:attribute name="Bold" type="tns:Trinary" use="required"/>
  <xs:attribute name="Italic" type="tns:Trinary" use="required"/>
  <xs:attribute name="Underline" type="tns:Trinary" use="required"/>
  <xs:attribute name="Strikeout" type="tns:Trinary" use="required"/>
</xs:complexType>

```

**FamilyName:** The family name of the font. This value **MUST** be present.

**SizeInPoints:** The font size in points. This value **MUST** be present.

**Bold:** Specifies whether the font is bold. This value **MUST** be set in the form of [Trinary](#) and **MUST** be present.

**Italic:** Specifies whether the font is italicized. This value **MUST** be set in the form of Trinary and **MUST** be present.

**Underline:** Specifies whether the font is underlined. This value **MUST** be set in the form of Trinary and **MUST** be present.

**Strikeout:** Specifies whether the font has a strikethrough. This value **MUST** be set in the form of Trinary and **MUST** be present.

### 2.2.4.115 GridFormatInfo

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This class represents the display format settings for the [GridCell](#) contents.

```

<xs:complexType name="GridFormatInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FontInfo" type="tns:GridFontInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ForeColor" type="tns:GridColor"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="tns:GridColor"/>
  </xs:sequence>
  <xs:attribute name="TextWrap" type="tns:Trinary" use="required"/>
  <xs:attribute name="VerticalAlignment" type="tns:VerticalAlignments" use="required"/>
  <xs:attribute name="HorizontalAlignment" type="tns:HorizontalAlignments" use="required"/>
</xs:complexType>

```

**FontInfo:** The font information of the GridCell contents, as defined in [GridFontInfo](#).

**ForeColor:** The font color of the GridCell contents, as defined in [GridColor](#).

**BackColor:** The background color of the GridCell contents, as defined in [GridColor](#).

**TextWrap:** Specifies whether the contents of a GridCell wraps. This value MUST be set in the form of [Trinary](#) and MUST be present.

**VerticalAlignment:** The vertical alignment of the GridCell contents. This value MUST be set in the form of [VerticalAlignments](#) and MUST be present.

**HorizontalAlignment:** The horizontal alignment of the GridCell contents. This value MUST be set in the form of [HorizontalAlignments](#) and MUST be present.

#### 2.2.4.116 GridHeaderItem

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **GridHeaderItem** complex type specifies the header that represents a row or a column node in a **scorecard**.

```

<xs:complexType name="GridHeaderItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="HeaderFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellFormatInfo" type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Children"
type="tns:ArrayOfGridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SerializeTag"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DimensionMember" type="tns:Member"/>
    <xs:element minOccurs="0" maxOccurs="1" name="OverrideIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LinkedKpiLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BpmProperties"
type="tns:ArrayOfBpmProperty"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TargetSettings"
type="tns:GridTargetSettings"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TrendIndicatorLocation"
type="tns:RepositoryLocation"/>
  </xs:sequence>
  <xs:attribute name="Id" type="xs:int" use="required"/>
  <xs:attribute name="Guid" xmlns:s1="http://microsoft.com/wsd/types/" type="s1:guid"
use="required"/>
  <xs:attribute name="DefinitionGuid" xmlns:s1="http://microsoft.com/wsd/types/"
type="s1:guid" use="required"/>
  <xs:attribute name="DisplayText" type="xs:string"/>
  <xs:attribute name="DimensionName" type="xs:string"/>
  <xs:attribute name="DimensionValue" type="xs:string"/>
  <xs:attribute name="HeaderType" type="tns:ScorecardNodeTypes" use="required"/>
  <xs:attribute name="GroupId" type="xs:int" use="required"/>

```

```

<xs:attribute name="Depth" type="xs:int" use="required"/>
<xs:attribute name="DescendantSpan" type="xs:int" use="required"/>
<xs:attribute name="LeafSpan" type="xs:int" use="required"/>
<xs:attribute name="IsCollapsed" type="xs:boolean" use="required"/>
<xs:attribute name="IsDynamicCellExpansionEnabled" type="xs:boolean" use="required"/>
<xs:attribute name="IsDrillEnabled" type="xs:boolean" use="required"/>
<xs:attribute name="IsDrillDownDisabled" type="xs:boolean" use="required"/>
<xs:attribute name="IsDrillUpDisabled" type="xs:boolean" use="required"/>
<xs:attribute name="IsDynamicallyExpandedHeader" type="xs:boolean" use="required"/>
<xs:attribute name="IsCellHidden" type="xs:boolean" use="required"/>
<xs:attribute name="IsPathHidden" type="xs:boolean" use="required"/>
<xs:attribute name="IsHiddenBasedOnFilterStatus" type="xs:boolean" use="required"/>
<xs:attribute name="NamedSetExpression" type="xs:string"/>
<xs:attribute name="CustomSetFormula" type="xs:string"/>
<xs:attribute name="IsNamedSetInError" type="xs:boolean" use="required"/>
<xs:attribute name="IsNamedSetEmpty" type="xs:boolean" use="required"/>
<xs:attribute name="NamedSetType" type="tns:ScorecardNamedSetType" use="required"/>
<xs:attribute name="UseLinkedElementDisplayText" type="xs:boolean" use="required"/>
<xs:attribute name="Hyperlink" type="xs:string"/>
<xs:attribute name="ShowHyperlinkInNewWindow" type="xs:boolean" use="required"/>
<xs:attribute name="IsHierarchyHeader" type="xs:boolean" use="required"/>
<xs:attribute name="IsColumnHeader" type="xs:boolean" use="required"/>
<xs:attribute name="AppendFilterInfoToHyperlink" type="xs:boolean" use="required"/>
<xs:attribute name="Weight" type="xs:decimal" use="required"/>
<xs:attribute name="KpiTargetName" type="xs:string"/>
<xs:attribute name="AggregationType" type="tns:HeaderAggregationTypes" use="required"/>
</xs:complexType>

```

**HeaderFormatInfo:** This property, as defined in the **GridFormatInfo** complex type (section [2.2.4.115](#)), overrides the format information set for **GridHeaderItem**, under either the **GridViewDefinition** (section [2.2.4.122](#)) or **GridViewData** (section [2.2.4.121](#)) complex types, for **GridHeaderItem**.

**CellFormatInfo:** This property, as defined in **GridFormatInfo**, overrides the format information set under **GridHeaderItem.HeaderFormatInfo** for **GridHeaderItem**.

**Children:** Specifies an array of **GridHeaderItem**, as defined in the **ArrayOfGridHeaderItem** complex type (section [2.2.4.37](#)).

**SerializeTag:** A general purpose tag for **GridHeaderItem** defined as a generic **object**.

**DimensionMember:** **Dimension** member (section [2.2.4.90](#)) associated with this header, as defined in the **Member** complex type (section [2.2.4.134](#)).

**OverrideIndicatorLocation:** The location of the override **Indicator** complex type (section [2.2.4.125](#)) for **rollups** as defined in the **RepositoryLocation** complex type (section [2.2.4.161](#)). If null, the default rollup indicator location, as mentioned under **GridViewDefinition** or **GridViewData** will be used.

**Banding:** **Banding** settings, as defined in the **Banding** complex type (section [2.2.4.60](#)). When null, the **BandingType.Type** is **Normalized**.

**LinkedKpiLocation:** Location of the linked **Kpi** complex type (section [2.2.4.128](#)), as defined in **RepositoryLocation**.

**BpmProperties:** Collection of element properties, as defined in the **ArrayOfBpmProperty** complex type (section [2.2.4.23](#)).

**TargetSettings:** **Target** column settings, as defined in **GridTargetSettings** complex type (section [2.2.4.119](#)).

**TrendIndicatorLocation:** If the header type is aggregate and **TrendIndicatorLocation** points to a valid location as defined in **RepositoryLocation**, this header item represents a trend column. The **TrendIndicatorLocation** MUST point to the location of the indicator used to show the trend.

**Id:** Unique integer identifier for this header.

**Guid:** Global unique identifier for **GridHeaderItem**.

**DefinitionGuid:** Global unique identifier that links a data header back to the definition header.

**DisplayText:** Display text for **GridHeaderItem**.

**DimensionName:** **Dimension** name is set based on the header type. The following table specifies the allowable **dimension** names for different scorecard header types.

| Header type      | Dimension name                |
|------------------|-------------------------------|
| Member           | Member <b>Dimension</b> name. |
| Kpi              | Scorecard__                   |
| KpiActual        | Scorecard_Measures__          |
| KpiTarget        | Scorecard_Measures__          |
| Aggregate        | Scorecard_Aggregates__        |
| ScorecardDetails | Scorecard_Details__           |
| DocumentLinks    | Scorecard_DocumentLinks__     |
| NamedSet         | null                          |
| None             | null                          |

**DimensionValue:** **Dimension** value is set based on the header type. The following table specifies the allowable dimension values for different scorecard header types.

| Header type      | Dimension value   |
|------------------|---|
| Member           | Member unique name.   |
| Kpi              | <b>RepositoryLocation</b> of the <b>Kpi</b> .   |
| KpiActual        | This value equals the <b>BpmPropertyText.Text</b> value.  |
| KpiTarget        | This value equals the <b>BpmPropertyText.Text</b> value.  |
| Aggregate        | <b>AggregateType</b> as specified by the <b>AggregateTypeEnum</b> simple type (section <a href="#">2.2.5.1</a> ). |
| ScorecardDetails | Only the values "Description", "Name", or "Person Responsible" are supported.                                     |
| DocumentLinks    | <b>GUID</b> .   |
| NamedSet         | null  |
| None             | null  |

**HeaderType:** The type of **GridHeaderItem** as defined in the **ScorecardNodeTypes** simple type (section [2.2.5.44](#)).

**GroupId:** An integer identifier to identify all **members (2)** in a set. The **GroupId** is positive if the header type is **Member** or **NamedSet** and has a negative value when no hierarchy (for example, a flat **list (1)** of members). Root headers are an exception to this rule because their **GroupId** value is zero.

**Depth:** Depth of the **GridHeaderItem** in the tree. It starts with value zero for the root level node and keeps incrementing moving towards the leaves.

**DescendantSpan:** Maximum number of header levels for all **descendant** leaves.

**LeafSpan:** Number of leaves under **GridHeaderItem**.

**IsCollapsed:** This attribute MUST be **TRUE** if the header node is collapsed; otherwise, this attribute is **FALSE**.

**IsDynamicCellExpansionEnabled:** This attribute MUST be **TRUE** if the dynamic expansion (**named set** expansion) setting is enabled for this header node; otherwise, this attribute is **FALSE**. This setting is valid only for **Dimension** members.

**IsDrillEnabled:** This attribute MUST be **TRUE** if the drill operations are enabled for **GridHeaderItem**; otherwise, this attribute is **FALSE**. This setting is valid only for **Dimension** members.

**IsDrillDownDisabled:** This attribute MUST be **TRUE** if the **drilldown** operation is disabled for **GridHeaderItem**; otherwise, this attribute is **FALSE**. This gets set if it is the leaf node in the **Hierarchy** complex type (section [2.2.4.124](#)).

**IsDrillUpDisabled:** This attribute MUST be **TRUE** if the drill up operation is disabled for this header; otherwise, the attribute is **FALSE**. This attribute gets set if it is the top most node in the **Hierarchy**.

**IsDynamicallyExpandedHeader:** This attribute MUST be **TRUE** if **GridHeaderItem** was created through dynamic expansion (named set expansion); otherwise, this attribute is **FALSE**. The header item can be dynamically expanded only if the **IsDynamicCellExpansionEnabled** attribute and the corresponding **ConfiguredView** (section [2.2.4.77](#)) setting (**AllowDynamicRowMemberExpansion** for rows and **AllowDynamicColumnMemberExpansion** for columns) are set to **TRUE**.

**IsCellHidden:** This attribute MUST be **TRUE** if the header **cell** is hidden; otherwise, this attribute is **FALSE**.

**IsPathHidden:** This attribute MUST be **TRUE** if the header path is hidden; otherwise, this attribute is **FALSE**.

**IsHiddenBasedOnFilterStatus:** This attribute MUST be **TRUE** if this **GridHeaderItem** is hidden by **Filter** (section [2.2.4.98](#)) status; otherwise, this attribute is **FALSE**.

**NamedSetExpression:** When the **NamedSetType** is **NamedSet**, this MUST conform to a valid **MDX** set expression. When the type is **CustomFormula**, the **CustomSetFormula** and **NamedSetExpression** properties are equal. For the **TimeFormula** type, this MUST be an empty string.

**CustomSetFormula:** When the **NamedSetType** is **TimeFormula**, this MUST be a valid **time intelligence** formula. When the type is **CustomFormula**, the **NamedSetExpression** properties are equal.

**IsNamedSetInError:** This attribute MUST be **TRUE** if the named set expression is in an error state; otherwise, this attribute is **FALSE**.

**IsNamedSetEmpty:** This attribute MUST be **TRUE** if the named set expression returned an empty set; otherwise, this attribute is **FALSE**.

**NamedSetType:** It identifies whether it is a named set header, custom formula, time formula, or none, as defined in the **ScorecardNamedSetType** simple type (section [2.2.5.43](#)).

**UseLinkedElementDisplayText:** This attribute MUST be **TRUE** if the linked **Kpi** name is used as the display text for **GridHeaderItem**; otherwise, this attribute is **FALSE**.

**Hyperlink:** Obsolete.

**ShowHyperlinkInNewWindow:** Obsolete.

**IsHierarchyHeader:** This attribute MUST be **TRUE** if the header is part of a **Hierarchy** collection, or **FALSE** if the header is part of a linear list (1).

**IsColumnHeader:** This attribute MUST be **TRUE** if this is a column header, or **FALSE** if this is a row header.

**AppendFilterInfoToHyperlink:** This attribute MUST be **TRUE** if the filter information MUST be appended to the hyperlink; otherwise, this attribute is **FALSE**.

**Weight:** Display value weight that gets used for **Kpi** headers.

**KpiTargetName:** **Kpi** actual or **Target** (section [2.2.4.170](#)) display name for **GridHeaderItem**.

**AggregationType:** Specifies the aggregation types, as defined in the **HeaderAggregationTypes** simple type (section [2.2.5.26](#)).

### 2.2.4.117 GridIndicatorSettings

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Defines the settings for the [Indicator](#) in the [Target](#) field.

```
<xs:complexType name="GridIndicatorSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Position" type="tns:IndicatorPosition"/>
  </xs:sequence>
  <xs:attribute name="ShowImage" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowText" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowForeColor" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowBackColor" type="xs:boolean" use="required"/>
</xs:complexType>
```

**Position:** Represents the position of the Indicator as defined in [IndicatorPosition](#).

**ShowImage:** This attribute MUST be **true** if the Indicator's image (see [IndicatorBand.ImageData](#)) displays; otherwise, **false**.

**ShowText:** This attribute MUST be **true** if the Indicator's text (see [IndicatorBand.ToolTip](#)) displays; otherwise, **false**.

**ShowForeColor:** This attribute MUST be **true** if the Indicator's foreground color (see [IndicatorBand.Color](#)) is applied; otherwise, **false**.

**ShowBackColor:** This attribute MUST be **true** if the Indicator's background color (see [IndicatorBand.BackColor](#)) is applied; otherwise, **false**.

## 2.2.4.118 GridScoreSettings

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Defines the settings for the **score** in the [Target](#) field.

```
<xs:complexType name="GridScoreSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
  <xs:attribute name="ScoreType" type="tns:ScoreTypes" use="required"/>
  <xs:attribute name="RollupType" type="tns:RollupTypes" use="required"/>
  <xs:attribute name="Position" type="tns:DataValuePosition" use="required"/>
</xs:complexType>
```

**ShowValue:** This attribute MUST be **true** if the score is shown for Target column; otherwise, **false**.

**ScoreType:** Represents the score type as defined in [ScoreTypes](#).

**RollupType:** Represents the score **rollup** type as defined in [RollupTypes](#).

**Position:** Represents the score position as defined in [DataValuePosition](#).

## 2.2.4.119 GridTargetSettings

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Defines the display settings for the [Target](#) column.

```
<xs:complexType name="GridTargetSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="VarianceSettings"
      type="tns:GridVarianceSettings"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterEmptyRows" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Position" type="tns:DataValuePosition"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PositionActual"
      type="tns:DataValuePosition"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScoreSettings"
      type="tns:GridScoreSettings"/>
    <xs:element minOccurs="0" maxOccurs="1" name="IndicatorSettings"
      type="tns:GridIndicatorSettings"/>
  </xs:sequence>
  <xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowActualAsTarget" type="xs:boolean" use="required"/>
  <xs:attribute name="IgnoreScoreFilter" type="xs:boolean" use="required"/>
</xs:complexType>
```

**VarianceSettings:** Represents the **variance** settings as defined in [GridVarianceSettings](#).

**FilterEmptyRows:** This attribute MUST be **true** if the empty rows are filtered; otherwise, **false**.

**Position:** Represents the position of the Target value in the **cell** as defined in [DataValuePosition](#).

**PositionActual:** Represents the position of the associated actual value in the cell as defined in [DataValuePosition](#).

**ScoreSettings:** Represents the Target cell's **score** settings as defined in [GridScoreSettings](#).

**IndicatorSettings:** Represents the Target cell's [Indicator](#) settings as defined in [GridIndicatorSettings](#).

**ShowValue:** This attribute MUST be **true** if the Target value is shown; otherwise, **false**.

**ShowActualAsTarget:** This attribute MUST be **true** if the actual value is shown in place of the Target value; otherwise, **false**.

**IgnoreScoreFilter:** This attribute MUST be **true** if the Target is considered when filtering rows using the score filter; otherwise, **false**.

#### 2.2.4.120 GridVarianceSettings

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Defines the settings for the **variance** in the [Target](#) column.

```
<xs:complexType name="GridVarianceSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="NumDecimalPlaces" type="xs:int" use="required"/>
  <xs:attribute name="VarianceType" type="tns:VarianceType" use="required"/>
  <xs:attribute name="DisplayType" type="tns:VarianceDisplayType" use="required"/>
  <xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
  <xs:attribute name="Position" type="tns:DataValuePosition" use="required"/>
</xs:complexType>
```

**NumDecimalPlaces:** Represents the number of decimal places to show after the decimal.

**VarianceType:** Represents the **variance** calculation type as defined in [VarianceType](#).

**DisplayType:** Represents the **variance** display type as defined in [VarianceDisplayType](#).

**ShowValue:** This attribute MUST be **true** if the **variance** is displayed in the Target column; otherwise **false**.

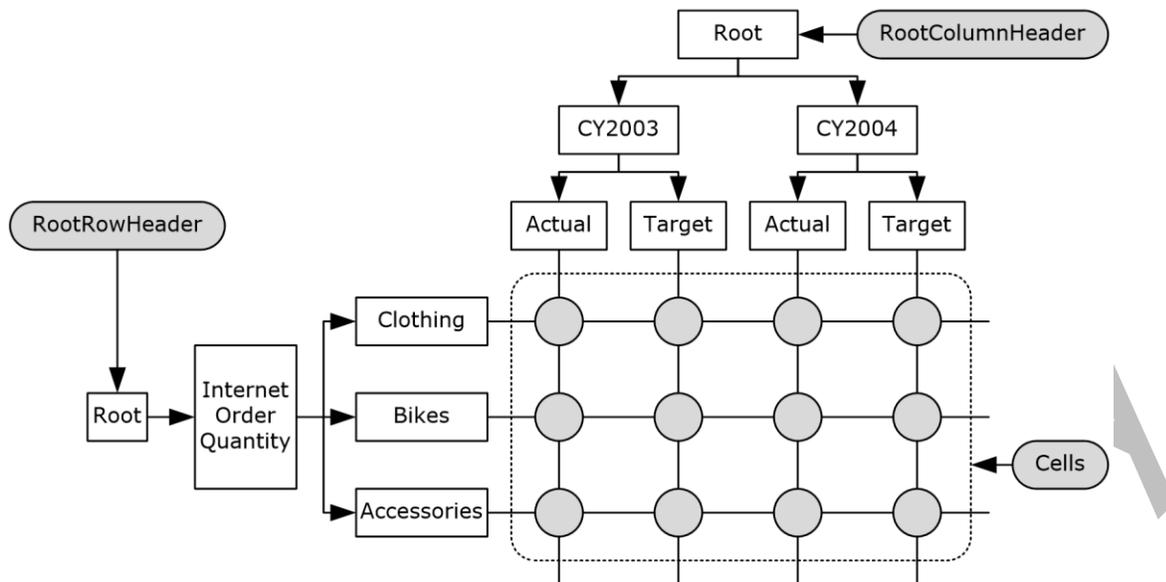
**Position:** Represents the position of the **variance** value as defined in [DataValuePosition](#).

#### 2.2.4.121 GridViewData

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **GridViewData** complex type specifies the data structure that represents the **scorecard** view.

The following diagram illustrates the scorecard view representation:



**Figure 4: GridViewData**

The **GridViewData** is mainly composed of two tree data structures representing all the row and column headers and a two dimensional array representing every possible interception between elements of those two trees.

The row and column header trees **MUST** be accessed by the properties **RootRowHeader** and **RootColumnHeader** respectively. The two dimensional array **MUST** be accessed by the **Cells** property.

```
<xs:complexType name="GridViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Cells" type="tns:GridCellSet"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader" type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PostQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreRenderTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PerUserTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PageFilters" type="tns:ArrayOfMember"/>
  </xs:sequence>
  <xs:attribute name="ScorecardViewId" xmlns:s1="http://microsoft.com/wsd/types/"
type="s1:guid" use="required"/>
  <xs:attribute name="Cached" type="xs:boolean" use="required"/>
  <xs:attribute name="CacheExpiration" type="xs:dateTime" use="required"/>
  <xs:attribute name="DefaultRollupIndicatorId" xmlns:s1="http://microsoft.com/wsd/types/"
type="s1:guid" use="required"/>
  <xs:attribute name="EmptyCell" type="xs:string"/>
  <xs:attribute name="InvalidCell" type="xs:string"/>
  <xs:attribute name="TIFormula" type="xs:string"/>
  <xs:attribute name="TICurrentDateTime" type="xs:string"/>
</xs:complexType>
```

**Cells:** This is a two dimensional array as defined in the complex type **GridCellSet** (section [2.2.4.101](#)). The array is indexed by two **GridHeaderItem** complex type objects (section [2.2.4.116](#)). One representing a row header and one representing a column header. This element MUST contain one **GridCell** complex type object (section [2.2.4.100](#)) for each possible intersection of a row header and a leaf column header.

**RootRowHeader:** Specifies the root element for the row header tree, as defined in **GridHeaderItem**.

**RootColumnHeader:** Specifies the root element for the column header tree, as defined in **GridHeaderItem**.

**ScorecardLocation:** Points to the scorecard object for which the **GridViewData** was created, as defined in the [RepositoryLocation](#) complex type (section 2.2.4.161).

**DefaultRollupIndicatorLocation:** Points to the default **indicator** for **rollup** calculated cells, as defined in **RepositoryLocation**.

**PreQueryTransforms:** Specifies a set of **transform** operations that are applied to the **GridViewData** just before getting data from the **data sources (1)** (see **GridViewTransformReference** section [2.2.4.123](#)).

**PostQueryTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** after getting data from the data sources(1) (see **GridViewTransformReference**).

**PreRenderTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** prior to rendering the scorecard (see **GridviewTransformReference**). While all the other types of transform operations are applied once when the **GridViewData** is generated, the pre-render and per-user transforms are applied every time the scorecard is rendered, even if the **GridViewData** object is not new.

**PerUserTransforms:** This element is deprecated and MUST NOT be used.

**PageFilters:** Specifies a collection of **members** used to **slice** the scorecard values, as defined in **ArrayOfMember** (section [2.2.4.45](#)).

**ScorecardViewId:** **GUID** that identifies the **ConfiguredView** complex type (section [2.2.4.77](#)) instance associated with the scorecard pointed to by **ScorecardLocation**.

**Cached:** This attribute MUST be **FALSE** if the **GridViewData** is new, or **TRUE** if it was retrieved from a caching mechanism.

**CacheExpiration:** Specifies when the **GridViewData** object becomes invalid.

**DefaultRollupIndicatorId:** GUID used as the identifier for the **indicator** that is used by default for rollup calculated cells.

**EmptyCell:** Specifies the default text used as the display test for empty cells.

**InvalidCell:** Specifies the default text used as the display test for invalid cells.

**TIFormula:** Specifies the value passed from an external **time intelligence filter** connected to the scorecard TI Formula endpoint (see **Scorecard.EndPoints** section [2.2.4.162](#)). If set, it represents the **Simple Time Period Specification formula** that is used by the scorecard query engine to filter **KpiMeasure** complex types (section [2.2.4.129](#)) uniformly independent of data source. If it is null or empty, the default time intelligence filter of the KPI is applied, if one is defined.

**TICurrentDateTime:** Specifies the value passed from an external time intelligence filter connected to the scorecard Current Date Time endpoint (see **Scorecard.EndPoints**). If set, it represents the Simple Time Period Specification (STPS) **dateTime** that is used by the scorecard query engine to evaluate **KpiMeasures** that contain a time intelligence filter. If not set, the current date time of the

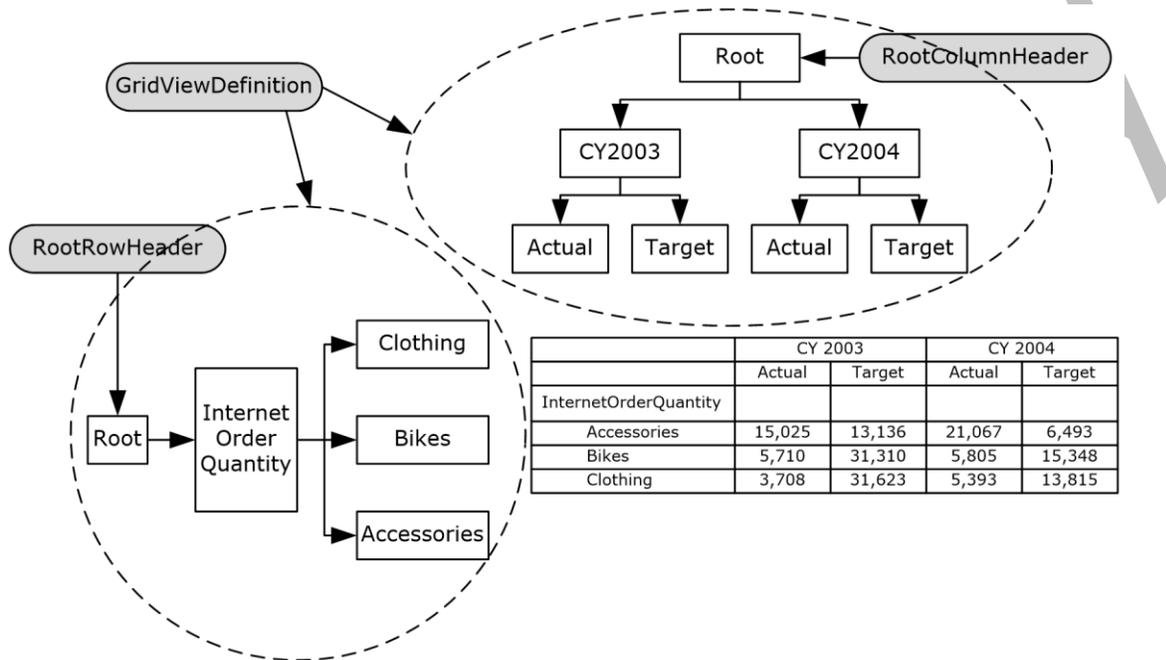
**server (2)** is used by the scorecard query engine to evaluate **KpiMeasures** if a time intelligence filter is defined.

### 2.2.4.122 GridViewDefinition

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **GridViewDefinition** complex type specifies the definition of a grid-based **scorecard** view.

The following picture illustrates the role of a **GridViewDefinition** in a scorecard.



**Figure 5: GridViewDefinition**

The **GridViewDefinition** contains the tree data structures representing all the row and column headers. The row and column header trees **MUST** be accessed by the properties **RootRowHeader** and **RootColumnHeader** respectively.

```
<xs:complexType name="GridViewDefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CornerCellFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader" type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DefaultRollupIndicatorId"
xmlns:s1="http://microsoft.com/wsd1/types/" type="s1:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreQueryTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PostQueryTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreRenderTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PerUserTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellBorderColor" type="tns:GridColor"/>
  </xs:sequence>
</xs:complexType>
```

```

<xs:attribute name="EmptyCell" type="xs:string"/>
<xs:attribute name="InvalidCell" type="xs:string"/>
<xs:attribute name="ShowGridLines" type="xs:boolean" use="required"/>
<xs:attribute name="ShowHiddenHeaders" type="xs:boolean" use="required"/>
<xs:attribute name="ShowMetricHeaders" type="xs:boolean" use="required"/>
<xs:attribute name="ShowPlusMinus" type="xs:boolean" use="required"/>
</xs:complexType>

```

**CornerCellFormatInfo:** Specifies the format applied to the top left **cell** of the scorecard as defined in the **GridFormatInfo** complex type (section [2.2.4.115](#)).

**RootRowHeader:** Specifies the root element of the row header tree, as defined in the **GridHeaderItem** complex type (section [2.2.4.116](#)).

**RootColumnHeader:** Specifies the root element of the column header tree, as defined in **GridHeaderItem**.

**DefaultRollupIndicatorId:** This attribute is deprecated from the protocol and MUST NOT be used.

**DefaultRollupIndicatorLocation:** Points to the default **indicator** for **rollup** calculated cells, as defined in the **RepositoryLocation** complex type (section [2.2.4.161](#)).

**PreQueryTransforms:** This attribute is deprecated from the protocol and MUST NOT be used.

**PostQueryTransforms:** This attribute is deprecated from the protocol and MUST NOT be used.

**PreRenderTransforms:** This attribute is deprecated from the protocol and MUST NOT be used.

**PerUserTransforms:** This attribute is deprecated from the protocol and MUST NOT be used.

**CellBorderColor:** Specifies the border color applied to scorecard cells, as defined in the **GridColor** complex type (section [2.2.4.102](#)).

**EmptyCell:** Specifies the string that needs to be displayed in empty scorecard cells. The cells are left empty when this property is **null** or empty.

**InvalidCell:** Specifies the string that needs to be displayed in invalid scorecard cells. The default value for this property is "Error".

**ShowGridLines:** This attribute MUST be **TRUE** if the scorecard grid lines are displayed; otherwise, this attribute is **FALSE**.

**ShowHiddenHeaders:** This attribute MUST be **TRUE** if the hidden headers (see **GridHeaderItem.IsHidden**) are displayed; otherwise, this attribute is **FALSE**.

**ShowMetricHeaders:** This attribute MUST be **TRUE** if the metric headers are displayed; otherwise, this attribute is **FALSE**.

**ShowPlusMinus:** This attribute MUST be **TRUE** if the expand/collapse signs are displayed; otherwise, this attribute is **FALSE**.

### 2.2.4.123 GridViewTransformReference

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **GridViewTransformReference** complex type specifies one **transform** operation to be applied to a **GridViewData** complex type (section [2.2.4.121](#)) instance.

```

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

  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:PropertyBag"/>
  </xs:sequence>
  <xs:attribute name="Id" type="xs:string"/>
</xs:complexType>

```

**Parameters:** Represents a general property bag, as defined in the **PropertyBag** complex type (section [2.2.4.158](#)). The **Parameters** property MAY be null or empty. If the transformation associated with the **GridViewTransformReference** complex type (section 2.2.4.123) requires any specific information, the **Parameters** property MUST contain that information.

**Id:** Specifies the transformation associated with the **GridViewTransformReference**. It MUST NOT be null or empty. It MUST be one of the transformations registered on the **server (2)**.[<16>](#)

### 2.2.4.124 Hierarchy

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Hierarchy** complex type specifies a **hierarchy**. It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```

<xs:complexType name="Hierarchy" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
      </xs:sequence>
      <xs:attribute name="DefaultMemberName" type="xs:string"/>
      <xs:attribute name="DimensionUniqueName" type="xs:string"/>
      <xs:attribute name="DisplayFolder" type="xs:string"/>
      <xs:attribute name="HierarchyOrigin" type="tns:HierarchyOrigin" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**Levels:** An array of **Level** complex type objects (section [2.2.4.131](#)) in the hierarchy.

**DefaultMemberName:** The unique name of the hierarchy's **default member**.

**DimensionUniqueName:** The parent **dimension** (see **Dimension** complex type section [2.2.4.90](#)) name of the hierarchy.

**DisplayFolder:** The **display folder** of the hierarchy.

**HierarchyOrigin:** The hierarchy structure, as defined by the **HierarchyOrigin** simple type (section [2.2.5.27](#)).

### 2.2.4.125 Indicator

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

A set of visualizations that represent how the actual value of a **KPI** compares against its target value.

```

<xs:complexType name="Indicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">

```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="NoDataIndicatorBand"
type="tns:IndicatorBand"/>
      <xs:element minOccurs="0" maxOccurs="1" name="IndicatorBands"
type="tns:ArrayOfIndicatorBand"/>
    </xs:sequence>
    <xs:attribute name="IndicatorType" type="tns:IndicatorType" use="required"/>
    <xs:attribute name="IsBuiltIn" type="xs:boolean" use="required"/>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

**NoDataIndicatorBand:** The [IndicatorBand](#) element that is used when the KPI contains no data. It MUST exist.

**IndicatorBands:** An array of IndicatorBand elements that represent different ranges of values for a KPI.

- The array MUST exist.
- If **IndicatorType** is set to "Standard", there MUST be at least two and no more than ten indicator bands.
- If **IndicatorType** is set to "Centered", there MUST be an even number of indicator bands that counts at least four and no more than 20.

**IndicatorType:** The type of **indicator** as specified by [IndicatorType](#).

**IsBuiltIn:** A Boolean that specifies whether the **indicator** was shipped with the product or not. A value of **true** means the **indicator** was shipped with the product. A value of **false** means that it is a custom **indicator** created by a user.

#### 2.2.4.126 IndicatorBand

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This is a visualization representing one state of an **indicator**.

```

<xs:complexType name="IndicatorBand" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ImageData" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Color" type="xs:string"/>
  <xs:attribute name="BackColor" type="xs:string"/>
  <xs:attribute name="ToolTip" type="xs:string"/>
</xs:complexType>

```

**ImageData:** A base-64 encoded string converted from a stream of the **Portable Network Graphics (PNG)** image file representing this indicator state.

- The PNG file stream that **ImageData** originates from MUST NOT exceed 512,000 bytes in length.
- Both the height and the width of the PNG image MUST NOT exceed 256 **pixels**.

**Color:** A string converted from a 24-bit color that represents this **indicator** state when it is shown as text. The string MUST be formatted as "#RRGGBB".

- **RR** – A two-digit hexadecimal value that indicates the amount of red light in the color. For example, #FF0000 defines the color red.

- **GG** – A two-digit hexadecimal value that indicates the amount of green light in the color. For example, #00FF00 defines the color green.
- **BB** - A two-digit hexadecimal value that indicates the amount of blue light in the color. For example, #0000FF defines the color blue.

**BackColor:** A string converted from a 24-bit color that represents this indicator state in visualizations where images or text cannot be displayed, such as in **strategy maps**. The string MUST be formatted as "#RRGGBB".

- **RR** – A two-digit hexadecimal value that indicates the amount of red light in the color. For example, #FF0000 defines the color red.
- **GG** – A two-digit hexadecimal value that indicates the amount of green light in the color. For example, #00FF00 defines the color green.
- **BB** - A two-digit hexadecimal value that indicates the amount of blue light in the color. For example, #0000FF defines the color blue.

**ToolTip:** A string containing the **ToolTip** for this **IndicatorBand**. The length MUST NOT exceed 1000 characters.

#### 2.2.4.127 Item

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Represents a key-value pair in a **SerializableDictionary** (section 2.2.4.164).

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

**Key:** Specifies the string key used for addressing the **Value** element content.

**Value:** Specifies the element associated with the **Key**. It MUST be of complex type **MemberSetFormula** (section [2.2.4.145](#)), **MemberList** (section [2.2.4.135](#)), or **Member** (section [2.2.4.134](#)).

The **Key** and **Value** elements MUST conform to the following:

- For each **Key**, there MUST be an associated **Value**.
- Each **Key** MUST be unique and MUST NOT be **null**.

Each **Value** MUST NOT be **null**.

#### 2.2.4.128 Kpi

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A **key performance indicator (KPI)** is contained in a **scorecard**.

```
<xs:complexType name="Kpi" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="Actuals" type="tns:ArrayOfKpiMeasure"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Targets" type="tns:ArrayOfTarget"/>
  </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

**Actuals:** An array of **KpiMeasure** (see section [2.2.4.129](#)) elements. The array **MUST** exist and **MUST** contain at least one **KpiMeasure**.

**Targets:** An array of **Target** (see section [2.2.4.170](#)) elements.

## 2.2.4.129 KpiMeasure

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **KpiMeasure** complex type is contained in a **KPI**.

```

<xs:complexType name="KpiMeasure" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SecondClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="OwnerKpiLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DefaultDimensionSettings"
type="tns:ArrayOfDefaultDimensionSetting"/>
        <xs:element minOccurs="0" maxOccurs="1" name="OverrideFormatProperties"
type="tns:KpiNumberFormatProperties"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CalcFormulaInfo"
type="tns:CalculatedFormulaInfo"/>
      </xs:sequence>
      <xs:attribute name="AggregateBy" type="tns:AggregateTypeEnum" use="required"/>
      <xs:attribute name="DisableScorecardFilters" type="xs:boolean" use="required"/>
      <xs:attribute name="ModelCurrent" type="xs:decimal" use="required"/>
      <xs:attribute name="Pattern" type="tns:KpiPattern" use="required"/>
      <xs:attribute name="CurrentFormula" type="xs:string"/>
      <xs:attribute name="IsCustomCurrentFormula" type="xs:boolean" use="required"/>
      <xs:attribute name="OdbcQuery" type="xs:string"/>
      <xs:attribute name="OverrideHoverText" type="xs:string"/>
      <xs:attribute name="TimeFilterFormula" type="xs:string"/>
      <xs:attribute name="ValueSource" type="tns:ValueSources" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**OwnerKpiLocation:** The location of the parent **Kpi** complex type (section [2.2.4.128](#)), as specified by the **RepositoryLocation** complex type (see section [2.2.4.161](#)). Upon successful **Kpi** creation, the **server (2)** **MUST** set this value to a **RepositoryLocation**, whose **ItemUrl** field matches the location of the parent **Kpi**.

**DataSourceLocation:** The location of the **DataSource** complex type (section [2.2.4.85](#)), as specified by **RepositoryLocation**. For **CalcFormulaInfo** to apply to the measure query, **DataSourceLocation.ItemUrl** **MUST** be empty.

**DefaultDimensionSettings:** An array of **DefaultDimensionSetting** complex types (section [2.2.4.87](#)) which represent the **dimension slices** to apply to the measure query.

**OverrideFormatProperties:** This allows for custom formatting of measure values, as specified by **KpiNumberFormatProperties** (section [2.2.4.130](#)).

**CalcFormulaInfo:** A calculated **formula** to apply to the measure query, as specified by **CalculatedFormulaInfo** (section [2.2.4.74](#)). For this formula to apply, **DataSourceLocation.ItemUrl** MUST be empty.

**AggregateBy:** The aggregation method to apply to the measure query, as specified by **AggregateTypeEnum** (section [2.2.5.1](#)).

**DisableScorecardFilters:** A value of **TRUE** indicates that **scorecard filters** are disabled for the measure query; a value of **FALSE** indicates that scorecard filters are enabled for the measure query.

**ModelCurrent:** The fixed value of the **KpiMeasure**.

- **DataSourceLocation.ItemUrl** MUST equal `"/%%fixedvalues%%"` for **ModelCurrent** to be used.

**Pattern:** The pattern this **KpiMeasure** follows, as specified by the **KpiPattern** simple type (section [2.2.5.32](#)). **Banding** and scoring behave differently with different patterns.

**CurrentFormula:** The **MDX** formula or **tuple** used to retrieve the current value.

- If **IsCustomCurrentFormula** is set to **TRUE**, the value MUST have one or more non-**whitespace** characters.
- If **IsCustomCurrentFormula** is set to **FALSE**, the value is ignored.
- MUST be a valid MDX formula or tuple if **DataSource.SourceName** (see section 2.2.4.85) equals "ADOMD.NET".
- The length MUST NOT exceed 4,000 characters.

**IsCustomCurrentFormula:** A value of **TRUE** indicates that **CurrentFormula** is used to compute the current value; a value of **FALSE** indicates that **CurrentFormula** is ignored.

- **DataSource.SourceName** MUST equal "ADOMD.NET" for **IsCustomCurrentFormula** to be used.

**OdbcQuery:** This attribute is deprecated from the protocol and MUST NOT be used.

**OverrideHoverText:** A descriptive string meant for the user. The length MUST NOT exceed 256 characters.

**TimeFilterFormula:** The **time intelligence** formula to apply to the measure query. The length MUST NOT exceed 4,000 characters.

**ValueSource:** The **rollup** method to apply to the source data, as specified by the **ValueSources** simple type (section [2.2.5.51](#)).

### 2.2.4.130 KpiNumberFormatProperties

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Used for custom formatting of **KPI measure** values.

```
<xs:complexType name="KpiNumberFormatProperties" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Multiplier" type="xs:decimal" use="required"/>
  <xs:attribute name="FormatType" type="tns:FormatType" use="required"/>
  <xs:attribute name="CurrencySymbol" type="xs:string"/>
  <xs:attribute name="DecimalPlaces" type="xs:int" use="required"/>
  <xs:attribute name="NegativeSymbol" type="tns:FormatNegativeSymbol" use="required"/>
  <xs:attribute name="ShowZeroAs" type="xs:string"/>
  <xs:attribute name="UseThousandsSeparator" type="xs:boolean" use="required"/>
  <xs:attribute name="AdditionalTextLeft" type="xs:string"/>
  <xs:attribute name="AdditionalTextRight" type="xs:string"/>
</xs:complexType>
```

</xs:complexType>

**Multiplier:** The multiplier value used to convert the original value to a different scale.

**FormatType:** The formatting pattern used for number formatting, as specified by **FormatType** (see section [2.2.5.23](#)).

**CurrencySymbol:** The currency symbol used for number formatting.

**DecimalPlaces:** The number of decimal places used for number formatting. The value MUST NOT be less than 0 and MUST NOT be greater than 28.

**NegativeSymbol:** The representation of negative values used for number formatting, as specified by **FormatNegativeSymbol** (see section [2.2.5.22](#)).

**ShowZeroAs:** The string used, if its length is greater than 0 characters, to express a value of 0; otherwise, 0 will be formatted as a number, as specified in **FormatType** (section [2.2.5.23](#)). The length MUST NOT exceed 8 characters.

**UseThousandsSeparator:** A value of **true** indicates that a thousands separator is enabled for number formatting; a value of **false** indicates it is disabled.

**AdditionalTextLeft:** The string added to the left of the formatted number. The length MUST NOT exceed 8 characters.

**AdditionalTextRight:** The string added to the right of the formatted number. The length MUST NOT exceed 8 characters.

#### 2.2.4.131 Level

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies a **level**. It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```
<xs:complexType name="Level" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:attribute name="DimensionUniqueName" type="xs:string"/>
      <xs:attribute name="HierarchyUniqueName" type="xs:string"/>
      <xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
      <xs:attribute name="LevelNumber" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**DimensionUniqueName:** The unique name of the **dimension** for the level.

**HierarchyUniqueName:** The unique name of the **hierarchy** for the level.

**IsAllLevel:** This attribute MUST be **true** if this Level is the level that unites all the members of the dimension or hierarchy into one element at the top of the dimension or hierarchy; otherwise, **false**.

**LevelNumber:** The numeric representation of the level depth in the dimension or hierarchy that the level represents. The value MUST NOT be less than 0. Zero means this level is the root level in the dimension or hierarchy. If set to 1, this member is at the first level of the dimension or hierarchy, 2 indicates that the member is at the second level of the dimension or hierarchy, and so on.

### 2.2.4.132 MDXParameterDefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **MDXParameterDefinition** is a complex type that specifies a custom **MDX** used to retrieve data.

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

**Expression:** A string representing an MDX.

### 2.2.4.133 Measure

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Measure** complex type specifies a **measure**. It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```
<xs:complexType name="Measure" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:attribute name="AggregatorValue" type="xs:int" use="required"/>
      <xs:attribute name="MeasureGroup" type="xs:string"/>
      <xs:attribute name="DisplayFolder" type="xs:string"/>
      <xs:attribute name="HierarchyName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**AggregatorValue:** The numeric value representing the aggregation type for this measure as defined in the MEASURE\_AGGREGATOR column of the MDSHEMA\_MEASURES rowset in [\[MS-SSAS\]](#) section [3.1.4.2.2.1.3.9.1](#).

**MeasureGroup:** The name of the **measure group** which contains this measure.

**DisplayFolder:** The name of the **display folder** for this measure.

**HierarchyName:** The unique name of the hierarchy of this measure.

### 2.2.4.134 Member

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Member** complex type represents an **OLAP member** in a **Dimension** complex type (section [2.2.4.90](#)).

```
<xs:complexType name="Member" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberOperation"
      type="tns:MemberOperation"/>
  </xs:sequence>
  <xs:attribute name="Caption" type="xs:string"/>
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="HierarchyPath" type="xs:string"/>
  <xs:attribute name="LevelName" type="xs:string"/>
  <xs:attribute name="DimensionName" type="xs:string"/>
  <xs:attribute name="LevelDepth" type="xs:int" use="required"/>
```

```

<xs:attribute name="ChildCount" type="xs:long" use="required"/>
<xs:attribute name="IsChildCountReal" type="xs:boolean" use="required"/>
<xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
<xs:attribute name="DimensionUniqueName" type="xs:string"/>
<xs:attribute name="MemberType" type="tns:MemberType" use="required"/>
</xs:complexType>

```

**MemberOperation:** The **MemberOperation** complex type (section [2.2.4.136](#)) for this member (2).

**Caption:** The display name for this member (2).

**UniqueName:** The unique name for this member (2).

**HierarchyPath:** The hierarchy tree path of this member (2).

**LevelName:** The unique name of the level for this member (2).

**DimensionName:** The unique name of the **dimension** that this member (2) belongs to.

**LevelDepth:** The numeric value of the level depth in the **Hierarchy** (section [2.2.4.124](#)) that this member belongs to. Zero indicates that this member is at the root level in the hierarchy. If set to 1, this member is at the first level of the hierarchy, 2 indicates that the member is at the second level of the hierarchy, and so on.

**ChildCount:** The number of **child** members (2) of this member (2).

**IsChildCountReal:** This attribute MUST be **FALSE** if the **ChildCount** property is an estimate, or **TRUE** if it is the actual number. This property is used to monitor whether the **ChildCount** property is up-to-date. This property is set by the client.

**IsAllLevel:** This attribute MUST be **TRUE** if the level that this member (2) belongs to is the level that unites all the members (2) of the hierarchy into one element at the top of the hierarchy; otherwise, this attribute is **FALSE**.

**DimensionUniqueName:** The unique name of the **Dimension** for this member (2).

**MemberType:** The **MemberType** simple type (section [2.2.5.39](#)) for this member (2).

## 2.2.4.135 MemberList

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **MemberList** complex type specifies the **members (2)** of an **OLAP hierarchy**. This type extends **MemberSet** complex type (section [2.2.4.144](#)), and can be used with any axis type.

```

<xs:complexType name="MemberList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberSet">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="memberList" type="tns:ArrayOfString"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**memberList:** An array of strings representing the members of an OLAP hierarchy. This MUST conform to the schema of complex type **ArrayOfString** complex type (section [2.2.4.54](#)). Each string in the list represents the **UniqueName** string property of an OLAP **Member** complex type (section [2.2.4.134](#)).

#### 2.2.4.136 MemberOperation

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Represents the basic [member](#) operations that can be performed on an **OLAP dimension** member.

MemberOperation abstract type is the base class for [MemberOperationAllDescendants](#), [MemberOperationChildren](#), [MemberOperationDescendants](#), [MemberOperationDrillUp](#), [MemberOperationHide](#) and [MemberOperationLeafDescendants](#).

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

#### 2.2.4.137 MemberOperationAllDescendants

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A **MemberOperation** complex type (section [2.2.4.136](#)) that represents all **descendants** of a referred [member](#) in the [dimension hierarchy](#). This type extends **MemberOperation**.

```
<xs:complexType name="MemberOperationAllDescendants"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.138 MemberOperationChildren

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A [MemberOperation](#) that represents all **child** members of a referred [member](#) in a [dimension hierarchy](#). This type extends MemberOperation.

```
<xs:complexType name="MemberOperationChildren" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.139 MemberOperationDescendants

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A [MemberOperation](#) that represents all **descendants** of a referred [member](#) at a specified level in the [hierarchy](#). This type extends MemberOperation.

```
<xs:complexType name="MemberOperationDescendants"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation">
      <xs:attribute name="LevelUniqueName" type="xs:string"/>
      <xs:attribute name="LevelDisplayName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**LevelUniqueName:** The unique name of a [level](#) in the [dimension](#) hierarchy.

**LevelDisplayName:** The display name of a level (see section 2.2.4.131) in a dimension (see section 2.2.4.90) hierarchy (see section 2.2.4.124).

#### 2.2.4.140 MemberOperationDrillUp

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A [MemberOperation](#) that represents the parent of a referred [member](#). This type extends MemberOperation.

```
<xs:complexType name="MemberOperationDrillUp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.141 MemberOperationHide

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A [MemberOperation](#) that hides a referred [member](#). This type extends MemberOperation.

```
<xs:complexType name="MemberOperationHide" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.142 MemberOperationLeafDescendants

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

A [MemberOperation](#) that represents all descendants of a referred [member](#) that are also leaf members in the [dimension hierarchy](#). This type extends MemberOperation.

```
<xs:complexType name="MemberOperationLeafDescendants"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.143 MemberParameterDefinition

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **MemberParameterDefinition** is a complex type that represents a group of **members (2)** used to retrieve data.

```
<xs:complexType name="MemberParameterDefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Dimension" type="tns:Dimension"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Members" type="tns:ArrayOfMember"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultMembers" type="tns:ArrayOfMember"/>
  </xs:sequence>
```

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

**Dimension:** A **Dimension** (see section [2.2.4.90](#)) representing the **dimension** for the group of associated (or related) members (2).

**Members:** The group of members (2) used to identify the data to be retrieved.

**DefaultMembers:** An **ArrayOfMember** (see section [2.2.4.45](#)) object representing the list (1) of default members (2) for a specified dimension.

#### 2.2.4.144 MemberSet

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the properties of an **OLAP member hierarchy**.

```
<xs:complexType name="MemberSet" abstract="true" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="FilterEmpty" type="xs:boolean" use="required"/>
  <xs:attribute name="HierarchyType" type="tns:HierarchyType" use="required"/>
  <xs:attribute name="Hierarchize" type="xs:boolean" use="required"/>
  <xs:attribute name="Distinct" type="xs:boolean" use="required"/>
  <xs:attribute name="HierarchyName" type="xs:string"/>
</xs:complexType>
```

**FilterEmpty:** This attribute MUST be present and MUST be **true** if the FILTER function MUST be used in the **MDX** query; otherwise, **false**.

**HierarchyType:** This attribute MUST be present. It specifies the type of the hierarchy that the members belong to. It MUST conform to the schema of **HierarchyType** (section [2.2.5.28](#)) simple type.

**Hierarchize:** This attribute MUST be present and MUST be **true** if the HIERARCHIZE function MUST be used in the MDX query; otherwise, **false**.

**Distinct:** This attribute MUST be present and MUST be **true** if the DISTINCT function MUST be used in the MDX query; otherwise, **false**.

**HierarchyName:** This attribute MUST NOT be **null**. It specifies the unique name of the hierarchy.

#### 2.2.4.145 MemberSetFormula

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies a collection of operations on the **members (2)** of an **OLAP hierarchy**. This type extends [MemberSet](#) and can be used with any axis type.

```
<xs:complexType name="MemberSetFormula" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberSet">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Operations"
type="tns:ArrayOfSetOperation"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Operations:** This element MUST NOT be **null**. It contains a collection of elements of complex type **SetOperation** (section [2.2.4.165](#)) that specify the operations on the members of the hierarchy.

### 2.2.4.146 MemberTransform

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Represents a **transform**, such as **drilldown**, applied to a [member](#), [hierarchy](#) group or [KPI](#).

```
<xs:complexType name="MemberTransform" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="GroupId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellPath" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:MemberTransformType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Operation"
type="tns:MemberTransformOperation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**GroupId:** The string representing a hierarchy group identifier.

**CellPath:** The location of the member inside the hierarchy group.

**Type:** The [MemberTransformType](#) of the **MemberTransform**.

**Operation:** The [MemberTransformOperation](#) of the **MemberTransform**.

**CustomData:** Specifies additional data related to the **MemberTransform**. This element MUST be present. This element MUST NOT be empty. The content of **CustomData** is dependent on the Operation of the **MemberTransform** as designated in the following table.

| Operation                     | Content   |
|-------------------------------|---|
| Replace                       | CustomData MUST be an instance of <a href="#">ArrayOfMember</a> . |
| DrillUp, DrillDown, or Expand | CustomData MUST be an instance of <a href="#">DataSource</a> .    |

### 2.2.4.147 NamedSet

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

An **OLAP named set**.

```
<xs:complexType name="NamedSet" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Dimensions" type="tns:ArrayOfString"/>
  </xs:sequence>
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="Expression" type="xs:string"/>
  <xs:attribute name="DisplayFolder" type="xs:string"/>
</xs:complexType>
```

**Dimensions:** The list (1) of dimensions (section [2.2.4.90](#)) used in the named set, using the Dimension.UniqueName property. It MUST conform to the schema of the **ArrayOfString** (section [2.2.4.54](#)) complex type.

**Name:** The display name for the named set.

**Expression:** The **MDX** for this named set.

**DisplayFolder:** Where the named set appears in a hierarchical view of named sets.

#### 2.2.4.148 NamedSetParameterDefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **NamedSetParameterDefinition** is a complex type representing a set of **members (2)** used to retrieve data.

```
<xs:complexType name="NamedSetParameterDefinition"
  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="Expression" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**Name:** A display name for the **named set**.

**Expression:** The **MDX** representing a set of members (2) used to retrieve data.

#### 2.2.4.149 NameInfo

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **NameInfo** complex type specifies the names and the description of a **cube, dimension, hierarchy, level, or measure**. It is the base type for the complex types **Cube** (section [2.2.4.78](#)), **Dimension** (section [2.2.4.90](#)), **Hierarchy** (section [2.2.4.124](#)), **Level** (section [2.2.4.131](#)), and **Measure** (section [2.2.4.133](#)).

```
<xs:complexType name="NameInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="DisplayName" type="xs:string"/>
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
</xs:complexType>
```

**DisplayName:** The display name of the cube, dimension, hierarchy, level, or measure.

**UniqueName:** The unique name of the cube, dimension, hierarchy, level, or measure.

**Description:** The description of the cube, dimension, hierarchy, level, or measure.

#### 2.2.4.150 NumericFormat

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **NumericFormat** is a complex type that represents the numeric format setting for an **Analysis Services measure** numeric value within an analytic grid report.

```
<xs:complexType name="NumericFormat" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FormatType" type="tns:FormatType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CurrencySymbol" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

```

    <xs:element minOccurs="1" maxOccurs="1" name="DecimalPlaces" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NegativeSymbol"
type="tns:FormatNegativeSymbol"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ShowZeroAs" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UseThousandsSeparator" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextLeft" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextRight" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**MemberName:** The Analysis Services measure name to which this numeric formatting is being applied.

**FormatType:** The formatting pattern used for number formatting, as specified by **FormatType** (see section [2.2.5.23](#)).

**CurrencySymbol:** The currency symbol for number formatting.

**DecimalPlaces:** The number of trailing decimal places used for number formatting. The value MUST NOT be less than 0 and MUST NOT be greater than 30.

**NegativeSymbol:** The representation of negative values used for number formatting.

**ShowZeroAs:** The string used, if its length is greater than 0 characters, to express the value of 0; otherwise formatted as a number.

**UseThousandsSeparator:** A value of **true** indicates that a thousands separator is enabled for number formatting; a value of **false** indicates it is disabled.

**AdditionalTextLeft:** The text added to the left of the formatted number.

**AdditionalTextRight:** The text added to the right of the formatted number.

#### 2.2.4.151 NumericFormatsHashtable

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

An array of **NumericFormat** objects.

```

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

```

**NumericFormat:** This element MUST NOT be null and MUST conform to the schema of the **NumericFormat** (see section 2.2.4.150) complex type.

#### 2.2.4.152 OLAPQueryData

**Namespace:** <http://performancepoint.microsoft.com/OLAPQueryData>

Represents an analytic query.

```

<xs:complexType name="OLAPQueryData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:ArrayOfParameter"/>

```

```

    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MDX" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**Parameters:** An **ArrayOfParameters** collection (see section [2.2.4.54](#)) containing all the user-defined parameters for the current query as well as their default values. It MUST NOT be null. If there are no user-defined parameters, it MUST be empty.

**DataSourceLocation:** A **RepositoryLocation** object (see section [2.2.4.163](#)) that specifies the location on the **server (2)** of the data source object associated with this query. It MUST NOT be null.

**MDX:** The **MDX** query used to generate data for the analytic report. It MUST NOT be null or empty. Any parameters from the **Parameters** collection used in this query MUST be denoted using left and right angle brackets. For example, a parameter named *ParameterName* MUST be included as `<<ParameterName>>`.

### 2.2.4.153 OLAPReportView

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **OLAPReportView** complex type contains all the state information for an analytic report.

```

<xs:complexType name="OLAPReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryData" type="qdata:OLAPQueryData"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ReportViewData" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentReportViewLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowInformationBar" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryState" type="query:QueryState"/>
  </xs:sequence>
  <xs:attribute name="MeasureGroupName" type="xs:string"/>
  <xs:attribute name="Caption" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
  <xs:attribute name="FormatDimensionUniqueName" type="xs:string"/>
</xs:complexType>

```

**QueryData:** An **OLAPQueryData** complex type object (section [2.2.4.152](#)) that specifies data source information and user-defined parameters. It MUST NOT be null. Either this object or the **QueryState** complex type object (section [2.2.4.159](#)) MUST be populated to represent the query for the report.

**ReportViewData:** Specifies view data for the current report. It MUST be XML that can **deserialize** into an object that inherits from the **AnalyticBaseReportViewData** complex type (section [2.2.4.14](#)). It MUST NOT be null or empty. See also the complex types **AnalyticChartReportView** (section [2.2.4.16](#)) and **AnalyticGridReportView** (section [2.2.4.17](#)), which both inherit from **AnalyticBaseReportViewData**.

**ParentReportViewLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the parent report on the **server (2)**. It MUST NOT be null. It SHOULD be empty to indicate that there is no parent report. It MUST contain the location of a report on the server (2) if the method **SaveTemporaryAnalyticReport** is being called (section [3.1.4.65](#)).

**ShowInformationBar:** Specifies whether to display an information bar along the top of the **report view**.

**QueryState:** A **QueryState** object that specifies the current data query. It MUST NOT be null. Either this object or the **QueryData** object MUST be populated to represent the query for the report. If this

object is used, the **IsEnabled** property MUST be set to **TRUE**. If both **QueryData** and **QueryState** are populated and **QueryState.IsEnabled** is **TRUE**, the **QueryState** object will be used to run the query. If **QueryState.IsEnabled** is **FALSE**, the **QueryData** object will be used to run the query.

**MeasureGroupName:** Specifies the measure group that was selected when the report was last modified.

**Caption:** Specifies the text that is displayed in the caption for the report.

**Description:** This attribute is deprecated from the protocol and MUST NOT be used.

**FormatDimensionUniqueName:** Specifies a text name that uniquely identifies the **dimension** to use to obtain data formatting information for this report.

#### 2.2.4.154 Parameter

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies a logical element of an analytic query whose value can be changed independently of the analytic query.

```
<xs:complexType name="Parameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultValue" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Name" type="xs:string"/>
</xs:complexType>
```

**DefaultValue:** The string value that the parameter will use by default.

**Name:** A string that uniquely identifies the parameter within its parent, `ArrayOfParameter` (see section [2.2.4.49](#)). It MUST NOT contain a left-angle bracket (<) or a right-angle bracket (>).

#### 2.2.4.155 ParameterDefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This class represents the non-visual portion of the metadata to describe a parameter. This class carries the state necessary to generate a parameter list representing possible connections that can be originated from a first-class element.

```
<xs:complexType name="ParameterDefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ParameterUniqueName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayValues">
      <xs:complexType>
        <xs:sequence>
          <xs:any minOccurs="0" maxOccurs="unbounded"
            namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
          <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
            processContents="lax"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element minOccurs="0" maxOccurs="1" name="CustomDefinition" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParameterProviderId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="EmitterType"
      type="tns:BeginPointEmitterType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="KeyColumn" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentKeyColumn" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

```

<xs:element minOccurs="0" maxOccurs="1" name="DisplayColumn" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="IsDefaultColumn" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="DefaultPostFormula" type="xs:string"/>
</xs:sequence>
</xs:complexType>

```

**ParameterUniqueName:** The unique name of the parameter.

**DisplayValues:** The **DataTable** (as described in [\[DataTable\]](#)) containing **DataColumn** definitions that define the parameter outputs of a data source. A **DataColumn** that is a parameter output MUST contain a **ShowColumn** extended property and its value MUST be **true** using the format specified in [\[MS-DSDIFFGRAM\]](#), section 2.3.2. A column definition that is a parameter output not to be used for configuring conditional visibility MUST contain a **NotShowColumnForCondVisibility** extended property and its value MUST be **true** using the format specified in [\[MS-DSDIFFGRAM\]](#), section 2.3.2.

**CustomDefinition:** A serialized object or string value. If the value of **ParameterProviderId** is in the **ParameterProviderId** table, the value of **CustomDefinition** MUST be the corresponding chart value or serialized object. If the value for **ParameterProviderId** is not in the chart, **CustomDefinition** can be any string.

**ParameterProviderId:** The identifier of the data provider for the value or serialized object in **CustomDefinition**.

| ParameterProviderId                    | CustomDefinition  |
|--|---|
| MDXParameterDataProvider               | A <a href="#">MdxParameterDefinition</a> object.                |
| MemberParameterDataProvider            | A <a href="#">MemberParameterDefinition</a> object.             |
| NamedSetParameterDataProvider          | A <a href="#">NamedSetParameterDefinition</a> object.           |
| ParameterScorecardCellProvider         | "BeginPoint_ScorecardCell"                                      |
| ParameterScorecardColumnMemberProvider | "BeginPoint_ScorecardColumnMember"                              |
| ParameterScorecardKpiProvider          | "BeginPoint_Kpi"  |
| ParameterScorecardRowMemberProvider    | "BeginPoint_ScorecardRowMember"                                 |
| TimeIntelligencePostFormulaProvider    | A <a href="#">TimeIntelligencePostFormulaDefinition</a> object. |
| TimeIntelligenceProvider               | A <a href="#">TimeIntelligenceDefinition</a> object.            |

**DisplayName:** The display name of the parameter.

**EmitterType:** A [BeginPointEmitterType](#) object that specifies the type of information the parameter emits.

**KeyColumn:** The column name containing the key identifier for the parameter values.

**ParentKeyColumn:** The column name containing the parent key column.

**DisplayColumn:** The column name containing the display name of the parameter values.

**IsDefaultColumn:** The column name containing the Boolean value that indicates the row is a default selection of the parameter values.

**DefaultPostFormula:** The default post **formula** for this parameter as defined in [\[MSFT-ConnectionFormula\]](#).

## 2.2.4.156 ParameterMapping

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Provides the mapping information between a **ParameterDefinition** (section [2.2.4.155](#)) and a **DashboardItem** (section [2.2.4.83](#)).

```
<xs:complexType name="ParameterMapping" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ConditionalData">
      <xs:complexType>
        <xs:sequence>
          <xs:any minOccurs="0" maxOccurs="unbounded"
            namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
          <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
            processContents="lax"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="EndPointUniqueName" type="xs:string"/>
  <xs:attribute name="Id" xmlns:sl="http://microsoft.com/wsd/types/" type="sl:guid"
    use="required"/>
  <xs:attribute name="SourceColumnName" type="xs:string"/>
  <xs:attribute name="DashboardItemId" xmlns:sl="http://microsoft.com/wsd/types/"
    type="sl:guid" use="required"/>
  <xs:attribute name="ParameterUniqueName" type="xs:string"/>
  <xs:attribute name="PostFormula" type="xs:string"/>
  <xs:attribute name="IsConditionalDataEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDefaultVisibility" type="xs:boolean" use="required"/>
</xs:complexType>
```

**ConditionalData:** The **DataTable** (as described in [\[DataTable\]](#)) containing visibility values that indicate a connected **Web Part** is visible. The **DataTable** MUST contain a **DataColumn** with name equal to the **KeyColumn** defined in **ParameterDefinition** (section 2.2.4.155) that contains key values. The **DataTable** MUST contain a **DataColumn** with name equal to the **DisplayColumn** defined in **ParameterDefinition** (section 2.2.4.155) that contains display values; otherwise, the first column in the **DataTable** will be used for display values.

**EndPointUniqueName:** Specifies the unique name of the endpoint for the **DashboardItem** (section 2.2.4.83).

**Id:** A **GUID** that marks the mapping relationship.

**SourceColumnName:** A column name that appears in the return of the query that pulls selected values for the parameter associated with the element identified by **DashboardItemId**.

**DashboardItemId:** Identifies the **DashboardItem** that is the source of the parameter.

**ParameterUniqueName:** This attribute MUST equal the **ParameterUniqueName** defined in **ParameterDefinition** (section 2.2.4.155).

**PostFormula:** A **PostFormula** is a transformation expression that is applied to the selected values passed from a filter or scorecard to consuming report or scorecard as defined in [\[MSFT-ConnectionFormula\]](#).

**IsConditionalDataEnabled:** This attribute MUST be set to **true** if **ConditionalData** is not null; otherwise, **false**.

**IsDefaultVisibility:** This attribute MUST be set to **true** if the Web Part is shown as a default, when the provider does not enable any consumers via configured visible values; otherwise, **false**.

### 2.2.4.157 PasReportViewData

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Contains all the state information for a ProClarity Analytics Server report.

```
<xs:complexType name="PasReportViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ServerUrl" type="xs:string"/>
  <xs:attribute xmlns:s1="http://microsoft.com/wsd/types/" name="PageId" type="s1:guid"
  use="required"/>
  <xs:attribute name="PagePath" type="xs:string"/>
  <xs:attribute name="ConfigOptions" type="xs:string"/>
</xs:complexType>
```

**ServerUrl:** The **URL** identifies the ProClarity Analytics Server of the report view.

**PageId:** The ProClarity Analytics Server **report view GUID** identifier.

**PagePath:** The ProClarity Analytics Server report URL path that is relative to the **server (2)** URL. The absolute URL is the combination of the **ServerUrl** and **PagePath** parts.

**ConfigOptions:** A list (1) of ProClarity Analytics Server report view configuration options that is included as the "uiConfig" URL parameter query string.

### 2.2.4.158 PropertyBag

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **PropertyBag** complex type MUST contain a pairing of keys and values.

```
<xs:complexType name="PropertyBag" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfChoice1"/>
  </xs:sequence>
</xs:complexType>
```

**Keys:** Key names of type string.

**Values:** A property chosen from a list (1) of various data types; see [ArrayOfChoice1](#).

### 2.2.4.159 QueryState

**Namespace:** http://schemas.microsoft.com/performancepoint/2007/03/query

An alternate representation of a **MDX** query that includes the member selections of each axis.

```
<xs:complexType name="QueryState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Axes" type="tns:ArrayOfAxis"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsEnabled" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UnknownFilterParameter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowDatasourceFormatting"
  type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
  type="tns:RepositoryLocation"/>
  </xs:sequence>
</xs:complexType>
```

**Axes:** An **ArrayOfAxis** (see section [2.2.4.25](#)) collection that contains the member selections for each axis. It MUST NOT be null.

**IsEnabled:** Specifies whether the **QueryState** object represents the query for the report. A value of **true** indicates that the **QueryState** object will be used. A value of **false** indicates that the **QueryState** object will not be used.

**UnknownFilterParameter:** Specifies whether or not an aggregation of multiple members are selected on one of the filter axes. A value of **true** indicates that multiple members are selected on a filter axis. A value of **false** indicates that they are not.

**ShowDatasourceFormatting:** Specifies whether or not formatting information from the data source is used to determine how to display data. A value of **true** indicates that formatting information from the data source is to be used. A value of **false** indicates that it is not.

**DataSourceLocation:** A **RepositoryLocation** object (see section [2.2.4.163](#)) that specifies the location on the **server (2)** of the data source object associated with this query state. It MUST NOT be null.

## 2.2.4.160 ReportView

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ReportView** complex type controls the visual display of data in a **dashboard** and can be coordinated with other **report views** using filters. Report views include analytic grids and charts, **PivotTable** and **PivotChart** reports, Excel spreadsheets [\[MS-XLSX\]](#), SQL Server Reporting Services reports, **strategy maps**, trend charts, web pages, and custom reports.

```
<xs:complexType name="ReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Endpoints" type="tns:ArrayOfEndPoint"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
      </xs:sequence>
      <xs:attribute name="TypeName" type="xs:string"/>
      <xs:attribute name="RenderClientSide" type="xs:boolean" use="required"/>
      <xs:attribute name="ConfiguredViewId" xmlns:s1="http://microsoft.com/wsdl/types/"
type="s1:guid" use="required"/>
      <xs:attribute name="SubTypeId" type="xs:string"/>
      <xs:attribute name="RendererClassName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**ScorecardLocation:** This property is only used for strategy map **ReportViews**. It stores the **RepositoryLocation** complex type (section [2.2.4.161](#)) of the **Scorecard** associated with the strategy map.

**CustomData:** Specifies custom data for the report view. This element MUST be present. The content of **CustomData** is determined by the **TypeName** of the report view as designated in the following table.

| TypeName      | Content   |
|---------------|---|
| AnalyticChart | <b>CustomData</b> MUST contain an <b>OlapReportView</b> complex type object (section <a href="#">2.2.4.153</a> ) serialized as an <b>XML document</b> and XML encoded. The value of the |

| TypeName                              | Content   |
|---------------------------------------|---|
|                                       | <b>OlapReportView ReportViewData</b> property MUST be an <b>AnalyticChartReportView</b> complex type (section <a href="#">2.2.4.16</a> ) serialized as an XML document.   |
| DecompositionTree                     | <b>CustomData</b> MUST be ignored.  |
| ExcelService                          | <b>CustomData</b> MUST contain an <b>ExcelServicesData</b> complex type object (section <a href="#">2.2.4.97</a> ) serialized as an XML document and XML encoded.   |
| Implementation-specific custom string | <b>CustomData</b> MAY be used depending on the implementation of the third-party report view. The specific content required is defined by the implementer of the custom report view.  |
| KpiDetails                            | <b>CustomData</b> MUST be ignored.  |
| OLAPDrillThrough                      | <b>CustomData</b> MUST be ignored.  |
| OLAPGrid                              | <b>CustomData</b> MUST contain an <b>OlapReportView</b> object serialized as an XML document and XML encoded. The value of the <b>OlapReportView ReportViewData</b> property MUST be an <b>AnalyticGridReportView</b> complex type (section <a href="#">2.2.4.17</a> ) serialized as an XML document. |
| PasPage                               | <b>CustomData</b> MUST contain a <b>PasReportViewData</b> complex type (section <a href="#">2.2.4.157</a> ) serialized as an XML document and XML encoded.  |
| PivotChart                            | <b>CustomData</b> MUST be ignored.  |
| PivotTable                            | <b>CustomData</b> MUST be ignored.  |
| Spreadsheet                           | <b>CustomData</b> MUST be ignored.  |
| StrategyMap                           | <b>CustomData</b> MUST contain a <b>StrategyMapViewData</b> complex type (section <a href="#">2.2.4.168</a> ) serialized as an XML document and XML encoded.  |
| SqlReport                             | <b>CustomData</b> MUST contain a <b>SqlReportViewData</b> complex type (section <a href="#">2.2.4.166</a> ) serialized as an XML document and XML encoded.  |
| TrendAnalysisChart                    | <b>CustomData</b> MUST be ignored.  |
| Url                                   | <b>CustomData</b> MUST NOT be null and MUST be a valid <a href="#">[RFC1738]</a> <b>URL</b> or a string constant: "about:blank".  |

**EndPoints:** Specifies the available connection destinations to filter and control the display of this report view. This element MUST be present. If the **SubTypeId** is not custom and there are no connection destinations, two **Endpoint** complex type (section [2.2.4.95](#)) items will be present for row and column with a category of None. This element MUST conform to the schema of the **ArrayOfEndPoint** complex type (section [2.2.4.33](#)).

**BeginPoints:** Specifies the available connection sources to filter and set conditions for the display of other reports and scorecards. This element MUST be present. This element MUST conform to the schema of the **ArrayOfParameterDefinition** complex type (section [2.2.4.50](#)).

**TypeName:** Specifies the name of the report view type. This attribute MUST be present. The content of **TypeName** is determined by the type of the report view as designated in the following table. If the report view is a custom report view, **TypeName** MUST NOT be empty. It MUST NOT be longer than 60 characters. It MUST NOT contain the characters ', ', or \. It MUST NOT be the same as one of the predefined report view types already listed in the following table.

| Type                          | Content                                       |
|-------------------------------|---|
| URL                           | <b>TypeName</b> MUST be "Url".                |
| SQL Report                    | <b>TypeName</b> MUST be "SqlReport".          |
| Spreadsheet                   | <b>TypeName</b> MUST be "Spreadsheet".        |
| PivotTable                    | <b>TypeName</b> MUST be "PivotTable".         |
| PivotChart                    | <b>TypeName</b> MUST be "PivotChart".         |
| Strategy Map                  | <b>TypeName</b> MUST be "StrategyMap".        |
| Trend Analysis Chart          | <b>TypeName</b> MUST be "TrendAnalysisChart". |
| Analytic Grid                 | <b>TypeName</b> MUST be "OLAPGrid".           |
| Analytic Chart                | <b>TypeName</b> MUST be "AnalyticChart".      |
| Decomposition Tree Report     | <b>TypeName</b> MUST be "DecompositionTree".  |
| Analytic Drill Through report | <b>TypeName</b> MUST be "OLAPDrillThrough".   |
| Excel Services Workbook       | <b>TypeName</b> MUST be "ExcelServices".      |
| PAS Page                      | <b>TypeName</b> MUST be "PasPage".            |
| KPI Detail Page               | <b>TypeName</b> MUST be "KpiDetails".         |

**RenderClientSide:** If **TRUE**, the report view is rendered on the client. If **FALSE**, the report view is rendered on the **server (2)**.

**ConfiguredViewId:** Specifies the identity of the **ConfiguredView** complex type (section [2.2.4.77](#)) for this **ReportView**. This element MUST be present.

**SubTypeId:** Specifies the identifier for the type of the report view. This attribute MUST be present. The content of **SubTypeId** is determined by the type of the report view, as designated in the following table. If the report view is a custom report view, **SubTypeId** MUST NOT be empty. It MUST NOT be longer than 60 characters. It MUST NOT contain the characters ', ", or \. It MUST NOT be the same as one of the predefined report view type's **SubTypeId** already listed in the following table.

| Type                 | Content  |
|----------------------|--|
| URL                  | <b>SubTypeId</b> MUST be "Url".                |
| SQL Report           | <b>SubTypeId</b> MUST be "SqlReport".          |
| Spreadsheet          | <b>SubTypeId</b> MUST be "Spreadsheet".        |
| PivotTable           | <b>SubTypeId</b> MUST be "PivotTable".         |
| PivotChart           | <b>SubTypeId</b> MUST be "PivotChart".         |
| Strategy Map         | <b>SubTypeId</b> MUST be "StrategyMap".        |
| Trend Analysis Chart | <b>SubTypeId</b> MUST be "TrendAnalysisChart". |
| Analytic Grid        | <b>SubTypeId</b> MUST be "OLAPGrid".           |
| Analytic Chart       | <b>SubTypeId</b> MUST be "AnalyticChart".      |

| Type                          | Content                                       |
|-------------------------------|---|
| Decomposition Tree Report     | <b>SubTypeId</b> MUST be "DecompositionTree". |
| Analytic Drill Through report | <b>SubTypeId</b> MUST be "OLAPDrillThrough".  |
| Excel Services Workbook       | <b>SubTypeId</b> MUST be "ExcelServices".     |
| PAS Page                      | <b>SubTypeId</b> MUST be "PasPage".           |
| KPI Detail Page               | <b>SubTypeId</b> MUST be "KpiDetails".        |

**RendererClassName:** Specifies the fully qualified name for the assembly class that provides the rendering for the report view. This attribute MUST be present. If **SubTypeId** is not one of the predefined report view types listed in the table for **SubTypeId**, **RendererClassName** MUST be the assembly-qualified name of the custom type; otherwise, the value MUST be empty.

### 2.2.4.161 RepositoryLocation

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **RepositoryLocation** complex type specifies the location of a **FirstClassElement** (section [2.2.4.99](#)) stored on the **server (2)**.

```
<xs:complexType name="RepositoryLocation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ItemUrl" type="xs:string" use="required"/>
  <xs:attribute default="None" name="ItemType" type="tns:FirstClassObjectType"
  use="optional"/>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="ItemGuid"
  use="optional">
    <xs:simpleType>
      <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:attribute>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteCollectionGuid"
  use="optional">
    <xs:simpleType>
      <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:attribute>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteGuid"
  use="optional">
    <xs:simpleType>
      <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:attribute>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpListGuid"
  use="optional">
    <xs:simpleType>
      <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:attribute>
</xs:complexType>
```

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

**ItemUrl:** A **server-relative URL** to a **FirstClassElement** (section 2.2.4.99) stored by the server (2).

- If the **FirstClassElement** was created by **SaveTemporaryAnalyticReport** (section 3.1.4.65), this value **MUST** be empty.
- When creating a new **FirstClassElement**, this value **MUST** be empty.
- In all other cases, this value **MUST** contain a valid **URL**.

**ItemType:** The type of **FirstClassElement** as specified by **FirstClassObjectType** (section 2.2.5.20).

**ItemGuid:** The **GUID** assigned to the **FirstClassElement** by the server (2).

**SpSiteCollectionGuid:** The GUID of the **site collection** to which the **FirstClassElement** belongs. This value is assigned by the server (2).

**SpSiteGuid:** The GUID of the **site (2)** to which the **FirstClassElement** belongs. This value is assigned by the server (2).

**SpListGuid:** The GUID of the **list (2)** to which the **FirstClassElement** belongs. This value is assigned by the server (2).

## 2.2.4.162 Scorecard

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This complex type represents a **scorecard**.

```
<xs:complexType name="Scorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ConfiguredViews"
          type="tns:ArrayOfConfiguredView"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Endpoints" type="tns:ArrayOfEndPoint"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
          type="tns:ArrayOfParameterDefinition"/>
      </xs:sequence>
      <xs:attribute name="RendererClassName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**ConfiguredViews:** Settings for display, behavior, and other purposes, as specified by **ArrayOfConfiguredView** (section 2.2.4.27). **MUST** be present and **MUST** contain at least one **ConfiguredView** (section 2.2.4.77).

**Endpoints:** Specifies the available connection destinations to filter and control the display of this scorecard. This element **MUST** be present. This element **MUST** conform to the schema of the **ArrayOfEndPoint** (section 2.2.4.33) complex type.

**BeginPoints:** Specifies the available connection sources to filter and set conditions for the display of other reports and scorecards. This element **MUST** be present and **MUST** conform to the schema of the **ArrayOfParameterDefinition** (section 2.2.4.50) complex type.

**RendererClassName:** Specifies the fully qualified name for the assembly class that provides the rendering for the scorecard. This attribute **MUST** be present. If the scorecard is a custom type, **RendererClassName** **MUST** be the assembly-qualified name of the custom type; otherwise, the value **MUST** be empty.

#### 2.2.4.163 SecondClassElement

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This abstract class is the base class for [ConfiguredView](#) (section [2.2.4.77](#)), [DashboardElement](#) (section [2.2.4.80](#)), and [KpiMeasure](#) (section [2.2.4.129](#)).

```
<xs:complexType name="SecondClassElement" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Element">
      <xs:attribute name="Guid" xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"
use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Guid:** The element's unique identifier.

#### 2.2.4.164 SerializableDictionary

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies an ordered collection of elements of complex type **MemberSetFormula** (section [2.2.4.145](#)), **MemberList** (section [2.2.4.135](#)), or **Member** (section [2.2.4.134](#)), with their associated string keys.

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

**Item:** Represents a key-value pair (section [2.2.4.127](#)).

#### 2.2.4.165 SetOperation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies a set operation.

It is the abstract base type for [AddAllMembersSetOp](#), [AddCalcMemberSetOp](#), [AddChildrenSetOp](#), [AddDefaultMemberSetOp](#), [AddDescendantsLeavesSetOp](#), [AddDescendantsSetOp](#), [AddDescendantsSubtreeSetOp](#), [AddFilterSetOp](#), [AddFilterTopBottomSetOp](#), [AddMemberSetOp](#), [AddNamedSetSetOp](#), [AddParentSiblingsSetOp](#), [EliminateDescendantsSetOp](#) and [EliminateMemberSetOp](#).

```
<xs:complexType name="SetOperation" abstract="true"
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="FilterValue1" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue2" type="xs:double"/>
  </xs:sequence>
</xs:complexType>
```

```

<xs:element minOccurs="0" maxOccurs="1" name="TupleSet" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="TupleCaption" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="FilterHierarchy" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="FilterMeasure" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="DefaultMeasure" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="Level" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="LevelDepth" type="xs:string"/>
<xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="xs:int"/>
<xs:element minOccurs="0" maxOccurs="1" name="MemberDefinition" type="xs:string"/>
</xs:sequence>
</xs:complexType>

```

**Name:** Specifies the name of a set operation.

**FilterValue1:** This contains the first filter value for those filter operations that need two filter values (for example, filtering a set such that the result is between a given minimum and maximum values). This is also used for filter operations that only require one filter value.

**FilterValue2:** For filter operations that need two filter values, this contains the second filter value. This is ignored for filter operations that only need one filter value.

**TupleSet:** This is the string representation of the **tuple** set used in filter operation to specify what to filter. The tuple set definition **MUST** be a valid **MDX** expression.

**TupleCaption:** This contains the tuple caption that will be displayed on the information bar.

**FilterHierarchy:** This contains the hierarchy unique name in a valid MDX that is used on the filter operation.

**FilterMeasure:** This contains the measure display name in that is used on the filter operation.

**DefaultMeasure:** This attribute is deprecated from the protocol and **MUST NOT** be used.

**Level:** This is used in filter set operation. This contains the level display name where the filter is being applied.

**LevelDepth:** This is used in filter set operation. This contains the level number where the filter is being applied.

**FilterType:** Specifies the type of filter. This **MUST** be one of the following values

| Value | Meaning                   |
|-------|---------------------------|
| 0     | No filter specified       |
| 1     | Specifies top count.      |
| 2     | Specifies top percent.    |
| 3     | Specifies top sum.        |
| 4     | Specifies bottom count.   |
| 5     | Specifies bottom percent. |
| 6     | Specifies bottom sum.     |
| 7     | Specifies equal.          |
| 8     | Specifies not equals.     |
| 9     | Specifies greater than.   |

| Value | Meaning                           |
|-------|-----------------------------------|
| 10    | Specifies greater than or equals. |
| 11    | Specifies less than.              |
| 12    | Specifies less than or equals.    |
| 13    | Specifies between.                |
| 14    | Specifies not between.            |

**MemberDefinition:** This defines a calculated member in a valid MDX being added to a **MemberSet** (see section 2.2.4.144).

### 2.2.4.166 SqlReportViewData

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **SqlReportViewData** complex type contains all the state information for a SQL Reporting Services report.

```
<xs:complexType name="SqlReportViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ReportName" type="xs:string"/>
  <xs:attribute name="ServerAddress" type="xs:string"/>
  <xs:attribute name="ServerUrl" type="xs:string"/>
  <xs:attribute name="ReportPath" type="xs:string"/>
  <xs:attribute name="ReportUrl" type="xs:string"/>
  <xs:attribute name="ReportMode" type="tns:SqlReportViewDataServerMode" use="required"/>
  <xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowParameters" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowDocMap" type="xs:boolean" use="required"/>
  <xs:attribute name="DocMapId" type="xs:string"/>
  <xs:attribute name="Zoom" type="xs:string"/>
  <xs:attribute name="Section" type="xs:string"/>
  <xs:attribute name="Format" type="xs:string"/>
</xs:complexType>
```

**ReportName:** The SQL Reporting Services report name.

**ServerAddress:** The SQL Reporting Services **URL**. The URL is the path to the Report Server of the SQL Server Reporting Service.

**ServerUrl:** The SQL Report URL, when in "SharePoint Integrated" mode. The URL is the path to the Report Server of the SQL Server Reporting Service.

**ReportPath:** The server-relative SQL Report URL, when in "Report Center" mode. The report path is the actual path in the SQL Server Reporting Service reports list to the report desired.

**ReportUrl:** In "SharePoint Integrated" mode, it defines the path of the SQL Report RDL including the RDL extension.

**ReportMode:** Indicates whether the report is in "SharePoint Integrated" or "Report Center" mode.

**ShowToolbar:** When **TRUE**, the SQL Report toolbar is shown.

**ShowParameters:** When **TRUE**, the SQL Report parameter toolbar is shown.

**ShowDocMap:** When **TRUE**, the SQL Report document map toolbar is shown.

**DocMapId:** The SQL Report document map identifier.

**Zoom:** The SQL Report zoom property.

**Section:** The SQL Report section property.

**Format:** The SQL Report format property.

### 2.2.4.167 StatusFilter

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies an **indicator** to be filtered.

```
<xs:complexType name="StatusFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="IndicatorLocationGuid" xmlns:sl="http://microsoft.com/wsdl/types/"
    type="sl:guid" use="required"/>
  <xs:attribute name="BandIndex" type="xs:int" use="required"/>
</xs:complexType>
```

**IndicatorLocationGuid:** The unique identifier for the filtered **indicator**. [<17>](#)

**BandIndex:** The index of the **indicator band** for the filtered **indicator**. MUST be a valid index for the indicator used in the **IndicatorLocationGuid**.

### 2.2.4.168 StrategyMapViewData

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **StrategyMapViewData** complex type class specifies metadata information about a **strategy map**.

```
<xs:complexType name="StrategyMapViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" default="None" name="ToolbarOptions"
      type="tns:StrategyMapToolbarOptions"/>
    <xs:element minOccurs="0" maxOccurs="1" name="VDX" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Version" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentLocation"
      type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentType"
      type="tns:FirstClassObjectType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**ToolbarOptions:** Specifies the toolbar configuration, as defined in the **StrategyMapToolbarOptions** simple type (section [2.2.5.49](#)).

**VDX:** Specifies a base64-bit representation of the compressed VDX [\[MS-VGSFF\]](#) file that represents the strategy map.

**Version:** Specifies the version of the protocol client where the strategy map was created. The version MUST be a number displayed as "major number.minor number.build number.private part number". A product version MUST represent a 64-bit number that holds the version number according to the following format:

- The first 16 bits are the product major part number.

- The next 16 bits are the product minor part number.
- The third set of 16 bits are the product build part number.
- The last 16 bits are the product private part number.

**ParentLocation:** Specifies the **FirstClassElement** complex type (section [2.2.4.99](#)) that represents the parent location of the strategy map. This element MUST be present. It MUST conform to the schema of the **RepositoryLocation** complex type (section [2.2.4.161](#)), and the **ItemUrl** attribute MUST NOT be **null**.

**ParentType:** The **ItemType** attribute for the parent **FirstClassElement**, as specified in **FirstClassObjectType** (section [2.2.5.20](#)).

**Parameters:** This value MUST be an empty string.

### 2.2.4.169 StringCollection

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The StringCollection complex type specifies a collection of **dimension** properties.

```
<xs:complexType name="StringCollection" 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:** Specifies the name of the dimension property.

### 2.2.4.170 Target

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The target of a [KPI](#) used to **measure** against actual data.

```
<xs:complexType name="Target" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:KpiMeasure">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="StatedScore" type="tns:KpiMeasure"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RelatedActualId"
xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
      </xs:sequence>
      <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**IndicatorLocation:** The [RepositoryLocation](#) of the [Indicator](#).

**StatedScore:** The **KpiMeasure** complex type (section [2.2.4.129](#)) that the Target uses when the type of the **Banding** complex type (section [2.2.4.60](#)) is "StatedScore". This value MUST NOT be **null**, if the type of **Banding** is "StatedScore".

**Banding:** The **Banding** data that correspond to the target.

**RelatedActualId:** The **GUID** of the corresponding **Actuals** property of the **Kpi** complex type (section 2.2.4.128). This element **MUST** be present.

**IsRollupScore:** This attribute **MUST** be **true** if the score of this target is computed by rolling up the **child** scores, or **MUST** be **false** if the score is computed from the source data.

### 2.2.4.171 TimeIntelligenceDataSource

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

A **time intelligence** data source reference used in time intelligence parameter definitions.

```
<xs:complexType name="TimeIntelligenceDataSource"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
      type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**DataSourceLocation:** The [RepositoryLocation](#) of the data source.

**DisplayName:** The display name of the data source.

### 2.2.4.172 TimeIntelligenceDefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **TimeIntelligenceDefinition** complex type specifies **time intelligence** formulas and data sources. It is used in **CustomDefinition** of the **ParameterDefinition** complex type (section [2.2.4.155](#)).

```
<xs:complexType name="TimeIntelligenceDefinition"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Formulas"
      type="tns:ArrayOfTimeIntelligenceFormula"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource"
      type="tns:TimeIntelligenceDataSource"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSources"
      type="tns:ArrayOfTimeIntelligenceDataSource"/>
  </xs:sequence>
</xs:complexType>
```

**Formulas:** See complex type **ArrayOfTimeIntelligenceFormula** (section [2.2.4.57](#)).

**MasterDataSource:** The **TimeIntelligenceDataSource** (section [2.2.4.171](#)) that is queried to populate the parameter display values.

**DataSources:** The **ArrayOfTimeIntelligenceDataSource** complex type (section [2.2.4.56](#)) that are queried to populate the parameter message values.

### 2.2.4.173 TimeIntelligenceFormula

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies a **time intelligence** parameter formula.

```
<xs:complexType name="TimeIntelligenceFormula" 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="Formula" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**DisplayName:** The display name of the formula.

**Formula:** The time intelligence **formula**. MUST NOT be **null**.

#### 2.2.4.174 TimeIntelligenceLevelBinding

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the mapping of internal **cube dimensions** to their time aggregation level.

```
<xs:complexType name="TimeIntelligenceLevelBinding"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Level" type="tns:DateAggregationTypes"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**Level:** The [DateAggregationType](#) that indicates the level of the binding.

**UniqueName:** The unique name of the dimension in the cube that is mapped to the DateAggregationType indicated in Level. This element MUST be present.

#### 2.2.4.175 TimeIntelligenceMdxSettings

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies how a **dimension** in an **Analysis Services** data source maps to a **time intelligence** filter when running **Simple Time Period Specification (STPS)** formulas against the data source.

```
<xs:complexType name="TimeIntelligenceMdxSettings"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:TimeIntelligenceSettings">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ReferenceDimension"
type="tns:Dimension"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ReferenceLevel"
type="tns:DateAggregationTypes"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ReferenceMember" type="tns:Member"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ReferenceDateTime" type="xs:dateTime"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelBindings"
type="tns:ArrayOfTimeIntelligenceLevelBinding"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**ReferenceDimension:** Specifies the time dimension in the **cube** that is used when the STPS formula is run. See **Dimension** (section [2.2.4.90](#)). This element MUST be present.

**ReferenceLevel:** Specifies the lowest **hierarchy** level in the **ReferenceDimension** that will be available for STPS formulas run against the data source. See **DataAggregationTypes** (section [2.2.5.12](#)).

**ReferenceMember:** Specifies the date **Member** (see section 2.2.4.134) in the dimension specified in the **ReferenceDimension** element that corresponds to the date provided in the **ReferenceDateTime** element. This element **MUST** be present.

**ReferenceDateTime:** Specifies the actual date to which the value in the **ReferenceMember** element maps.

**LevelBindings:** Specifies the **ArrayOfTimeIntelligenceLevelBinding** (see section 2.2.4.58) that maps the internal cube member levels to their corresponding STPS formula. If there is no mapping for one or more of the member levels, the **member (2)** level **MUST NOT** have a binding present in this array. This element **MUST** be present.

### 2.2.4.176 TimeIntelligencePostFormulaDefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type specifies a **time intelligence** post **formula** filter definition.

```
<xs:complexType name="TimeIntelligencePostFormulaDefinition"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource" type="tns:DataSource"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSources" type="tns:ArrayOfDataSource"/>
  </xs:sequence>
</xs:complexType>
```

**MasterDataSource:** The **DataSource** (see section 2.2.4.85) that is queried to populate the parameter display values (see section 2.2.4.155).

**DataSources:** The data sources (see section [3.1.4.19.3.2](#)) that are queried to populate the parameter message values (See section 2.2.4.155).

### 2.2.4.177 TimeIntelligenceSettings

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies additional **time intelligence** settings for a data source.

```
<xs:complexType name="TimeIntelligenceSettings" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Enabled" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

**Enabled:** This value **MUST** be **true** if the time intelligence setting is enabled; otherwise, **false**.

### 2.2.4.178 Title

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This complex type represents a title for an analytic chart.

```

<xs:complexType name="Title" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string"/>
  </xs:sequence>
  <xs:attribute default="" name="Text" type="xs:string"/>
  <xs:attribute default="Center" name="Alignment" type="tns:AlignmentType"/>
</xs:complexType>

```

**Font:** The font, specified by **XmlFont** (see section [2.2.4.181](#)). This **MUST** be present.

**FontColor:** The font color, specified by a string. This **MUST** be present and **MUST** be one of the following formats:

- "NamedColor:<name>" where:
  - "<name>" is the name of a predefined color, specified by a case-insensitive string. Values **MUST** be the same as the names of the elements in the Color Table (see section [2.2.4.14](#)).
  - Example: "NamedColor:Black".
- "ARGBColor:<A>:<R>:<G>:<B>" where:
  - "<A>" is the alpha component, specified by a string. Values **MUST NOT** be less than 0 and **MUST NOT** be greater than 255.
  - "<R>" is the red component, specified by a string. Values **MUST NOT** be less than 0 and **MUST NOT** be greater than 255.
  - "<G>" is the green component, specified by a string. Values **MUST NOT** be less than 0 and **MUST NOT** be greater than 255.
  - "<B>" is the blue component, specified by a string. Values **MUST NOT** be less than 0 and **MUST NOT** be greater than 255.
  - Example: "ARGBColor:255:255:255:255".

**Text:** The title text, specified by a string.

**Alignment:** The alignment, specified by **AlignmentType** (see section [2.2.5.2](#)).

## 2.2.4.179 ToolbarOptions

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Contains the configuration settings of the toolbar of a **ConfiguredView** (section [2.2.4.77](#)).

```

<xs:complexType name="ToolbarOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ShowInlineText" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowStatusFilter" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolTips" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowCollapse" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowMode" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowExpand" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolbarItemsLabel" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowDefaultRollup" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowWorstChildRollup" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowIndicatorCount" type="xs:boolean" use="required"/>
</xs:complexType>

```

**ShowInlineText:** This attribute MUST be **true** if the inline text button MUST be shown; **false** if not.

**ShowToolBar:** Specifies whether the toolbar is shown or not.

1. If set to **true**, toolbar MUST be shown following the toolbar configuration settings.
2. If set to **false**, toolbar MUST NOT be shown, and toolbar configuration settings MUST be ignored.

**ShowStatusFilter:** This attribute MUST be **true** if the status filtering options (see StatusFilter, section [2.2.4.167](#)) MUST be shown; **false** if not. MUST be ignored if the **AllowStatusFilter** of the related **ConfiguredView** (section [2.2.4.77](#)) is set to **false**, in which case the filtering options MUST NOT be shown.

**ShowToolTips:** This attribute MUST be **true** if **ToolTips** MUST display in the toolbar buttons and options; **false** if not.

**ShowCollapse:** This attribute MUST be **true** if the collapse all button MUST be shown; **false** if not.

**ShowMode:** This attribute MUST be **true** if the button to switch between tree and flat mode MUST be shown; **false** if not.

**ShowExpand:** This attribute MUST be **true** if the expand all button MUST be shown; **false** if not.

**ShowToolBarItemsLabel:** Specifies whether the toolbar buttons are rendered with text label or not

1. If set to **true**, toolbar options and buttons MUST include both icon and text label.
2. If set to **false**, toolbar options and buttons MUST NOT include the text labels and MUST only include icon.

**ShowDefaultRollup:** This attribute MUST be **true** if the default **rollup** button MUST be shown; **false** if not.

**ShowWorstChildRollup:** This attribute MUST be **true** if the worst **child** rollup button MUST be shown; **false** if not.

**ShowIndicatorCount:** This attribute MUST be **true** if the indicator count rollup button MUST be shown; **false** if not.

#### 2.2.4.180 Tuple

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards/Analytics>

The **Tuple** complex type [<18>](#) represents an ordered collection of one or more **Member** complex types (section [2.2.4.134](#)) from different **dimensions**. It contains an instance of **SerializableDictionary** complex type (section [2.2.4.164](#)).

```
<xs:complexType name="Tuple" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="memberDictionary"
      type="tns:SerializableDictionary"/>
  </xs:sequence>
</xs:complexType>
```

**memberDictionary:** This element MUST NOT be null.

#### 2.2.4.181 XmlFont

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies a set of attributes that define a font.

```
<xs:complexType name="XmlFont" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FontFamily" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GraphicsUnit" type="tns:GraphicsUnit"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:float"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Style" type="tns:FontStyle"/>
  </xs:sequence>
</xs:complexType>
```

**FontFamily:** Specifies a group of typefaces having a similar basic design and style, such as "Arial" or "Courier". It SHOULD be set to a font family name that the **server (2)** can recognize. If the server (2) cannot recognize the font family name, it MUST instead use a font family name it does recognize.

**GraphicsUnit:** Specifies the unit of measure for the font as specified by **GraphicsUnit** (section [2.2.5.24](#)).

**Size:** Specifies the em-size of the font in the units specified by the **GraphicsUnit** attribute.

**Style:** Specifies style information applied to the font as specified by **FontStyle** (section [2.2.5.21](#)).

## 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   |
|-------------------------------|---|
| <b>AggregateTypeEnum</b>      | The <b>AggregateTypeEnum</b> simple type specifies the method by which a KpiMeasure will be aggregated.                           |
| <b>AlignmentType</b>          | Specifies the alignment of a text string relative to its layout rectangle.  |
| <b>AnalyticChartType</b>      | Type of chart to display.   |
| <b>AnalyticLegendLocation</b> | The location of the analytic chart legend.  |
| <b>AnalyticMarkerStyle</b>    | The <b>AnalyticMarkerStyle</b> simple type specifies a Data Point marker shape for a line-type series of the <b>report view</b> . |
| <b>AnnotationVersions</b>     | Specifies the product version that was used to create the annotation.   |
| <b>AxisType</b>               | The <b>AxisType</b> simple type specifies the type of an axis (as described in <a href="#">[MSDN-Axis]</a> ) in a query result.   |
| <b>BandType</b>               | Specifies the type of the <b>banding</b> for the <b>Target</b> (see section 2.2.4.170).   |
| <b>BeginPointEmitterType</b>  | The <b>BeginPointEmitterType</b> simple type specifies the type of information the parameter emits.                               |
| <b>ConnectionContext</b>      | The <b>ConnectionContext</b> simple type specifies what identity is used to connect to the data source.                           |
| <b>DataValuePosition</b>      | Specifies the display positioning for a data value.   |
| <b>DateAggregationTypes</b>   | This simple type represents a category of time intervals and MUST contain an <b>item</b> from the enumerated list.                |
| <b>DimensionTypeEnum</b>      | Specifies the type of information in a <b>dimension</b> .   |

| Simple type                        | Description  |
|------------------------------------|--|
| <b>EndPointCategory</b>            | The category specifying sort and filter <b>EndPoints</b> when connecting provider <b>Web Parts</b> to consumer Web Parts on the <b>Dashboard</b> .   |
| <b>ExcelServicesToolbarOptions</b> | Specifies the toolbar options for an Excel Services ( <a href="#">[MS-ESP]</a> ) report.   |
| <b>ExcelServicesToolbarType</b>    | Specifies which type of toolbar is shown on the Excel Services ([MS-ESP]) report.  |
| <b>ExcelServicesViewOptions</b>    | The <b>ExcelServicesViewOptions</b> simple type specifies how a user is allowed to interact with an Excel Services report ([MS-ESP]).  |
| <b>FactAggregations</b>            | This simple type specifies the type of aggregation to be performed on a numeric fact column in a tabular data set. The values are exclusive; that is, exactly one <b>MUST</b> be present in any field that uses this type.                   |
| <b>FilterSelectionMode</b>         | Specifies the manner in which the items in a Filter (see section 2.2.4.98) can be selected.  |
| <b>FirstClassObjectType</b>        | Specifies the type of a first-class object.  |
| <b>FontStyle</b>                   | Specifies style information applied to the font. It <b>MUST</b> equal <b>Regular</b> or any combination of the other values.   |
| <b>FormatNegativeSymbol</b>        | This simple type specifies the formatting pattern for negative numbers when custom formatting is used. Positive values are not affected. See <a href="#">KpiNumberFormatProperties</a> (section 2.2.4.130).                                  |
| <b>FormatType</b>                  | Defines the formatting pattern for numeric values. See <a href="#">KpiNumberFormatProperties</a> (section 2.2.4.130).  |
| <b>GraphicsUnit</b>                | Specifies the unit of measure for the font.  |
| <b>GridCellElementStatus</b>       | The <b>GridCellElementStatus</b> simple type specifies the status of a display element of a <b>scorecard cell</b> . It <b>MUST</b> be zero, one or two.  |
| <b>HeaderAggregationTypes</b>      | This simple type specifies the type of aggregation used by the Scorecard.  |
| <b>HierarchyOrigin</b>             | This simple type specifies the overall structure of a <b>hierarchy</b> .   |
| <b>HierarchyType</b>               | This simple type specifies the type of an <b>OLAP</b> hierarchy.   |
| <b>HorizontalAlignments</b>        | This simple type specifies how an object or text in a control is horizontally aligned relative to the control element.   |
| <b>IndicatorPosition</b>           | The <b>IndicatorPosition</b> simple type specifies the position of the indicator within the target value cell.   |
| <b>IndicatorType</b>               | This simple type specifies whether the <b>indicator bands</b> indicate a better or worse status as values move lower or higher, or whether the <b>indicator bands</b> indicate a better or worse status as values move closer to the center. |
| <b>KpiPattern</b>                  | This simple type specifies how banding and scoring change in appearance according to the setting of the KPI pattern.   |
| <b>LayoutOrientation</b>           | This simple type defines the layout of items within a <a href="#">DashboardElementContainer</a> (see section 2.2.4.81).  |
| <b>MappedColumnDataTypes</b>       | This simple type specifies the data type of the mapped columns in <a href="#">DataColumnMapping</a> (see section 2.2.4.84).  |
| <b>MappedColumnTypes</b>           | This simple type specifies the classification of a mapped column in <a href="#">DataColumnMapping</a> (see section 2.2.4.84).  |

| Simple type                         | Description  |
|-------------------------------------|--|
| <b>MemberRelationship</b>           | This simple type specifies the relationship among dimension members (see section 2.2.4.90). Member (see section 2.2.4.134) relationships are used in the context of a referred member.   |
| <b>MemberTransformOperation</b>     | This simple type specifies the <b>transform</b> action that the <b>MemberTransform</b> (section 2.2.4.146) will use.   |
| <b>MemberTransformType</b>          | This simple type specifies the classification of the <b>MemberTransform</b> (section 2.2.4.146).   |
| <b>MemberType</b>                   | This simple type specifies the type represented by the member (section 2.2.4.134) object.  |
| <b>ReportLayout</b>                 | Specifies the way that row and column headers are displayed in a grid report.  |
| <b>RollupTypes</b>                  | This simple type enumeration specifies the types of <b>rollup</b> behavior that can be exhibited by a target column in a scorecard.  |
| <b>ScorecardEmptyRowsFilterMode</b> | This simple type enumeration specifies whether to display scorecard rows with empty cells. A scorecard <b>GridCell</b> (section 2.2.4.100) is considered empty if <b>DisplayElements</b> does not contain any <b>GridDisplayElements</b> (section 2.2.4.103) with a <b>Status</b> of 0, as specified in <b>GridCellElementStatus</b> (section 2.2.5.25). |
| <b>ScorecardNamedSetType</b>        | This simple type enumeration specifies how to define a set of dimension <b>members (2)</b> . It is used by <b>GridHeaderItem</b> (section 2.2.4.116) when the attribute <b>HeaderType</b> is set to "NamedSet", as specified in <b>ScorecardNodeTypes</b> (section 2.2.5.44).  |
| <b>ScorecardNodeTypes</b>           | This simple type enumeration specifies the type of scorecard node header. This is used in the GridHeaderItem (section 2.2.4.116).  |
| <b>ScoreTypes</b>                   | This simple type enumeration specifies the type of <b>score</b> to be used when rolling up the target column in a scorecard.   |
| <b>SizeType</b>                     | This simple type enumeration specifies the size unit in <b>DashboardElementSize</b> (section 2.2.4.82).  |
| <b>SortType</b>                     | The <b>SortType</b> simple type specifies the manner in which the values in a query result are sorted.   |
| <b>SqlReportViewDataServerMode</b>  | The SqlReportViewDataServerMode simple type indicates when SQL Server Reporting Services integrated into a SharePoint <b>server (1)</b> .  |
| <b>StrategyMapToolbarOptions</b>    | The <b>StrategyMapToolbarOptions</b> simple type specifies the view options for a <b>strategy map</b> report.  |
| <b>Trinary</b>                      | This simple type specifies an enumeration type that has three possible values.   |
| <b>ValueSources</b>                 | This simple type enumeration specifies how rollup values are computed. The enumeration determines how values for parent scorecard row items will be computed from the values of <b>child</b> scorecard row items within the same scorecard column.   |
| <b>VarianceDisplayType</b>          | This simple type enumeration specifies how a <b>variance</b> value is calculated and presented.  |
| <b>VarianceType</b>                 | This simple type enumeration specifies how a <b>variance</b> calculation uses <b>indicator status band</b> and target values.  |
| <b>VerticalAlignments</b>           | This simple type enumeration specifies a vertical alignment of content   |

| Simple type | Description                            |
|-------------|--|
|             | within a grid cell or display element. |

### 2.2.5.1 AggregateTypeEnum

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **AggregateTypeEnum** simple type specifies the method by which a KpiMeasure will be aggregated.

```
<xs:simpleType name="AggregateTypeEnum" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="Minimum"/>
    <xs:enumeration value="Maximum"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Average"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AggregateTypeEnum** simple type.

| Value   | Meaning   |
|---------|---|
| Default | Query using the default KpiMeasure aggregation. |
| Sum     | Query the total value of the KpiMeasure.        |
| Minimum | Query the minimum value of the KpiMeasure.      |
| Maximum | Query the maximum value of the KpiMeasure.      |
| Count   | Query the count of values in the KpiMeasure.    |
| Average | Query the average value of the KpiMeasure.      |

### 2.2.5.2 AlignmentType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Specifies the alignment of a text string relative to its layout rectangle.

```
<xs:simpleType name="AlignmentType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="Center"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AlignmentType** simple type.

| Value  | Meaning  |
|--------|--|
| Left   | Specifies that the text be aligned left of the layout rectangle.   |
| Right  | Specifies that the text be aligned right of the layout rectangle.  |
| Center | Specifies that the text be aligned center of the layout rectangle. |

### 2.2.5.3 AnalyticChartType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Type of chart to display.

```
<xs:simpleType name="AnalyticChartType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Column"/>
    <xs:enumeration value="ColumnStacked"/>
    <xs:enumeration value="ColumnStacked100"/>
    <xs:enumeration value="Line"/>
    <xs:enumeration value="Pie"/>
    <xs:enumeration value="Bar"/>
    <xs:enumeration value="BarStacked"/>
    <xs:enumeration value="BarStacked100"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AnalyticChartType** simple type.

| Value            | Meaning   |
|------------------|---|
| None             | The type of chart has not been set.   |
| Column           | Displays a vertical bar chart.  |
| ColumnStacked    | Displays a stacked vertical bar chart.  |
| ColumnStacked100 | Displays a stacked vertical bar chart with bars sized as a percentage of the total.   |
| Line             | Displays a line chart.  |
| Pie              | Displays a pie chart.   |
| Bar              | Displays a horizontal bar chart.  |
| BarStacked       | Displays a stacked horizontal bar chart.  |
| BarStacked100    | Displays a stacked horizontal bar chart with bars sized as a percentage of the total. |

### 2.2.5.4 AnalyticLegendLocation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The location of the analytic chart legend.

```

<xs:simpleType name="AnalyticLegendLocation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="Top"/>
    <xs:enumeration value="Bottom"/>
    <xs:enumeration value="Left"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **AnalyticLegendLocation** simple type.

| Value  | Meaning  |
|--------|--|
| None   | The legend is not displayed.                                 |
| Right  | The legend is displayed to the right of the analytic chart.  |
| Top    | The legend is displayed on top of the analytic chart.        |
| Bottom | The legend is displayed on the bottom of the analytic chart. |
| Left   | The legend is displayed to the left of the analytic chart.   |

### 2.2.5.5 AnalyticMarkerStyle

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **AnalyticMarkerStyle** simple type specifies a Data Point marker shape for a line-type series of the **report view**.

```

<xs:simpleType name="AnalyticMarkerStyle" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Square"/>
    <xs:enumeration value="Circle"/>
    <xs:enumeration value="Diamond"/>
    <xs:enumeration value="Triangle"/>
    <xs:enumeration value="Cross"/>
    <xs:enumeration value="Star4"/>
    <xs:enumeration value="Star5"/>
    <xs:enumeration value="Star6"/>
    <xs:enumeration value="Star10"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **AnalyticMarkerStyle** simple type.

| Value   | Meaning  |
|---------|--|
| None    | No marker is displayed for the series/ <b>data point</b> . |
| Square  | A square marker is displayed.                              |
| Circle  | A circular marker is displayed.                            |
| Diamond | A diamond-shaped marker is displayed.                      |

| Value    | Meaning                                     |
|----------|---|
| Triangle | A triangular marker is displayed.           |
| Cross    | A cross-shaped marker is displayed.         |
| Star4    | A 4-point star-shaped marker is displayed.  |
| Star5    | A 5-point star-shaped marker is displayed.  |
| Star6    | A 6-point star-shaped marker is displayed.  |
| Star10   | A 10-point star-shaped marker is displayed. |

### 2.2.5.6 AnnotationVersions

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Specifies the product version that was used to create the annotation.

```
<xs:simpleType name="AnnotationVersions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Office14Beta2"/>
    <xs:enumeration value="Office14Beta1"/>
    <xs:enumeration value="Pps2007"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AnnotationVersions** simple type.

| Value         | Meaning  |
|---------------|--|
| Office14Beta2 | Annotation was created with a Beta2 or RTM version <a href="#">&lt;19&gt;</a> .    |
| Office14Beta1 | Annotation was created with a Beta1 version <a href="#">&lt;20&gt;</a> .           |
| Pps2007       | Annotation was created with a prior production version. <a href="#">&lt;21&gt;</a> |

### 2.2.5.7 AxisType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **AxisType** simple type specifies the type of an axis (as described in [\[MSDN-Axis\]](#)) in a query result.

```
<xs:simpleType name="AxisType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Filter"/>
    <xs:enumeration value="Columns"/>
    <xs:enumeration value="Rows"/>
    <xs:enumeration value="Pages"/>
    <xs:enumeration value="Sections"/>
    <xs:enumeration value="Chapters"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AxisType** simple type.

| Value    | Meaning   |
|----------|---|
| Filter   | Specifies a FILTER axis type or the <b>slicer</b> axis of the query.  |
| Columns  | Specifies a COLUMNS axis type that contains the column definition of the query.                             |
| Rows     | Specifies a ROWS axis type that contains the row definition of the query.                                   |
| Pages    | Specifies a PAGES axis type that contains the page definition of the query. This axis type is unused.       |
| Sections | Specifies a SECTIONS axis type that contains the section definition of the query. This axis type is unused. |
| Chapters | Specifies a CHAPTERS axis type that contains the chapter definition of the query. This axis type is unused. |

### 2.2.5.8 BandType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the type of the **banding** for the **Target** (see section 2.2.4.170).

```
<xs:simpleType name="BandType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Normalized"/>
    <xs:enumeration value="Actual"/>
    <xs:enumeration value="StatedScore"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **BandType** simple type.

| Value       | Meaning   |
|-------------|---|
| Normalized  | The value will be <b>normalized</b> .   |
| Actual      | The actual value will be used.  |
| StatedScore | The selected Target value will be used. See Target.StatedScore (section 2.2.4.170). |

### 2.2.5.9 BeginPointEmitterType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **BeginPointEmitterType** simple type specifies the type of information the parameter emits.

```
<xs:simpleType name="BeginPointEmitterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="BothAConditionalVisibilityAndParameterEmitter"/>
    <xs:enumeration value="ConditionalVisibilityEmitter"/>
    <xs:enumeration value="ParameterEmitter"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **BeginPointEmitterType** simple type.

| Value   | Meaning   |
|---|---|
| BothAConditionalVisibilityAndParameterEmitter | Emits information that is used for setting conditional visibility values that indicate a connected <b>Web Part</b> is visible and parameter values. |
| ConditionalVisibilityEmitter                  | Emits information that is used for setting conditional visibility values that indicate a connected Web Part is visible.                             |
| ParameterEmitter                              | Emits information that is used for setting parameter values.  |

### 2.2.5.10 ConnectionContext

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ConnectionContext** simple type specifies what identity is used to connect to the data source.

```
<xs:simpleType name="ConnectionContext" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="ConnectAsUser"/>
    <xs:enumeration value="ConnectAsSharedUser"/>
    <xs:enumeration value="SecureStoreCredentials"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ConnectionContext** simple type.

| Value                  | Meaning  |
|------------------------|--|
| ConnectAsUser          | Connects to the data source using the user credentials.  |
| ConnectAsSharedUser    | Connects to the data source using the shared account credentials.  |
| SecureStoreCredentials | Connects to the data source using credentials obtained from the Secure Store ( <a href="#">[MS-SSWPS]</a> ). |

### 2.2.5.11 DataValuePosition

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Specifies the display positioning for a data value.

```
<xs:simpleType name="DataValuePosition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="NotDisplayed"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **DataValuePosition** simple type.

| Value        | Meaning   |
|--------------|---|
| Left         | Specifies that the data value will be displayed on the left.  |
| Right        | Specifies that the data value will be displayed on the right. |
| NotDisplayed | Specifies that the data value will not be displayed.          |

### 2.2.5.12 DateAggregationTypes

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type represents a category of time intervals and MUST contain an **item** from the enumerated list.

```
<xs:simpleType name="DateAggregationTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Second"/>
        <xs:enumeration value="Minute"/>
        <xs:enumeration value="Hour"/>
        <xs:enumeration value="Day"/>
        <xs:enumeration value="Week"/>
        <xs:enumeration value="Month"/>
        <xs:enumeration value="Quarter"/>
        <xs:enumeration value="Year"/>
        <xs:enumeration value="Semester"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **DateAggregationTypes** simple type.

| Value    | Meaning                                |
|----------|--|
| None     | No time interval is defined.           |
| Second   | Intervals are seconds.                 |
| Minute   | Intervals are minutes.                 |
| Hour     | Intervals are hours.                   |
| Day      | Intervals are days.                    |
| Week     | Intervals are weeks.                   |
| Month    | Intervals are months.                  |
| Quarter  | Intervals are quarters.                |
| Year     | Intervals are years.                   |
| Semester | Intervals are half years or semesters. |

## 2.2.5.13 DimensionTypeEnum

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Specifies the type of information in a **dimension**.

```
<xs:simpleType name="DimensionTypeEnum" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Accounts"/>
    <xs:enumeration value="BillOfMaterials"/>
    <xs:enumeration value="Channel"/>
    <xs:enumeration value="Currency"/>
    <xs:enumeration value="Customers"/>
    <xs:enumeration value="Geography"/>
    <xs:enumeration value="Measure"/>
    <xs:enumeration value="Organization"/>
    <xs:enumeration value="Other"/>
    <xs:enumeration value="Products"/>
    <xs:enumeration value="Promotion"/>
    <xs:enumeration value="Quantitative"/>
    <xs:enumeration value="Rates"/>
    <xs:enumeration value="Scenario"/>
    <xs:enumeration value="Time"/>
    <xs:enumeration value="Unknown"/>
    <xs:enumeration value="Utility"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **DimensionTypeEnum** simple type.

| Value           | Meaning  |
|-----------------|--|
| Accounts        | The dimension contains an accounts structure with parent-child relationships.  |
| BillOfMaterials | The dimension represents a material/component breakdown. The parent-child relationship implies a parent composed of its <b>child</b> elements. |
| Channel         | The dimension contains information about a distribution channel.   |
| Currency        | The dimension contains currency information.   |
| Customers       | The dimension contains customer information. The lowest level represents individual customers.   |
| Geography       | The dimension contains a geographic hierarchy.   |
| Measure         | The dimension contains <b>measures</b> .   |
| Organization    | The dimension represents the reporting structure of an organization.   |
| Other           | The dimension type is not Time, Measure or otherwise specified.  |
| Products        | The dimension contains product information. The lowest level contains individual products.   |
| Promotion       | The dimension contains information about marketing and advertising promotions.   |
| Quantitative    | The dimension contains quantitative elements (for example, income level, or number of child elements).   |
| Rates           | The dimension contains different types of rates (for example, buy, sell, or discounted).   |
| Scenario        | The dimension contains different business scenarios.   |
| Time            | The dimension refers to time (for example, year, month, week, day).  |

| Value   | Meaning   |
|---------|---|
| Unknown | The type of the dimension is not specified.     |
| Utility | The dimension contains only calculated members. |

### 2.2.5.14 EndPointCategory

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The category specifying sort and filter **EndPoints** when connecting provider **Web Parts** to consumer Web Parts on the **Dashboard**.

```
<xs:simpleType name="EndPointCategory" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Axis"/>
    <xs:enumeration value="ColumnHierarchy"/>
    <xs:enumeration value="RowHierarchy"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **EndPointCategory** simple type.

| Value           | Meaning                                  |
|-----------------|--|
| None            | EndPoint has no category                 |
| Axis            | EndPoint is a Scorecard Axis             |
| ColumnHierarchy | EndPoint is a Scorecard Column Hierarchy |
| RowHierarchy    | EndPoint is a Scorecard Row Hierarchy    |

### 2.2.5.15 ExcelServicesToolbarOptions

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Specifies the toolbar options for an Excel Services ([\[MS-ESP\]](#)) report.

```
<xs:simpleType name="ExcelServicesToolbarOptions"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="AllowInExcelOperations"/>
        <xs:enumeration value="AllowRefreshConnections"/>
        <xs:enumeration value="AllowRecalculation"/>
        <xs:enumeration value="ShowVisibleItemButton"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServicesToolbarOptions** simple type.

| Value                   | Meaning   |
|-------------------------|---|
| AllowInExcelOperations  | Allows operations that open the Excel <b>workbook</b> ( <a href="#">[MS-XLS]</a> ).           |
| AllowRefreshConnections | Allows data connections in the Excel workbook to refresh.                                     |
| AllowRecalculation      | Allows users to recalculate the Excel workbook.   |
| ShowVisibleItemButton   | Shows the view menu to enable users to change the currently displayed <b>published item</b> . |

### 2.2.5.16 ExcelServicesToolbarType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies which type of toolbar is shown on the Excel Services ([\[MS-ESPI\]](#)) report.

```
<xs:simpleType name="ExcelServicesToolbarType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="FullToolbar"/>
    <xs:enumeration value="SummaryToolbar"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ExcelServicesToolbarType** simple type.

| Value          | Meaning                           |
|----------------|-----------------------------------|
| None           | No toolbar is displayed.          |
| FullToolbar    | The full toolbar is displayed.    |
| SummaryToolbar | The summary toolbar is displayed. |

### 2.2.5.17 ExcelServicesViewOptions

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ExcelServicesViewOptions** simple type specifies how a user is allowed to interact with an Excel Services report ([\[MS-ESPI\]](#)).

```
<xs:simpleType name="ExcelServicesViewOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="AllowInteractivity"/>
        <xs:enumeration value="AllowParameterModification"/>
        <xs:enumeration value="ShowWorkbookParameters"/>
        <xs:enumeration value="AllowSorting"/>
        <xs:enumeration value="AllowFiltering"/>
        <xs:enumeration value="AllowHyperlinks"/>
        <xs:enumeration value="AllowPivotSpecificOperations"/>
        <xs:enumeration value="AllowPeriodicRefresh"/>
        <xs:enumeration value="CloseWorkbookSessions"/>
        <xs:enumeration value="AllowScratchPadMode"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

    </xs:restriction>
  </xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **ExcelServicesViewOptions** simple type.

| Value                        | Meaning   |
|------------------------------|---|
| AllowInteractivity           | Allows users to interact with the <b>workbook</b> .   |
| AllowParameterModification   | Allows users to change workbook parameters.   |
| ShowWorkbookParameters       | Allows users to view and edit workbook parameters.  |
| AllowSorting                 | Allows users to sort when using <b>AutoFilter</b> , <b>lists (1)</b> , and <b>PivotTables</b> .                                     |
| AllowFiltering               | Allows users to filter when using AutoFilter, lists (1), and PivotTables.   |
| AllowHyperlinks              | Allows users to use hyperlinks in the workbook.   |
| AllowPivotSpecificOperations | Allows users to <b>drilldown</b> , find <b>members (2)</b> , and take actions in PivotTables in the workbook.                       |
| AllowPeriodicRefresh         | Allows Excel Services to perform periodic refreshes of external data sources if the data connection has a refresh interval defined. |
| CloseWorkbookSessions        | Closes the current workbook before opening a new one.   |
| AllowScratchPadMode          | The value of this element MUST be ignored.  |

### 2.2.5.18 FactAggregations

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type specifies the type of aggregation to be performed on a numeric fact column in a tabular data set. The values are exclusive; that is, exactly one MUST be present in any field that uses this type.

```

<xs:simpleType name="FactAggregations" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Average"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Max"/>
    <xs:enumeration value="Min"/>
    <xs:enumeration value="None"/>
    <xs:enumeration value="StDev"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="Variance"/>
    <xs:enumeration value="FirstOccurance"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **FactAggregations** simple type.

| Value   | Meaning                                       |
|---------|---|
| Average | Calculate the average of numeric fact values. |

| Value          | Meaning   |
|----------------|---|
| Count          | Calculate the total number of fact values.                                |
| Max            | Determine the largest numeric fact value.                                 |
| Min            | Determine the smallest numeric fact value.                                |
| None           | Perform no aggregation.   |
| StDev          | Calculate the variance of the numeric fact values.                        |
| Sum            | Calculate the sum of the numeric fact values.                             |
| Variance       | Calculate the statistical variance of the numeric fact values.            |
| FirstOccurance | Determine the first fact value that occurs for each unique column member. |

### 2.2.5.19 FilterSelectionMode

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the manner in which the **items** in a Filter (see section 2.2.4.98) can be selected.

```
<xs:simpleType name="FilterSelectionMode" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SingleSelect"/>
    <xs:enumeration value="MultiSelect"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **FilterSelectionMode** simple type.

| Value        | Meaning  |
|--------------|--|
| SingleSelect | Single select parameter selection. Only one item can be selected for the filter at one time. |
| MultiSelect  | Multi select parameter selection. Multiple items can be selected for the filter at one time. |

### 2.2.5.20 FirstClassObjectType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the type of a first-class object.

```
<xs:simpleType name="FirstClassObjectType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Kpi"/>
    <xs:enumeration value="Scorecard"/>
    <xs:enumeration value="ReportView"/>
    <xs:enumeration value="Indicator"/>
    <xs:enumeration value="DataSource"/>
    <xs:enumeration value="Dashboard"/>
    <xs:enumeration value="TempReportView"/>
    <xs:enumeration value="Filter"/>
  </xs:restriction>
</xs:simpleType>
```

```
</xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **FirstClassObjectType** simple type.

| Value          | Meaning   |
|----------------|---|
| None           | Indicates the object type is undefined  |
| Kpi            | Indicates the object is a Kpi (see section <a href="#">2.2.4.128</a> ).   |
| Scorecard      | Indicates the object is a Scorecard (see section <a href="#">2.2.4.162</a> )  |
| ReportView     | Indicates the object is a ReportView (see section <a href="#">2.2.4.160</a> )   |
| Indicator      | Indicates the object is an Indicator (see section <a href="#">2.2.4.125</a> )   |
| DataSource     | Indicates the object is a DataSource (see section <a href="#">2.2.4.85</a> )  |
| Dashboard      | Indicates the object is a Dashboard (see section <a href="#">2.2.4.79</a> )   |
| TempReportView | Indicates the object is a temporary ReportView (see section <a href="#">2.2.4.160</a> ) as created by <a href="#">SaveTemporaryAnalyticReport</a> |
| Filter         | Indicates the object is a Filter (see section <a href="#">2.2.4.98</a> )  |

### 2.2.5.21 FontStyle

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies style information applied to the font. It **MUST** equal **Regular** or any combination of the other values.

```
<xs:simpleType name="FontStyle" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="Regular"/>
        <xs:enumeration value="Bold"/>
        <xs:enumeration value="Italic"/>
        <xs:enumeration value="Underline"/>
        <xs:enumeration value="Strikeout"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **FontStyle** simple type.

| Value     | Meaning          |
|-----------|------------------|
| Regular   | Normal text.     |
| Bold      | Bold text.       |
| Italic    | Italic text.     |
| Underline | Underlined text. |

| Value     | Meaning                              |
|-----------|--------------------------------------|
| Strikeout | Text with a line through the middle. |

### 2.2.5.22 FormatNegativeSymbol

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies the formatting pattern for negative numbers when custom formatting is used. Positive values are not affected. See KpiNumberFormatProperties (section 2.2.4.130).

```
<xs:simpleType name="FormatNegativeSymbol" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NegativeSign"/>
    <xs:enumeration value="Parenthesis"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **FormatNegativeSymbol** simple type.

| Value        | Meaning   |
|--------------|---|
| NegativeSign | Show minus sign preceding to the number.<br>Example: -42.15 |
| Parenthesis  | Enclose the number in parenthesis.<br>Example: (42.15)      |

### 2.2.5.23 FormatType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

Defines the formatting pattern for numeric values. See KpiNumberFormatProperties (section 2.2.4.130).

```
<xs:simpleType name="FormatType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default"/>
    <xs:enumeration value="Number"/>
    <xs:enumeration value="Currency"/>
    <xs:enumeration value="Percentage"/>
    <xs:enumeration value="Unknown"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **FormatType** simple type.

| Value   | Meaning   |
|---------|---|
| Default | No formatting. Formatting of the data source is used. |
| Number  | General numeric formatting—for example, 12,222.003    |

| Value      | Meaning                                  |
|------------|--|
| Currency   | Currency formatting—for example, \$25.00 |
| Percentage | Percentage formatting—for example, 25%   |
| Unknown    | Null or undetermined formatting          |

### 2.2.5.24 GraphicsUnit

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the unit of measure for the font.

```
<xs:simpleType name="GraphicsUnit" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="World"/>
    <xs:enumeration value="Display"/>
    <xs:enumeration value="Pixel"/>
    <xs:enumeration value="Point"/>
    <xs:enumeration value="Inch"/>
    <xs:enumeration value="Document"/>
    <xs:enumeration value="Millimeter"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **GraphicsUnit** simple type.

| Value      | Meaning   |
|------------|---|
| World      | Specifies the world coordinate system unit as the unit of measure.  |
| Display    | Specifies the unit of measure of the display device. Typically <b>pixels</b> for video displays, and 1/100 inch for printers. |
| Pixel      | Specifies a device pixel as the unit of measure.  |
| Point      | Specifies a printer's point (1/72 inch) as the unit of measure.   |
| Inch       | Specifies the inch as the unit of measure.  |
| Document   | Specifies the document unit (1/300 inch) as the unit of measure.  |
| Millimeter | Specifies the millimeter as the unit of measure.  |

### 2.2.5.25 GridCellElementStatus

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **GridCellElementStatus** simple type specifies the status of a display element of a **scorecard cell**. It MUST be zero, one or two.

```
<xs:simpleType name="GridCellElementStatus" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="0"/>
    <xs:enumeration value="1"/>
  </xs:restriction>
</xs:simpleType>
```

```

    <xs:enumeration value="2"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **GridCellElementStatus** simple type.

| Value | Meaning   |
|-------|---|
| 0     | OK: Specifies that element is displayed correctly   |
| 1     | Error: Specifies that element is in error: error state is displayed. See the <b>InvalidCell</b> property of the <b>GridViewDefinition</b> complex type (section <a href="#">2.2.4.122</a> ) |
| 2     | Null: Specifies that element is empty: empty state is displayed. See the <b>EmptyCell</b> property of <b>GridViewDefinition</b>   |

### 2.2.5.26 HeaderAggregationTypes

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type specifies the type of aggregation used by the **Scorecard**.

```

<xs:simpleType name="HeaderAggregationTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="Average"/>
    <xs:enumeration value="Min"/>
    <xs:enumeration value="Max"/>
    <xs:enumeration value="Trend"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **HeaderAggregationTypes** simple type.

| Value   | Meaning  |
|---------|--|
| None    | No aggregation                                     |
| Sum     | Aggregate the sum value                            |
| Average | Aggregate the average value                        |
| Min     | Aggregate the minimum value                        |
| Max     | Aggregate the maximum value                        |
| Trend   | Aggregate the trend of the last two sibling values |

### 2.2.5.27 HierarchyOrigin

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type specifies the overall structure of a **hierarchy**.

```

<xs:simpleType name="HierarchyOrigin" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AttributeHierarchy"/>
    <xs:enumeration value="ParentChildHierarchy"/>
    <xs:enumeration value="UserHierarchy"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **HierarchyOrigin** simple type.

| Value                | Meaning  |
|----------------------|--|
| None                 | The hierarchy has no structure.                  |
| AttributeHierarchy   | The hierarchy is an <b>attribute hierarchy</b> . |
| ParentChildHierarchy | The hierarchy is a parent-child hierarchy.       |
| UserHierarchy        | The hierarchy is a user-defined hierarchy.       |

### 2.2.5.28 HierarchyType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies the type of an **OLAP** hierarchy.

```

<xs:simpleType name="HierarchyType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Standard"/>
    <xs:enumeration value="Measure"/>
    <xs:enumeration value="Time"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **HierarchyType** simple type.

| Value    | Meaning                              |
|----------|--------------------------------------|
| Standard | Indicates a Standard OLAP hierarchy. |
| Measure  | Indicates a Measured OLAP hierarchy. |
| Time     | Indicates a Time OLAP hierarchy.     |

### 2.2.5.29 HorizontalAlignments

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies how an object or text in a control is horizontally aligned relative to the control element.

```

<xs:simpleType name="HorizontalAlignments" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">

```

```

    <xs:enumeration value="Undefined"/>
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Center"/>
    <xs:enumeration value="Right"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **HorizontalAlignments** simple type.

| Value     | Meaning   |
|-----------|---|
| Undefined | No horizontal alignment is applied to the object or text.           |
| Left      | The object or text is aligned on the left of the control element.   |
| Center    | The object or text is aligned in the center of the control element. |
| Right     | The object or text is aligned on the right of the control element.  |

### 2.2.5.30 IndicatorPosition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **IndicatorPosition** simple type specifies the position of the indicator within the target value **cell**.

```

<xs:simpleType name="IndicatorPosition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="Center"/>
    <xs:enumeration value="NotDisplayed"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **IndicatorPosition** simple type.

| Value        | Meaning   |
|--------------|---|
| Left         | Display the indicator against the left edge of the cell.                        |
| Right        | Display the indicator against the right edge of the cell.                       |
| Center       | Display the indicator in the center of the cell between the two numeric values. |
| NotDisplayed | Do not display the indicator.   |

### 2.2.5.31 IndicatorType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type specifies whether the **indicator bands** indicate a better or worse status as values move lower or higher, or whether the **indicator bands** indicate a better or worse status as values move closer to the center.

```

<xs:simpleType name="IndicatorType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Standard"/>
    <xs:enumeration value="Centered"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **IndicatorType** simple type.

| Value    | Meaning  |
|----------|--|
| Standard | <b>Indicator bands</b> go from best to worst as values increase (or decrease).           |
| Centered | <b>Indicator bands</b> go from best to worst as values get further away from the center. |

### 2.2.5.32 KpiPattern

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies how **banding** and scoring change in appearance according to the setting of the KPI pattern.

```

<xs:simpleType name="KpiPattern" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="IncreasingIsBetter"/>
    <xs:enumeration value="DecreasingIsBetter"/>
    <xs:enumeration value="CloserToTargetIsBetter"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **KpiPattern** simple type.

| Value                  | Meaning   |
|------------------------|---|
| IncreasingIsBetter     | For banding and scoring, data that increases is better.               |
| DecreasingIsBetter     | For banding and scoring, data that decreases is better.               |
| CloserToTargetIsBetter | For banding and scoring, data that is closer to the target is better. |

### 2.2.5.33 LayoutOrientation

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type defines the layout of **items** within a DashboardElementContainer (see section 2.2.4.81).

```

<xs:simpleType name="LayoutOrientation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="HorizontalLeftJustified"/>
    <xs:enumeration value="HorizontalRightJustified"/>
    <xs:enumeration value="VerticalBottomJustified"/>
    <xs:enumeration value="VerticalTopJustified"/>
    <xs:enumeration value="Stacked"/>
  </xs:restriction>
</xs:simpleType>

```

```

    <xs:enumeration value="Hidden"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **LayoutOrientation** simple type.

| Value                    | Meaning   |
|--------------------------|---|
| HorizontalLeftJustified  | Horizontal layout where adjacent items are left-justified.    |
| HorizontalRightJustified | Horizontal layout where adjacent items are right-justified.   |
| VerticalBottomJustified  | Vertical layout where adjacent items are bottom-justified.    |
| VerticalTopJustified     | Vertical layout where adjacent items are top-justified.       |
| Stacked                  | Items are stacked so that only one item is visible at a time. |
| Hidden                   | Items are not displayed.                                      |

### 2.2.5.34 MappedColumnDataTypes

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies the data type of the mapped columns in DataColumnMapping (see section 2.2.4.84).

```

<xs:simpleType name="MappedColumnDataTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NotSupported"/>
    <xs:enumeration value="Number"/>
    <xs:enumeration value="String"/>
    <xs:enumeration value="DateTime"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **MappedColumnDataTypes** simple type.

| Value        | Meaning   |
|--------------|---|
| NotSupported | Used when <a href="#">MappedColumnTypes</a> is set to Ignore in DataColumnMapping.                      |
| Number       | The mapped column values are numeric. Valid numeric values are short, integer, long, decimal and float. |
| String       | The mapped column values are <a href="#">UNICODE</a> characters.  |
| DateTime     | The mapped column values are date-time values.  |

### 2.2.5.35 MappedColumnTypes

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies the classification of a mapped column in **DataColumnMapping** (see section 2.2.4.84).

```
<xs:simpleType name="MappedColumnTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Ignore"/>
    <xs:enumeration value="Fact"/>
    <xs:enumeration value="Dimension"/>
    <xs:enumeration value="TimeDimension"/>
    <xs:enumeration value="Key"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MappedColumnTypes** simple type.

| Value         | Meaning  |
|---------------|--|
| Ignore        | The ignore type indicates that the mapped column in DataColumnMapping MUST be ignored.   |
| Fact          | The mapped column contains <b>fact</b> data. A fact column type MUST have an associated FactAggregations (see section 2.2.5.18). |
| Dimension     | The mapped column contains <b>dimension</b> (see section 2.2.4.90) members.  |
| TimeDimension | The mapped column contains time-based dimension members.   |
| Key           | The mapped column is the key column for columns mapped as Dimension (see section 2.2.4.90).                                      |

### 2.2.5.36 MemberRelationship

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies the relationship among **dimension** members (see section 2.2.4.90). Member (see section 2.2.4.134) relationships are used in the context of a referred member.

```
<xs:simpleType name="MemberRelationship" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Parent"/>
    <xs:enumeration value="FirstSibling"/>
    <xs:enumeration value="PrevMember"/>
    <xs:enumeration value="NextMember"/>
    <xs:enumeration value="LastSibling"/>
    <xs:enumeration value="FirstChild"/>
    <xs:enumeration value="LastChild"/>
    <xs:enumeration value="CurrentMember"/>
    <xs:enumeration value="Children"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MemberRelationship** simple type.

| Value        | Meaning   |
|--------------|---|
| Parent       | Parent of the referred dimension (section 2.2.4.90) <b>member (2)</b> (section 2.2.4.134).          |
| FirstSibling | First <b>child</b> of the parent of the referred (section 2.2.4.90) member (2) (section 2.2.4.134). |

| Value         | Meaning   |
|---------------|---|
| PrevMember    | Previous member (2) at the same level that contains the referred dimension (section 2.2.4.90) member (2) (section 2.2.4.134).   |
| NextMember    | Next member (2) at the same level that contains the referred dimension (section 2.2.4.90) member (2) (section 2.2.4.134).   |
| LastSibling   | Last child of the parent of the referred dimension (section 2.2.4.90) member (2) (section 2.2.4.134).   |
| FirstChild    | First child of the parent of the referred dimension (section 2.2.4.90) member (2) (section 2.2.4.134).  |
| LastChild     | Last child of the referred dimension (section 2.2.4.90) member (2) (section 2.2.4.134).   |
| CurrentMember | Current member (2) (section 2.2.4.134) along a specified dimension (section 2.2.4.90) or hierarchy (section 2.2.4.124) during iteration. When used in the context of a referred member (2) it implies the referred member (2) itself. |
| Children      | Child members (2) of the referred dimension (section 2.2.4.90) member (section 2.2.4.134).  |

### 2.2.5.37 MemberTransformOperation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type specifies the **transform** action that the **MemberTransform** (section 2.2.4.146) will use.

```
<xs:simpleType name="MemberTransformOperation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Replace"/>
    <xs:enumeration value="DrillUp"/>
    <xs:enumeration value="DrillDown"/>
    <xs:enumeration value="Expand"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MemberTransformOperation** simple type.

| Value     | Meaning   |
|-----------|---|
| Replace   | Replaces a single hierarchy (section 2.2.4.124) group or all <b>members (2)</b> (section 2.2.4.134) from a KPI (section 2.2.4.128) with members (2) (section 2.2.4.134) provided by filters (section 2.2.4.98). |
| DrillUp   | Drills up on a referred member (2) (section 2.2.4.134).   |
| DrillDown | Drills down on a referred member (2) (section 2.2.4.134).   |
| Expand    | Dynamically expands the <b>child</b> members (2) of a referred member (2) (section 2.2.4.134).  |

### 2.2.5.38 MemberTransformType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type specifies the classification of the **MemberTransform** (section 2.2.4.146).

```
<xs:simpleType name="MemberTransformType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Row"/>
    <xs:enumeration value="Column"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MemberTransformType** simple type.

| Value  | Meaning   |
|--------|---|
| Row    | The MemberTransform (section 2.2.4.146) will be applied to rows.    |
| Column | The MemberTransform (section 2.2.4.146) will be applied to columns. |

### 2.2.5.39 MemberType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type specifies the type represented by the member (section 2.2.4.134) object.

```
<xs:simpleType name="MemberType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Regular"/>
    <xs:enumeration value="Operation"/>
    <xs:enumeration value="Default"/>
    <xs:enumeration value="Formula"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MemberType** simple type.

| Value     | Meaning   |
|-----------|---|
| Regular   | A regular <b>member (2)</b> (section 2.2.4.134).                            |
| Operation | The member object represents a member operation (section 2.2.4.136).        |
| Default   | The member object represents the <b>default member</b> (section 2.2.4.134). |
| Formula   | The member object represents a calculated member.                           |

### 2.2.5.40 ReportLayout

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the way that row and column headers are displayed in a grid report.

```
<xs:simpleType name="ReportLayout" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="TabularForm"/>
    <xs:enumeration value="CompactForm"/>
  </xs:restriction>
</xs:simpleType>
```

</xs:simpleType>

The following table specifies the allowable values for the **ReportLayout** simple type.

| Value       | Meaning   |
|-------------|---|
| TabularForm | Row and column headers are flattened so that data is displayed in a space-efficient manner.               |
| CompactForm | Row and column headers are displayed in an indented manner that reflects their hierarchical relationship. |

### 2.2.5.41 RollupTypes

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type enumeration specifies the types of **rollup** behavior that can be exhibited by a target column in a **scorecard**.

```
<xs:simpleType name="RollupTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AverageWeighted"/>
    <xs:enumeration value="WorstChild"/>
    <xs:enumeration value="IndicatorCount"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **RollupTypes** simple type.

| Value           | Meaning   |
|-----------------|---|
| None            | Do not perform rollups.   |
| AverageWeighted | Rollup a weighted average of the scores of the direct <b>child</b> members.   |
| WorstChild      | Rollup the worst score among the <b>descendants</b> .   |
| IndicatorCount  | Rollup a count of each state of each indicator found within the descendants, excluding those belonging to <b>objective KPIs</b> . |

### 2.2.5.42 ScorecardEmptyRowsFilterMode

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type enumeration specifies whether to display **scorecard** rows with empty cells. A scorecard **GridCell** (section [2.2.4.100](#)) is considered empty if **DisplayElements** does not contain any **GridDisplayElements** (section [2.2.4.103](#)) with a **Status** of 0, as specified in **GridCellElementStatus** (section [2.2.5.25](#)).

```
<xs:simpleType name="ScorecardEmptyRowsFilterMode"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
  </xs:restriction>
</xs:simpleType>
```

```

    <xs:enumeration value="AllValuesAreEmpty"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **ScorecardEmptyRowsFilterMode** simple type.

| Value             | Meaning   |
|-------------------|---|
| None              | Do not filter rows.                                   |
| AllValuesAreEmpty | Filter out rows where all non-header cells are empty. |

### 2.2.5.43 ScorecardNamedSetType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type enumeration specifies how to define a set of **dimension members (2)**. It is used by **GridHeaderItem** (section 2.2.4.116) when the attribute **HeaderType** is set to "NamedSet", as specified in **ScorecardNodeTypes** (section 2.2.5.44).

```

<xs:simpleType name="ScorecardNamedSetType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="NamedSet"/>
        <xs:enumeration value="CustomFormula"/>
        <xs:enumeration value="TimeFormula"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **ScorecardNamedSetType** simple type.

| Value         | Meaning   |
|---------------|---|
| None          | <b>GridHeaderItem</b> (section 2.2.4.116) does not contain any dimension members (2) specified by a <b>named set</b> , a custom formula, or a <b>time intelligence</b> formula. A <b>GridHeaderItem</b> <b>MUST NOT</b> use this value if the <b>HeaderType</b> attribute is set to "NamedSet", as specified in <b>ScorecardNodeTypes</b> (section 2.2.5.44). |
| NamedSet      | Dimension members (2) are specified by a named set.   |
| CustomFormula | Dimension members (2) are specified by a custom formula.  |
| TimeFormula   | Dimension members (2) are specified by a time intelligence formula.   |

### 2.2.5.44 ScorecardNodeTypes

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type enumeration specifies the type of **scorecard** node header. This is used in the GridHeaderItem (section [2.2.4.116](#)).

```
<xs:simpleType name="ScorecardNodeTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Member"/>
        <xs:enumeration value="Kpi"/>
        <xs:enumeration value="KpiActual"/>
        <xs:enumeration value="KpiTarget"/>
        <xs:enumeration value="ScorecardDetails"/>
        <xs:enumeration value="DocumentLinks"/>
        <xs:enumeration value="NamedSet"/>
        <xs:enumeration value="Aggregate"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **ScorecardNodeTypes** simple type.

| Value            | Meaning   |
|------------------|---|
| None             | An unknown node type. This value SHOULD NOT be used except for the row and column root nodes. The behavior for this node type is unspecified. |
| Member           | A <b>dimension</b> member node.   |
| Kpi              | A <b>KPI</b> node.  |
| KpiActual        | A KPI actual value node.  |
| KpiTarget        | A KPI target value node.  |
| ScorecardDetails | Additional properties of scorecard elements node.   |
| DocumentLinks    | Document links of scorecard elements node.  |
| NamedSet         | A <b>named set</b> node.  |
| Aggregate        | An aggregation node.  |

## 2.2.5.45 ScoreTypes

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type enumeration specifies the type of **score** to be used when rolling up the target column in a **scorecard**.

```
<xs:simpleType name="ScoreTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Normalized"/>
    <xs:enumeration value="Raw"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ScoreTypes** simple type.

| Value      | Meaning  |
|------------|--|
| Normalized | Rollup scores are determined using <b>child</b> scores <b>normalized</b> to a common scale.  |
| Raw        | Rollup scores are determined using the child scores without any conversion or normalization. |

### 2.2.5.46 SizeType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type enumeration specifies the size unit in **DashboardElementSize** (section [2.2.4.82](#)).

```
<xs:simpleType name="SizeType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="AutoSize"/>
    <xs:enumeration value="Absolute"/>
    <xs:enumeration value="Percent"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **SizeType** simple type.

| Value    | Meaning   |
|----------|---|
| AutoSize | Auto sized based on internal content. Any related measurement value MUST be ignored if specified.                     |
| Absolute | Absolute value in <b>pixels</b> .   |
| Percent  | Percentage value relative to the container size. This value MUST NOT be less than 0 and MUST NOT be greater than 100. |

### 2.2.5.47 SortType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **SortType** simple type specifies the manner in which the values in a query result are sorted.

```
<xs:simpleType name="SortType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Off"/>
    <xs:enumeration value="ByIndex"/>
    <xs:enumeration value="ByTuple"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **SortType** simple type.

| Value   | Meaning  |
|---------|--|
| Off     | No sort is applied.  |
| ByIndex | Sort by column index.  |
| ByTuple | Sort by value, which is specified by the measure in the tuple. |

### 2.2.5.48 SqlReportViewDataServerMode

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The `SqlReportViewDataServerMode` simple type indicates when SQL Server Reporting Services integrated into a SharePoint **server (1)**.

```
<xs:simpleType name="SqlReportViewDataServerMode"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SharepointIntegrated"/>
    <xs:enumeration value="ReportCenter"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the `SqlReportViewDataServerMode` simple type.

| Value                | Meaning  |
|----------------------|--|
| SharepointIntegrated | The SQL Reporting Services server (1) is integrated into SharePoint, allowing reports to be stored and rendered using SharePoint server (1). |
| ReportCenter         | SQL Reports are stored and rendered using a SQL Server Reporting Services server (1).  |

### 2.2.5.49 StrategyMapToolbarOptions

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The `StrategyMapToolbarOptions` simple type specifies the view options for a **strategy map** report.

```
<xs:simpleType name="StrategyMapToolbarOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="ShowToolbar"/>
        <xs:enumeration value="ShowPage"/>
        <xs:enumeration value="ShowScrollbars"/>
        <xs:enumeration value="ShowPageTabs"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the `StrategyMapToolbarOptions` simple type.

| Value       | Meaning                        |
|-------------|--------------------------------|
| None        | No options are specified.      |
| ShowToolbar | The toolbar is displayed.      |
| ShowPage    | The drawing page is displayed. |

| Value          | Meaning                       |
|----------------|-------------------------------|
| ShowScrollbars | The scrollbars are displayed. |
| ShowPageTabs   | The page tabs are displayed.  |

### 2.2.5.50 Trinary

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type specifies an enumeration type that has three possible values.

```
<xs:simpleType name="Trinary" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Undefined"/>
    <xs:enumeration value="False"/>
    <xs:enumeration value="True"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **Trinary** simple type.

| Value     | Meaning             |
|-----------|---------------------|
| Undefined | Not Defined.        |
| False     | Specified as False. |
| True      | Specified as True.  |

### 2.2.5.51 ValueSources

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type enumeration specifies how **rollup** values are computed. The enumeration determines how values for parent scorecard row **items** will be computed from the values of **child** scorecard row items within the same scorecard column.

```
<xs:simpleType name="ValueSources" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default"/>
    <xs:enumeration value="NoValue"/>
    <xs:enumeration value="SourceData"/>
    <xs:enumeration value="Text"/>
    <xs:enumeration value="AverageRollup"/>
    <xs:enumeration value="MinRollup"/>
    <xs:enumeration value="MaxRollup"/>
    <xs:enumeration value="TotalRollup"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **ValueSources** simple type.

| Value         | Meaning   |
|---------------|---|
| Default       | Use default settings: If there are child <b>members (2)</b> , the <b>average weighted value</b> of child objects MUST be used; otherwise, when there are no child objects, SourceData value MUST be used. |
| NoValue       | Don't compute or show values.   |
| SourceData    | No rollup, query source data.   |
| Text          | Text value of source data.  |
| AverageRollup | Mathematical average value of child objects.  |
| MinRollup     | Minimum value of child objects.   |
| MaxRollup     | Maximum value of child objects.   |
| TotalRollup   | Total, summed, value of child objects.  |

### 2.2.5.52 VarianceDisplayType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type enumeration specifies how a **variance** value is calculated and presented.

```
<xs:simpleType name="VarianceDisplayType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="ShowPercent"/>
    <xs:enumeration value="ShowValue"/>
    <xs:enumeration value="ShowInvertedPercent"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **VarianceDisplayType** simple type.

| Value               | Meaning  |
|---------------------|--|
| ShowPercent         | Show <b>variance</b> value as the percentage variance between a target (section 2.2.4.170) value and its associated actual value.              |
| ShowValue           | Show the <b>variance</b> value as the difference between a target (section 2.2.4.170) value and its associated actual value.                   |
| ShowInvertedPercent | Show the <b>variance</b> value as the inverted percentage variance between a target (section 2.2.4.170) value and its associated actual value. |

### 2.2.5.53 VarianceType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

This simple type enumeration specifies how a **variance** calculation uses **indicator status band** and target values.

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

```

<xs:restriction base="xs:string">
  <xs:enumeration value="VarianceToTarget"/>
  <xs:enumeration value="VarianceToBestTarget"/>
</xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **VarianceType** simple type.

| Value                | Meaning  |
|----------------------|--|
| VarianceToTarget     | Show the <b>variance</b> value as the inverted percentage variance between a target (section 2.2.4.170) value and its associated actual value.   |
| VarianceToBestTarget | Calculate value as the <b>variance</b> between the actual value and a computed target (section 2.2.4.170) value. The computed target (section 2.2.4.170) value takes into account the nearest threshold of the best <b>indicator status band</b> . See the <b>Banding</b> complex type (section <a href="#">2.2.4.60</a> ) for more information about bands. |

### 2.2.5.54 VerticalAlignments

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

This simple type enumeration specifies a vertical alignment of content within a grid **cell** or display element.

```

<xs:simpleType name="VerticalAlignments" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Undefined"/>
    <xs:enumeration value="Top"/>
    <xs:enumeration value="Middle"/>
    <xs:enumeration value="Bottom"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **VerticalAlignments** simple type.

| Value     | Meaning                          |
|-----------|----------------------------------|
| Undefined | Vertical alignment is undefined. |
| Top       | Align at the top.                |
| Middle    | Align at the middle.             |
| Bottom    | Align at the bottom.             |

### 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.

### **2.2.9 Common Data Structures**

This specification does not define any common **XML schema** data structures.

Preliminary

## 3 Protocol Details

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 **server (2)** as specified in [\[RFC2616\]](#) section 10, Status Code Definitions).

This protocol allows servers (2) to notify protocol clients of application-level faults using **SOAP faults**. Except where specified, these SOAP faults are not significant for interoperability, and protocol clients can interpret them in an implementation-specific manner.

This protocol allows servers (2) to perform implementation-specific authorization checks and notify protocol clients of authorization faults either using HTTP status codes or using SOAP faults as specified previously in this section.

Occasionally, instances occur where this web service's **WSDL** specifies optionality (for example, `minOccurs="0"` and `maxOccurs="1"`) that conflicts with the stated behavior in this document, or the document doesn't contain the stated behavior. In such cases, where the document and the WSDL conflict, the document takes precedence. In cases where the document doesn't specify optionality, the argument has to be present, even if the WSDL specifies that the argument is optional (for example, `minOccurs="0"`).

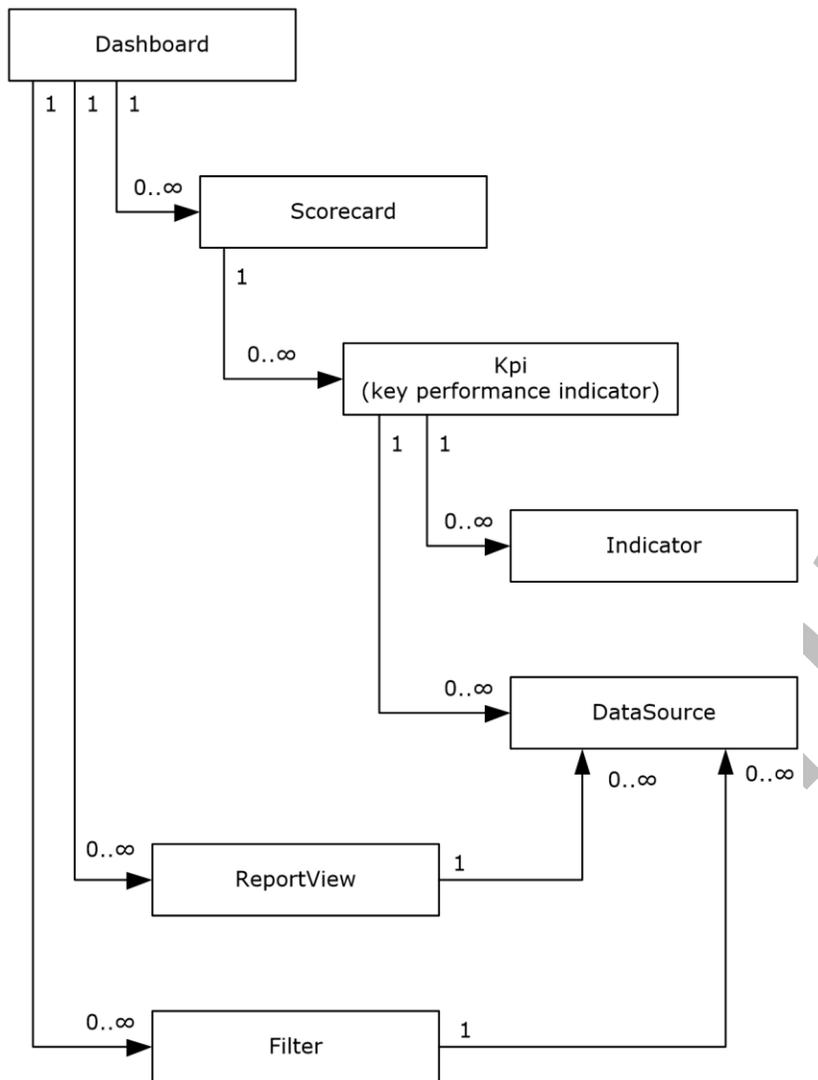
In cases where an argument is optional and the WSDL specifies both `"minOccurs=0"` and `"Nillable=true"`, treat the argument as only `"minOccurs=0"`.

### 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.

The **server (2)** maintains a collection of first-class elements indexed by unique repository locations. Each first-class element can be independently published to and read from the server (2). Each first-class element references its dependents by their unique repository locations. The following **UML** diagram describes how the first-class elements are related:



**Figure 6: Overview of first-class elements**

A first-class element's dependents are published prior to that first-class element being consumed on the server (2). For example, all the first-class elements that a **dashboard** is dependent on are published prior to that dashboard being deployed or viewed.

The following classes are defined as first-class elements:

**Dashboard:** A customizable landing page for a business application or workspace that uses **Web Parts** to display selected information. It can provide a comprehensive look at the information inside the application or workspace by consolidating lists (1), libraries, text, images and other data into a dynamic, customizable information portal.

Each Web Part on a dashboard displays the information specified by a single first-class element.

The Filters, Reports, and Scorecards in a Dashboard can be connected together so that changes in the state of one first-class element will change the information displayed by other first-class elements. For example, a Filter can be connected to Report Views or Scorecards so that changes to the selections made in the Filter are reflected in the information shown by those Report Views and Scorecards.

When Filters, Reports, and Scorecards are connected in a Dashboard, each connection has an explicit source and a destination. State information in a dashboard always flows from a connection source or begin point in one first-class element to a connection destination or endpoint in another first-class element. Filters, Reports, and Scorecards can each have multiple begin points and endpoints. A connection is fully defined by a source element, a begin point on that element, a destination element and an endpoint on that element. For example, the member name begin point on a Filter could be connected to the row endpoint on a Scorecard.

There are limitations on the way different first-class element can be connected in a Dashboard:

| First-class element | Can be a source? | Can be a destination? |
|---------------------|------------------|-----------------------|
| Filter              | Yes              | No                    |
| Report View         | No               | Yes                   |
| Scorecard           | Yes              | Yes                   |

- The connection cannot create a circular reference; a user cannot connect a scorecard to a filter that is already linked to the scorecard.
- A begin point is available if:
  - It is not already connected to another begin point or it is connected but its AcceptMultipleFilterLinks property is set to true.
  - It is not already connected to the begin point. If the dashboard item is a scorecard it can accept multiple connections from the same begin point.
- Unless the target item is a scorecard a user cannot make multiple connections from a begin point to a target.
- Although a scorecard can accept multiple connections from the same begin point, those connections cannot be to the same end point on the scorecard. In other words, a user can connect a filter to a scorecard's Row end point and its Column end point, but a user cannot connect a begin point to a scorecard's Row end point twice.

**Scorecard:** A report type that depicts organizational performance by displaying a collection of key performance indicators (KPIs) together with performance targets for those KPIs. A scorecard can be organized hierarchically.

**ReportView:** A visual display of data in a dashboard that can be coordinated with other **report views** by using filters.

**Filter:** A feature that enables users to modify dashboard views by changing the subset of data that is displayed in reports or scorecards.

**KPI (key performance indicator):** A predefined measure that is used to track performance of a strategic goal, objective, plan, initiative, or business process. A KPI is evaluated against a target. An explicit and measurable value taken directly from a data source.

**Indicator:** A set of graphics, text, and colors for defining different levels of performance when comparing an actual value and a target value within a KPI.

**DataSource:** A reference to a disk, file, document, or other collection of information from which data is taken or moved.

The server (2) also maintains a collection of annotations.

**Annotation:** One of possibly several notations associated with a comment. Each comment is associated with a single **cell** in a scorecard and meant to provide related information about the value in that scorecard cell.

### 3.1.2 Timers

If a request exceeds a query timeout period, the **server (2)** MUST return a **SOAP fault** response, which MUST contain the **Query Timeout** [<22> ErrorCode](#) as specified in section [2.2.2.1](#).

### 3.1.3 Initialization

None.

### 3.1.4 Message Processing Events and Sequencing Rules

This section specifies the **server (2)** operations.

The following table summarizes the list of operations as defined by this specification.

| Operation               | Description  |
|-------------------------|--|
| <b>CreateAnnotation</b> | The <b>CreateAnnotation</b> operation is used to create an <b>Annotation</b> complex type (section <a href="#">2.2.4.18</a> ) on the server (2). |
| <b>CreateDashboard</b>  | The <b>CreateDashboard</b> operation is used to create a <b>Dashboard</b> complex type (section <a href="#">2.2.4.79</a> ) on the server (2).    |
| <b>CreateDataSource</b> | The <b>CreateDataSource</b> operation is used to create a <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ) on the server (2).  |
| <b>CreateFilter</b>     | The <b>CreateFilter</b> operation is used to create a <b>Filter</b> complex type (section <a href="#">2.2.4.98</a> ) on the server (2).          |
| <b>CreateIndicator</b>  | The <b>CreateIndicator</b> operation is used to create an <b>Indicator</b> complex type (section <a href="#">2.2.4.125</a> ) on the server (2).  |
| <b>CreateKpi</b>        | The <b>CreateKpi</b> operation is used to create a <b>Kpi</b> complex type (section <a href="#">2.2.4.128</a> ) on the server (2).               |
| <b>CreateReportView</b> | The <b>CreateReportView</b> operation creates a <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ) on the server (2).           |
| <b>CreateScorecard</b>  | The <b>CreateScorecard</b> operation creates a <b>Scorecard</b> complex type (section <a href="#">2.2.4.162</a> ) on the server (2).             |
| <b>DeleteAnnotation</b> | The <b>DeleteAnnotation</b> operation deletes an <b>Annotation</b> complex type (section <a href="#">2.2.4.18</a> ) from the server (2).         |
| <b>DeleteDashboard</b>  | The <b>DeleteDashboard</b> operation deletes a <b>Dashboard</b> complex type (section <a href="#">2.2.4.79</a> ) from the server (2).            |
| <b>DeleteDataSource</b> | The <b>DeleteDataSource</b> operation deletes a <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ) from the server (2).          |
| <b>DeleteFilter</b>     | The <b>DeleteFilter</b> operation deletes a <b>Filter</b> complex type (section <a href="#">2.2.4.98</a> ) from the server (2).                  |
| <b>DeleteIndicator</b>  | The <b>DeleteIndicator</b> operation deletes an <b>Indicator</b> complex type (section <a href="#">2.2.4.125</a> ) from the server (2).          |
| <b>DeleteKpi</b>        | The <b>DeleteKpi</b> operation deletes a <b>Kpi</b> complex type   |

| Operation                                   | Description  |
|---|--|
|   | (section 2.2.4.128) from the server (2).   |
| <b>DeleteReportView</b>                     | The <b>DeleteReportView</b> operation deletes a <b>ReportView</b> complex type (section 2.2.4.160) from the server (2).  |
| <b>DeleteScorecard</b>                      | The <b>DeleteScorecard</b> operation deletes a <b>Scorecard</b> complex type (section 2.2.4.162) from the server (2).  |
| <b>ExportDashboard</b>                      | The <b>ExportDashboard</b> operation<23> is used to export <b>dashboard</b> pages and their associated content from the server (2) into a specified Deployment Package ([ <a href="#">MS-PRIMEPF</a> ]).   |
| <b>GenerateView</b>                         | The <b>GenerateView</b> operation generates the data structure that represents a <b>scorecard</b> grid view, the <b>GridViewData</b> complex type (section <a href="#">2.2.4.121</a> ), based on information stored on the server (2).   |
| <b>GenerateViewDirect</b>                   | The <b>GenerateViewDirect</b> operation generates the data structure that represents a scorecard grid view (see <b>GridViewData</b> complex type, section 2.2.4.121), using information sent from the client.  |
| <b>GetAllAnnotationsByScorecardLocation</b> | The <b>GetAllAnnotationsByScorecardLocation</b> operation retrieves an array of <b>Annotation</b> complex type elements (section 2.2.4.18) associated with a scorecard.  |
| <b>GetAnalyticReportView</b>                | The <b>GetAnalyticReportView</b> operation retrieves a <b>report view</b> from the server (2) that has been created through the <b>SaveTemporaryAnalyticReport</b> (section <a href="#">3.1.4.65</a> ) or <b>CreateReportView</b> (section <a href="#">3.1.4.7</a> ) operation.  |
| <b>GetAnnotation</b>                        | The <b>GetAnnotation</b> operation retrieves an <b>Annotation</b> complex type (section 2.2.4.18) associated with a scorecard <b>cell</b> from the server (2).   |
| <b>GetAnnotationByID</b>                    | The <b>GetAnnotationByID</b> operation retrieves an <b>Annotation</b> complex type (section 2.2.4.18) from a specified <b>GUID</b> from the server (2).  |
| <b>GetAnnotationSetting</b>                 | The <b>Attribute Groups</b> operation retrieves an <b>AnnotationSetting</b> complex type object (section <a href="#">3.1.4.24.3.1</a> ) that contains the annotation settings for the server (2).  |
| <b>GetAsKpis</b>                            | The <b>GetAsKpis</b> operation takes in an <b>Analysis Services</b> data source along with a <b>server-relative URL</b> to a <b>Kpi</b> complex type (section 2.2.4.128) <b>list (1)</b> , and returns a collection of <b>Kpis</b> as defined in the <b>ArrayOfKpi</b> complex type (see section <a href="#">2.2.4.41</a> ). |
| <b>GetCube</b>                              | The <b>GetCube</b> operation takes in a <b>RepositoryLocation</b> complex type object (section <a href="#">2.2.4.161</a> ), and returns the associated <b>Cube</b> complex type object (section <a href="#">2.2.4.78</a> ).  |
| <b>GetCubeFromDataSource</b>                | The <b>GetCubeFromDataSource</b> operation takes in a data source object and returns the associated <b>Cube</b> complex type object section 2.2.4.78().  |
| <b>GetCubeMetaData</b>                      | The <b>GetCubeMetaData</b> operation takes in an Analysis Services <b>RepositoryLocation</b> complex type object (section 2.2.4.161) and returns the associated <b>Cube</b>  |

| Operation                             | Description  |
|---------------------------------------|--|
|                                       | complex type object (section 2.2.4.78).  |
| <b>GetCubeMetaDataForDataSource</b>   | The <b>GetCubeMetaDataForDataSource</b> operation takes in an Analysis Services data source object and returns the associated <b>Cube</b> complex type object (section 2.2.4.78). This operation is valid for Analysis Services data sources only.   |
| <b>GetCubeNameInfos</b>               | The <b>GetCubeNameInfos</b> operation retrieves an <b>ArrayOfNameInfo</b> complex type (section 2.2.4.48) that describes the <b>cubes</b> of the <b>data source (1)</b> .  |
| <b>GetCurrentCultureLcid</b>          | The <b>GetCurrentCultureLcid</b> operation retrieves the current culture locale identifier.  |
| <b>GetCurrentUserInfo</b>             | The <b>GetCurrentUserInfo</b> operation retrieves the user name and display name information of the <b>current user</b> .  |
| <b>GetDashboard</b>                   | The <b>GetDashboard</b> operation retrieves a dashboard.   |
| <b>GetDatabaseNamesFromDataSource</b> | The <b>GetDatabaseNamesFromDataSource</b> operation retrieves an array of database names associated with the data source (1).  |
| <b>GetDataSource</b>                  | The <b>GetDataSource</b> operation retrieves a data source (1).  |
| <b>GetDependentElements</b>           | The <b>GetDependentElements</b> operation retrieves from the server (2) all <b>FirstClassElement</b> complex types (section 2.2.4.99) associated with a list (1) of repository locations. In addition, all <b>FirstClassElements</b> that are related by reference are also included in the response. For example, for a requested scorecard, all <b>Kpis</b> , <b>Indicators</b> , and <b>DataSources</b> that the scorecard depends on will also be retrieved. |
| <b>GetDimensions</b>                  | The <b>GetDimensions</b> operation retrieves an array of <b>dimension</b> objects.   |
| <b>GetDimensionsFromDataSource</b>    | The <b>GetDimensionsFromDataSource</b> operation retrieves an array of dimension objects (see section 2.2.4.90).   |
| <b>GetFilter</b>                      | The <b>GetFilter</b> operation retrieves a <b>Filter</b> complex type (section 2.2.4.98).  |
| <b>GetIndicator</b>                   | The <b>GetIndicator</b> operation retrieves an <b>Indicator</b> complex type (section 2.2.4.125) from the server (2).  |
| <b>GetKpi</b>                         | The <b>GetKpi</b> operation retrieves a <b>Kpi</b> complex type object (section 2.2.4.128).  |
| <b>GetKpisFromScorecard</b>           | The <b>GetKpisFromScorecard</b> operation retrieves an array of <b>Kpi</b> complex type objects (section 2.2.4.128) associated with a scorecard.   |
| <b>GetLatestAnalyticReportVersion</b> | The <b>GetLatestAnalyticReportVersion</b> operation retrieves from the server (2) the version number for a report view that has been created through <b>SaveTemporaryAnalyticReport</b> operation (section 3.1.4.65).  |
| <b>GetListItems</b>                   | The <b>GetListItems</b> operation retrieves all  |

| Operation                                      | Description  |
|--|--|
|  | <b>FirstClassElements</b> complex types (section 2.2.4.99) associated with a given repository list (1) from the server (2).  |
| <b>GetMdx</b>                                  | The <b>GetMdx</b> operation retrieves an <b>MDX</b> that can be used to query data sources for the given analytic report. The Analytic Chart and Analytic Grid report view types contain custom data that is used to generate MDX queries. See the <b>ReportView</b> complex type (section 2.2.4.160) for more detail.   |
| <b>GetParameterDisplayData</b>                 | The <b>GetParameterDisplayData</b> operation builds a template data table containing only the columns produced by a specific parameter type. The referred parameter represents a specific kind of connection between two <b>Web Parts</b> . The resulting <b>DataTable</b> (as described in <a href="#">[DataTable]</a> ) represents an empty sample of the information that gets passed on that connection. |
| <b>GetPreviewDataSet</b>                       | The <b>GetPreviewDataSet</b> method retrieves a data set from a data source, which is suitable for previewing results.   |
| <b>GetQueryResultMembers</b>                   | The <b>GetQueryResultMembers</b> operation retrieves an array of <b>members (2)</b> associated with the specified <b>report</b> .  |
| <b>GetRegisteredCustomFCOs</b>                 | The <b>GetRegisteredCustomFCOs</b> operation retrieves custom object definitions registered on the server (2).   |
| <b>GetReportView</b>                           | The <b>GetReportView</b> operation retrieves a <b>ReportView</b> complex type (section 2.2.4.160) from the server (2).   |
| <b>GetScorecard</b>                            | The <b>GetScorecard</b> operation retrieves a <b>Scorecard</b> complex type (section 2.2.4.162).   |
| <b>ImportDashboard</b>                         | The <b>ImportDashboard</b> operation <a href="#">&lt;24&gt;</a> is used to import content from a specified Deployment Package ([MS-PRIMEPF]) to the server (2).  |
| <b>QueryChildMembers</b>                       | The <b>QueryChildMembers</b> operation uses a data source for the specified member, and returns a collection of members.   |
| <b>QueryChildMembersByRangeFromDataSource</b>  | The <b>QueryChildMembersByRangeFromDataSource</b> operation queries the <b>DataSource</b> complex type (section 2.2.4.85), and returns a collection of <b>child</b> members.   |
| <b>QueryChildMembersFromDataSource</b>         | The <b>QueryChildMembersFromDataSource</b> operation uses the data source to retrieve a collection of child members for the specified member name.   |
| <b>QueryDimensionRootMembers</b>               | The <b>QueryDimensionRootMembers</b> operation uses a data source (1) from the repository location for the specified member, and returns a collection of root members.   |
| <b>QueryDimensionRootMembersFromDataSource</b> | The <b>QueryDimensionRootMembersFromDataSource</b> method uses the data source to retrieve a collection of root members for the specified member name.   |
| <b>QueryNamedSets</b>                          | The <b>QueryNamedSets</b> operation is used to retrieve the <b>named sets</b> that are defined by a data source (1) when   |

| Operation                                | Description  |
|--|--|
|  | given the <b>RepositoryLocation</b> complex type (section 2.2.4.161) of the data source (1).   |
| <b>QueryNamedSetsFromDataSource</b>      | The <b>QueryNamedSetsFromDataSource</b> operation is used to retrieve the named sets that are defined by the given data source (1).  |
| <b>QueryRelatedMember</b>                | The <b>QueryRelatedMember</b> operation is used to retrieve a member (2) having the specified relationship to the specified member from the data source (1) at the given <b>RepositoryLocation</b> complex type (section 2.2.4.161).   |
| <b>QueryRelatedMemberFromDataSource</b>  | The <b>QueryRelatedMemberFromDataSource</b> operation queries the given data source (1) for the member (2) having the specified relationship to the specified member.  |
| <b>QueryTimeIntelligence</b>             | The <b>QueryTimeIntelligence</b> operation queries a data source (1) location for the members (2) that are specified by a <b>time intelligence</b> formula.  |
| <b>QueryTimeIntelligenceDirect</b>       | The <b>QueryTimeIntelligenceDirect</b> operation queries the provided data source (1) for the members (2) that are specified by a time intelligence formula.   |
| <b>QueryTransformMembers</b>             | The <b>QueryTransformMembers</b> method <b>transforms</b> any collection of <b>Member</b> complex types (section <a href="#">2.2.4.134</a> ) into a new member collection based on the operation passed on the <b>transformType</b> parameter of the <b>QueryTransformMembers</b> element (section <a href="#">3.1.4.64.2.1</a> ) as specified in section <a href="#">3.1.4.64.4.1</a> . |
| <b>SaveTemporaryAnalyticReport</b>       | The <b>SaveTemporaryAnalyticReport</b> operation stores a temporary copy of a <b>ReportView</b> complex type (section 2.2.4.160) to the server (2).  |
| <b>TestConnection</b>                    | The <b>TestConnection</b> operation is used to determine whether a connection as specified by the <b>dataSource</b> element can be established.  |
| <b>TrimAnnotationByOwner</b>             | The <b>TrimAnnotationByOwner</b> operation removes all the <b>Annotation</b> complex types (section 2.2.4.18) that are owned by a specific user.   |
| <b>TrimAnnotationByScorecardLocation</b> | The <b>TrimAnnotationByScorecardLocation</b> operation removes all the annotations that belong to a scorecard at a specific location.  |
| <b>TrimAnnotationUntouchedSince</b>      | The <b>TrimAnnotationUntouchedSince</b> operation removes all the <b>Annotation</b> complex types (section 2.2.4.18) that haven't been updated since the specified date.   |
| <b>UpdateAnnotation</b>                  | The <b>UpdateAnnotation</b> operation updates an existing <b>Annotation</b> complex type (section 2.2.4.18).   |
| <b>UpdateDashboard</b>                   | The <b>UpdateDashboard</b> operation updates an existing <b>Dashboard</b> complex type (section 2.2.4.79).   |
| <b>UpdateDataSource</b>                  | The <b>UpdateDataSource</b> operation updates an existing <b>DataSource</b> complex type (section 2.2.4.85).   |
| <b>UpdateFilter</b>                      | The <b>UpdateFilter</b> operation is used to update the existing <b>filter</b> as specified by the <b>Filter</b> complex type object (section 2.2.4.98) in the <b>UpdateFilter</b> input element   |

| Operation                     | Description  |
|-------------------------------|--|
|                               | (section <a href="#">3.1.4.73.2.1</a> ).   |
| <b>UpdateIndicator</b>        | The <b>UpdateIndicator</b> operation is used to update the existing <b>Indicator</b> as specified by the <b>Indicator</b> complex type object (section 2.2.4.125) in the <b>UpdateIndicator</b> input element (section <a href="#">3.1.4.74.2.1</a> ). |
| <b>UpdateKpi</b>              | The <b>UpdateKpi</b> operation is used to update the existing <b>KPI</b> as specified by the <b>Kpi</b> complex type object (section 2.2.4.128) in the <b>UpdateKpi</b> input element (section <a href="#">3.1.4.75.2.1</a> ).                         |
| <b>UpdateReportView</b>       | The <b>UpdateReportView</b> operation is used to update the existing report view as specified by the <b>ReportView</b> complex type object (section 2.2.4.160) in the <b>UpdateReportView</b> input element (section <a href="#">3.1.4.76.2.1</a> ).   |
| <b>UpdateScorecard</b>        | The <b>UpdateScorecard</b> operation is used to update the existing scorecard as specified by the <b>Scorecard</b> complex type object (section 2.2.4.162) in the <b>UpdateScorecard</b> input element (section <a href="#">3.1.4.77.2.1</a> ).        |
| <b>ValidateKpi</b>            | The <b>ValidateKpi</b> operation checks whether a KPI stored on the server (2) is valid.   |
| <b>ValidateScorecard</b>      | The <b>ValidateScorecard</b> operation checks if a scorecard stored on the server (2) is valid.  |
| <b>ValidateSiteCollection</b> | The <b>ValidateSiteCollection</b> operation is used to check if the <b>context site</b> has the server (2) feature installed.  |

### 3.1.4.1 CreateAnnotation

The **CreateAnnotation** operation is used to create an **Annotation** complex type (section [2.2.4.18](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateAnnotation WSDL operation**.

```
<wsdl:operation name="CreateAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateAnnotationSoapIn"/>
  <wsdl:output message="tns:CreateAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateAnnotationSoapIn** request message (section [3.1.4.1.1.1](#)), and the server (2) responds with a **CreateAnnotationSoapOut** response message (section [3.1.4.1.1.2](#)) as follows:

- The protocol client MUST send the **Annotation** to be created.
- The server (2) MUST create the specified **Annotation** in the database.
- If creation is successful, the server (2) MUST return the created **Annotation** whose following fields are updated:
  - CreatedOn
  - Guid
  - LastUpdatedOn

## Exceptions:

| ErrorCode            | Description   |
|----------------------|---|
| AnnotationNotEnabled | See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ). |
| InvalidAnnotation    | See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ). |
| InvalidComment       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| InvalidPermission    | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |

In case of any other failure, the **ErrorCode** MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.1.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                        | Description  |
|--------------------------------|--|
| <b>CreateAnnotationSoapIn</b>  | The request WSDL message for the <b>CreateAnnotation WSDL operation</b> .  |
| <b>CreateAnnotationSoapOut</b> | The response WSDL message for the <b>CreateAnnotation WSDL operation</b> . |

#### 3.1.4.1.1.1 CreateAnnotationSoapIn

The request **WSDL message** for the **CreateAnnotation WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/CreateAnnotation`

The **SOAP body** contains the **CreateAnnotation** element.

#### 3.1.4.1.1.2 CreateAnnotationSoapOut

The response **WSDL message** for the **CreateAnnotation WSDL operation**.

The **SOAP body** contains the **CreateAnnotationResponse** element.

### 3.1.4.1.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>CreateAnnotation</b>         | The input data for the <b>CreateAnnotation WSDL operation</b> .  |
| <b>CreateAnnotationResponse</b> | The result data for the <b>CreateAnnotation WSDL operation</b> . |

### 3.1.4.1.2.1 CreateAnnotation

The **CreateAnnotation** element specifies the input data for the **CreateAnnotation WSDL operation**.

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

**annotation:** The **Annotation** complex type (section [2.2.4.18](#)) to be created on the **server (2)**. This element **MUST** be present.

### 3.1.4.1.2.2 CreateAnnotationResponse

The **CreateAnnotationResponse** element specifies the result data for the **CreateAnnotation WSDL operation**.

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

**CreateAnnotationResult:** The **Annotation** complex type (section [2.2.4.18](#)) created on the **server (2)**. This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.1](#).

### 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 CreateDashboard

The **CreateDashboard** operation is used to create a **Dashboard** complex type (section [2.2.4.79](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateDashboard WSDL operation**.

```
<wsdl:operation name="CreateDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateDashboardSoapIn"/>
  <wsdl:output message="tns:CreateDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateDashboardSoapIn** request message (section [3.1.4.2.1.1](#)), and the server (2) responds with a **CreateDashboardSoapOut** response message (section [3.1.4.2.1.2](#)) as follows:

- The protocol client MUST send the **Dashboard** and its target location on the server (2).
- The server (2) MUST create the specified **Dashboard** at the specified server (2) location.
- If creation is successful, the server (2) MUST return the created **Dashboard** with the following fields set, as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

#### Exceptions:

| ErrorCode                            | Description  |
|--------------------------------------|--|
| <b>InvalidObject</b>                 | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>             | See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListAccess</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListType</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationUrlLength</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationAbsoluteUrl</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>Unknown</b>                       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the **ErrorCode** MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.2.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                       | Description   |
|-------------------------------|---|
| <b>CreateDashboardSoapIn</b>  | The request WSDL message for the <b>CreateDashboard WSDL operation</b> .  |
| <b>CreateDashboardSoapOut</b> | The response WSDL message for the <b>CreateDashboard WSDL operation</b> . |

#### 3.1.4.2.1.1 CreateDashboardSoapIn

The request **WSDL message** for the **CreateDashboard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateDashboard
```

The **SOAP body** contains the **CreateDashboard** element.

#### 3.1.4.2.1.2 CreateDashboardSoapOut

The response **WSDL message** for the **CreateDashboard WSDL operation**.

The **SOAP body** contains the **CreateDashboardResponse** element.

### 3.1.4.2.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>CreateDashboard</b>         | The input data for the <b>CreateDashboard WSDL operation</b> .  |
| <b>CreateDashboardResponse</b> | The result data for the <b>CreateDashboard WSDL operation</b> . |

#### 3.1.4.2.2.1 CreateDashboard

The **CreateDashboard** element specifies the input data for the **CreateDashboard WSDL operation**.

```
<xs:element name="CreateDashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dashboard" type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
```

```
</xs:element>
```

**listUrl:** The location on the **server (2)** where the **dashboard** is created. This element MUST be present. It MUST be a valid **URL** as specified in [\[RFC1738\]](#) and MUST be a valid **subsite** on the server (2).

**dashboard:** The **Dashboard** complex type (section [2.2.4.79](#)) to be created on the server (2). This element MUST be present.

### 3.1.4.2.2 CreateDashboardResponse

The **CreateDashboardResponse** element specifies the result data for the **CreateDashboard WSDL operation**.

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

**CreateDashboardResult:** The **Dashboard** complex type (section [2.2.4.79](#)) created on the **server (2)**. This element MUST be present. All of the fields MUST be set as designated in section [3.1.4.2](#).

### 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 CreateDataSource

The **CreateDataSource** operation is used to create a **DataSource** complex type (section [2.2.4.85](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateDataSource WSDL operation**.

```
<wsdl:operation name="CreateDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateDataSourceSoapIn"/>
  <wsdl:output message="tns:CreateDataSourceSoapOut"/>
</wsdl:operation>
```

</wsdl:operation>

The protocol client sends a **CreateDataSourceSoapIn** request message (section [3.1.4.3.1.1](#)), and the server (2) responds with a **CreateDataSourceSoapOut** response message (section [3.1.4.3.1.2](#)) as follows:

- The protocol client MUST send the **DataSource** and its target location on the server (2).
- The server (2) MUST create the specified **DataSource** at the specified server (2) location.
- If creation is successful, the server (2) MUST return the created **DataSource** with the following fields set as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

**Exceptions:**

| Error code                           | Description  |
|--------------------------------------|--|
| <b>InvalidDataSource</b>             | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>             | See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListAccess</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListType</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationUrlLength</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationAbsoluteUrl</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>Unknown</b>                       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.3.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                        | Description  |
|--------------------------------|--|
| <b>CreateDataSourceSoapIn</b>  | The request WSDL message for the <b>CreateDataSource WSDL operation</b> .  |
| <b>CreateDataSourceSoapOut</b> | The response WSDL message for the <b>CreateDataSource WSDL operation</b> . |

#### 3.1.4.3.1.1 CreateDataSourceSoapIn

The request **WSDL message** for the **CreateDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateDataSource
```

The **SOAP body** contains the **CreateDataSource** element.

#### 3.1.4.3.1.2 CreateDataSourceSoapOut

The response **WSDL message** for the **CreateDataSource WSDL operation**.

The **SOAP body** contains the **CreateDataSourceResponse** element.

### 3.1.4.3.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>CreateDataSource</b>         | The input data for the <b>CreateDataSource WSDL operation</b> .  |
| <b>CreateDataSourceResponse</b> | The result data for the <b>CreateDataSource WSDL operation</b> . |

#### 3.1.4.3.2.1 CreateDataSource

The **CreateDataSource** element specifies the input data for the **CreateDataSource WSDL operation**.

```
<xs:element name="CreateDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the **server (2)** where the **DataSource** complex type (section [2.2.4.85](#)) is to be created. This element MUST be present. It MUST be a valid relative **URL** as specified in [\[RFC1808\]](#) and MUST be a **site (2)** on the server (2).

**dataSource:** The **DataSource** to be created on the server (2). This element MUST be present.

### 3.1.4.3.2 CreateDataSourceResponse

The **CreateDataSourceResponse** element specifies the result data for the **CreateDataSource WSDL operation**.

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

**CreateDataSourceResult:** The **DataSource** complex type (section [2.2.4.85](#)) created on the **server (2)**. This element MUST be present. All of the fields MUST be set as designated in section [3.1.4.3](#).

### 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 CreateFilter

The **CreateFilter** operation is used to create a **Filter** complex type (section [2.2.4.98](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateFilter WSDL operation**.

```
<wsdl:operation name="CreateFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateFilterSoapIn"/>
  <wsdl:output message="tns:CreateFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateFilterSoapIn** request message (section [3.1.4.4.1.1](#)), and the server (2) responds with a **CreateFilterSoapOut** response message (section [3.1.4.4.1.2](#)) as follows:

- The protocol client MUST send the **Filter** and its **target** location on the server (2).
- The server (2) MUST create the specified **Filter** at the specified server (2) location.
- If creation is successful, the server (2) MUST return the created Filter with the following fields set as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):
  - CreatedBy
  - CreatedDate
  - LastModified
  - Location
  - ModifiedBy
  - Version

**Exceptions:**

| Error code                           | Description  |
|--------------------------------------|--|
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>             | See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListAccess</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListType</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationUrlLength</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationAbsoluteUrl</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>Unknown</b>                       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.4.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                    | Description  |
|----------------------------|--|
| <b>CreateFilterSoapIn</b>  | The request WSDL message for the <b>CreateFilter WSDL operation</b> .  |
| <b>CreateFilterSoapOut</b> | The response WSDL message for the <b>CreateFilter WSDL operation</b> . |

#### 3.1.4.4.1.1 CreateFilterSoapIn

The request **WSDL message** for the **CreateFilter WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateFilter
```

The **SOAP body** contains the **CreateFilter** element.

### 3.1.4.4.1.2 CreateFilterSoapOut

The response **WSDL message** for the **CreateFilter WSDL operation**.

The **SOAP body** contains the **CreateFilterResponse** element.

### 3.1.4.4.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>CreateFilter</b>         | The input data for the <b>CreateFilter WSDL operation</b> .  |
| <b>CreateFilterResponse</b> | The result data for the <b>CreateFilter WSDL operation</b> . |

#### 3.1.4.4.2.1 CreateFilter

The **CreateFilter** element specifies the input data for the **CreateFilter WSDL operation**.

```
<xs:element name="CreateFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the **server (2)** where the **Filter** complex type (section [2.2.4.98](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative **URL**, as specified in [RFC1808](#) and **MUST** be a valid **site (2)** on the server (2).

**filter:** The Filter to be created on the server (2). This element **MUST** be present.

#### 3.1.4.4.2.2 CreateFilterResponse

The **CreateFilterResponse** element specifies the result data for the **CreateFilter WSDL operation**.

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

**CreateFilterResult:** The **Filter** complex type (section [2.2.4.98](#)) created on the **server (2)**. This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.4](#).

### 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 CreateIndicator

The **CreateIndicator** operation is used to create an **Indicator** complex type (section [2.2.4.125](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateIndicator WSDL operation**.

```
<wsdl:operation name="CreateIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateIndicatorSoapIn"/>
  <wsdl:output message="tns:CreateIndicatorSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateIndicatorSoapIn** request message (section [3.1.4.5.1.1](#)), and the server (2) responds with a **CreateIndicatorSoapOut** response message (section [3.1.4.5.1.2](#)) as follows:

- The protocol client **MUST** send the **Indicator** and its target location on the server (2).
- The server (2) **MUST** create the specified **Indicator** at the specified server (2) location.
- If creation is successful, the server (2) **MUST** return the created **Indicator** with the following fields set as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

#### Exceptions:

| Error code                           | Description  |
|--------------------------------------|--|
| <b>InvalidIndicator</b>              | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>             | See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListAccess</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListType</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationUrlLength</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationAbsoluteUrl</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>Unknown</b>                       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.5.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                       | Description   |
|-------------------------------|---|
| <b>CreateIndicatorSoapIn</b>  | The request WSDL message for the <b>CreateIndicator WSDL operation</b> .  |
| <b>CreateIndicatorSoapOut</b> | The response WSDL message for the <b>CreateIndicator WSDL operation</b> . |

#### 3.1.4.5.1.1 CreateIndicatorSoapIn

The request **WSDL message** for the **CreateIndicator WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateIndicator
```

The **SOAP body** contains the **CreateIndicator** element.

#### 3.1.4.5.1.2 CreateIndicatorSoapOut

The response **WSDL message** for the **CreateIndicator WSDL operation**.

The **SOAP body** contains the **CreateIndicatorResponse** element.

### 3.1.4.5.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>CreateIndicator</b>         | The input data for the <b>CreateIndicator WSDL operation</b> .  |
| <b>CreateIndicatorResponse</b> | The result data for the <b>CreateIndicator WSDL operation</b> . |

#### 3.1.4.5.2.1 CreateIndicator

The **CreateIndicator** element specifies the input data for the **CreateIndicator WSDL operation**.

```
<xs:element name="CreateIndicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the **server (2)** where the **Indicator** complex type (section [2.2.4.125](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative **URL** as specified in [\[RFC1808\]](#) and **MUST** be a valid **site (2)** on the server (2).

**indicator:** The **Indicator** to be created on the server (2). **MUST** be present.

#### 3.1.4.5.2.2 CreateIndicatorResponse

The **CreateIndicatorResponse** element specifies the result data for the **CreateIndicator WSDL operation**.

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

**CreateIndicatorResult:** The **Indicator** complex type (section [2.2.4.125](#)) created on the **server (2)**. This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.5](#).

#### 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 CreateKpi

The **CreateKpi** operation is used to create a **Kpi** complex type (section [2.2.4.128](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateKpi WSDL operation**.

```
<wsdl:operation name="CreateKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateKpiSoapIn"/>
  <wsdl:output message="tns:CreateKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateKpiSoapIn** request message (section [3.1.4.6.1.1](#)), and the server (2) responds with a **CreateKpiSoapOut** response message (section [3.1.4.6.1.2](#)) as follows:

- The protocol client MUST send the **Kpi** and its target location on the server (2).
- The server (2) MUST create the specified **Kpi** at the specified server (2) location.
- If creation is successful, the server (2) MUST return the created **Kpi** with the following fields set as specified in the **FirstClassElement** (section [2.2.4.99](#)) and **KpiMeasure** (section [2.2.4.129](#)) complex types:
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version
  - Actuals.OwnerKpiLocation
  - Targets.OwnerKpiLocation

#### Exceptions:

| Error code                           | Description  |
|--------------------------------------|--|
| <b>InvalidKpi</b>                    | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

| Error code                           | Description   |
|--------------------------------------|---|
| <b>InvalidPermission</b>             | See Common list of Error Codes (section 2.2.2.1.3). |
| <b>FCOCreateFailed</b>               | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>FCOCreateFailedListAccess</b>     | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>FCOCreateFailedListType</b>       | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>RepositoryLocationUrlLength</b>   | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>RepositoryLocationAbsoluteUrl</b> | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>Unknown</b>                       | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------|---|
| <b>CreateKpiSoapIn</b>  | The request WSDL message for the <b>CreateKpi WSDL operation</b> .  |
| <b>CreateKpiSoapOut</b> | The response WSDL message for the <b>CreateKpi WSDL operation</b> . |

#### 3.1.4.6.1.1 CreateKpiSoapIn

The request **WSDL message** for the **CreateKpi WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateKpi
```

The **SOAP body** contains the **CreateKpi** element.

#### 3.1.4.6.1.2 CreateKpiSoapOut

The response **WSDL message** for the **CreateKpi WSDL operation**.

The **SOAP body** contains the **CreateKpiResponse** element.

### 3.1.4.6.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element          | Description  |
|------------------|--|
| <b>CreateKpi</b> | The input data for the <b>CreateKpi WSDL operation</b> . |

| Element                  | Description  |
|--------------------------|--|
| <b>CreateKpiResponse</b> | The result data for the <b>CreateKpi</b> WSDL operation. |

### 3.1.4.6.2.1 CreateKpi

The **CreateKpi** element specifies the input data for the **CreateKpi WSDL operation**.

```
<xs:element name="CreateKpi" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="kpi" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the **server (2)** where the **Kpi** complex type (section [2.2.4.128](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative **URL** as specified in [\[RFC1808\]](#) and **MUST** be a valid **site (2)** on the server (2).

**kpi:** The **KPI** to be created on the server (2). This element **MUST** be present.

### 3.1.4.6.2.2 CreateKpiResponse

The **CreateKpiResponse** element specifies the result data for the **CreateKpi WSDL operation**.

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

**CreateKpiResult:** The **Kpi** complex type (section [2.2.4.128](#)) created on the **server (2)**. This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.6](#).

### 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 CreateReportView

The **CreateReportView** operation creates a **ReportView** complex type (section [2.2.4.160](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateReportView WSDL operation**.

```
<wsdl:operation name="CreateReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateReportViewSoapIn"/>
  <wsdl:output message="tns:CreateReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateReportViewSoapIn** request message (section [3.1.4.7.1.1](#)), and the server (2) responds with a **CreateReportViewSoapOut** response message (section [3.1.4.7.1.2](#)) as follows:

- The protocol client MUST send the **ReportView** and **URL** location.
- The server (2) MUST create the specified **ReportView** at the specified URL location.
- If creation is successful, the server (2) MUST return the created **ReportView** with the following fields set as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

#### Exceptions:

| Error code                           | Description  |
|--------------------------------------|--|
| <b>InvalidReportView</b>             | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>             | See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListAccess</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListType</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationUrlLength</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

| Error code                           | Description   |
|--------------------------------------|---|
| <b>RepositoryLocationAbsoluteUrl</b> | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>Unknown</b>                       | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|--------------------------------|--|
| <b>CreateReportViewSoapIn</b>  | The request WSDL message for the <b>CreateReportView WSDL operation</b> .  |
| <b>CreateReportViewSoapOut</b> | The response WSDL message for the <b>CreateReportView WSDL operation</b> . |

#### 3.1.4.7.1.1 CreateReportViewSoapIn

The request **WSDL message** for the **CreateReportView WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateReportView
```

The **SOAP body** contains the **CreateReportView** element.

#### 3.1.4.7.1.2 CreateReportViewSoapOut

The response **WSDL message** for the **CreateReportView WSDL operation**.

The **SOAP body** contains the **CreateReportViewResponse** element.

### 3.1.4.7.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>CreateReportView</b>         | The input data for the <b>CreateReportView WSDL operation</b> .  |
| <b>CreateReportViewResponse</b> | The result data for the <b>CreateReportView WSDL operation</b> . |

#### 3.1.4.7.2.1 CreateReportView

The **CreateReportView** element specifies the input data for the **CreateReportView WSDL operation**.

```

<xs:element name="CreateReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**listUrl:** The location on the **server (2)** where the **ReportView** complex type (section [2.2.4.160](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative **URL** as specified in [\[RFC1808\]](#) and **MUST** be a valid **site (2)** on the server (2).

**reportView:** The **ReportView** to be created on the server (2). This element **MUST** be present.

### 3.1.4.7.2.2 CreateReportViewResponse

The **CreateReportViewResponse** element specifies the result data for the **CreateReportView WSDL operation**.

```

<xs:element name="CreateReportViewResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**CreateReportViewResult:** The **ReportView** complex type (section [2.2.4.160](#)) created on the **server (2)**. This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.7](#).

### 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 CreateScorecard

The **CreateScorecard** operation creates a **Scorecard** complex type (section [2.2.4.162](#)) on the **server (2)**.

The following is the **WSDL** port type specification of the **CreateScorecard WSDL operation**.

```

<wsdl:operation name="CreateScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateScorecardSoapIn"/>
  <wsdl:output message="tns:CreateScorecardSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **CreateScorecardSoapIn** request message (section [3.1.4.8.1.1](#)), and the server (2) responds with a **CreateScorecardSoapOut** response message (section [3.1.4.8.1.2](#)) as follows:

- The protocol client MUST send the **Scorecard** and **URL** location.
- The server (2) MUST create the specified **Scorecard** at the specified URL location.
- If creation is successful, the server (2) MUST return the created **Scorecard** with the following fields set as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

**Exceptions:**

| Error code                           | Description  |
|--------------------------------------|--|
| <b>InvalidObject</b>                 | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>             | See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListAccess</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOCreateFailedListType</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationUrlLength</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>RepositoryLocationAbsoluteUrl</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>Unknown</b>                       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------|---|
| <b>CreateScorecardSoapIn</b>  | The request WSDL message for the <b>CreateScorecard WSDL operation</b> .  |
| <b>CreateScorecardSoapOut</b> | The response WSDL message for the <b>CreateScorecard WSDL operation</b> . |

### 3.1.4.8.1.1 CreateScorecardSoapIn

The request **WSDL message** for the **CreateScorecard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateScorecard
```

The **SOAP body** contains the **CreateScorecard** element.

### 3.1.4.8.1.2 CreateScorecardSoapOut

The response **WSDL message** for the **CreateScorecard WSDL operation**.

The **SOAP body** contains the **CreateScorecardResponse** element.

### 3.1.4.8.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>CreateScorecard</b>         | The input data for the <b>CreateScorecard WSDL operation</b> .  |
| <b>CreateScorecardResponse</b> | The result data for the <b>CreateScorecard WSDL operation</b> . |

### 3.1.4.8.2.1 CreateScorecard

The **CreateScorecard** element specifies the input data for the **CreateScorecard WSDL operation**.

```
<xs:element name="CreateScorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the **server (2)** where a **Scorecard** complex type (section [2.2.4.162](#)) is to be created. This element **MUST** present. It **MUST** be a valid relative **URL** as specified in [\[RFC1808\]](#) and **MUST** be a valid **site (2)** on the server (2).

**scorecard:** The Scorecard to be created on the server (2). This element **MUST** be present.

### 3.1.4.8.2 CreateScorecardResponse

The **CreateScorecardResponse** element specifies the result data for the **CreateScorecard WSDL operation**.

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

**CreateScorecardResult:** A **Scorecard** complex type (section [2.2.4.162](#)) created on the **server (2)**. This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.8](#).

### 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 DeleteAnnotation

The **DeleteAnnotation** operation deletes an **Annotation** complex type (section [2.2.4.18](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteAnnotation WSDL operation**.

```
<wsdl:operation name="DeleteAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns>DeleteAnnotationSoapIn"/>
  <wsdl:output message="tns>DeleteAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteAnnotationSoapIn** request message (section [3.1.4.9.1.1](#)), and the server (2) responds with a **DeleteAnnotationSoapOut** response message (section [3.1.4.9.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of an **Annotation**.
- The server (2) **MUST** delete the **Annotation**.

## Exceptions:

| Error code                        | Description  |
|-----------------------------------|--|
| <b>AnnotationNotEnabled</b>       | <b>Annotations</b> are not enabled in the server (2).  |
| <b>AnnotationDeleteNotEnabled</b> | If Annotation Delete is not enabled in the server (2), but this request, which would delete comments, is received, the comments will not be changed on the server (2) and the <b>AnnotationDeleteNotEnabled</b> error code will be returned. |
| <b>InvalidAnnotation</b>          | The <b>annotation</b> does not exist in the server (2).  |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|--------------------------------|--|
| <b>DeleteAnnotationSoapIn</b>  | The request WSDL message for the <b>DeleteAnnotation WSDL operation</b> .  |
| <b>DeleteAnnotationSoapOut</b> | The response WSDL message for the <b>DeleteAnnotation WSDL operation</b> . |

#### 3.1.4.9.1.1 DeleteAnnotationSoapIn

The request **WSDL message** for the **DeleteAnnotation WSDL operation**.

The **SOAP action** value is:

<http://www.microsoft.com/performancepoint/scorecards/DeleteAnnotation>

The **SOAP body** contains the **DeleteAnnotation** element.

#### 3.1.4.9.1.2 DeleteAnnotationSoapOut

The response **WSDL message** for the **DeleteAnnotation WSDL operation**.

The **SOAP body** contains the **DeleteAnnotationResponse** element.

### 3.1.4.9.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>DeleteAnnotation</b>         | The input data for the <b>DeleteAnnotation WSDL operation</b> .  |
| <b>DeleteAnnotationResponse</b> | The result data for the <b>DeleteAnnotation WSDL operation</b> . |

### 3.1.4.9.2.1 DeleteAnnotation

The **DeleteAnnotation** element specifies the input data for the **DeleteAnnotation WSDL operation**.

```
<xs:element name="DeleteAnnotation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="annotationID"
xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**annotationID:** A **GUID** that specifies the **Annotation** complex type (section [2.2.4.18](#)) to be deleted. This element **MUST** be present.

### 3.1.4.9.2.2 DeleteAnnotationResponse

The **DeleteAnnotationResponse** element specifies the result data for the **DeleteAnnotation WSDL operation**.

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

### 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 DeleteDashboard

The **DeleteDashboard** operation deletes a **Dashboard** complex type (section [2.2.4.79](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteDashboard WSDL operation**.

```
<wsdl:operation name="DeleteDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteDashboardSoapIn"/>
```

```
<wsdl:output message="tns:DeleteDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteDashboardSoapIn** request message (section [3.1.4.10.1.1](#)), and the server (2) responds with a **DeleteDashboardSoapOut** response message (section [3.1.4.10.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Dashboard**.
- The server (2) MUST delete the **Dashboard**.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCODEleteFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCODEleteFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the **ErrorCode** MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.10.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                       | Description   |
|-------------------------------|---|
| <b>DeleteDashboardSoapIn</b>  | The request WSDL message for the <b>DeleteDashboard WSDL operation</b> .  |
| <b>DeleteDashboardSoapOut</b> | The response WSDL message for the <b>DeleteDashboard WSDL operation</b> . |

#### 3.1.4.10.1.1 DeleteDashboardSoapIn

The request **WSDL message** for the **DeleteDashboard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteDashboard
```

The **SOAP body** contains the **DeleteDashboard** element.

#### 3.1.4.10.1.2 DeleteDashboardSoapOut

The response **WSDL message** for the **DeleteDashboard WSDL operation**.

The **SOAP body** contains the **DeleteDashboardResponse** element.

### 3.1.4.10.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>DeleteDashboard</b>         | The input data for the <b>DeleteDashboard WSDL operation</b> .  |
| <b>DeleteDashboardResponse</b> | The result data for the <b>DeleteDashboard WSDL operation</b> . |

### 3.1.4.10.2.1 DeleteDashboard

The **DeleteDashboard** element specifies the input data for the **DeleteDashboard WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element **MUST** be present and **MUST** contain the location of a **Dashboard** complex type (section [2.2.4.79](#)).

### 3.1.4.10.2.2 DeleteDashboardResponse

The **DeleteDashboardResponse** element specifies the result data for the **DeleteDashboard WSDL operation**.

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

### 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 DeleteDataSource

The **DeleteDataSource** operation deletes a **DataSource** complex type (section [2.2.4.85](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteDataSource WSDL operation**.

```
<wsdl:operation name="DeleteDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteDataSourceSoapIn"/>
  <wsdl:output message="tns:DeleteDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteDataSourceSoapIn** request message (section [3.1.4.11.1.1](#)), and the server (2) responds with a **DeleteDataSourceSoapOut** response message (section [3.1.4.11.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) for a **DataSource**.
- The server (2) MUST delete the **DataSource**.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCODeleteFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCODeleteFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|--------------------------------|--|
| <b>DeleteDataSourceSoapIn</b>  | The request WSDL message for the <b>DeleteDataSource WSDL operation</b> .  |
| <b>DeleteDataSourceSoapOut</b> | The response WSDL message for the <b>DeleteDataSource WSDL operation</b> . |

##### 3.1.4.11.1.1 DeleteDataSourceSoapIn

The request **WSDL message** for the **DeleteDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteDataSource
```

The **SOAP body** contains the **DeleteDataSource** element.

##### 3.1.4.11.1.2 DeleteDataSourceSoapOut

The response **WSDL message** for the **DeleteDataSource WSDL operation**.

The **SOAP body** contains the **DeleteDataSourceResponse** element.

### 3.1.4.11.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>DeleteDataSource</b>         | The input data for the <b>DeleteDataSource WSDL operation</b> .  |
| <b>DeleteDataSourceResponse</b> | The result data for the <b>DeleteDataSource WSDL operation</b> . |

#### 3.1.4.11.2.1 DeleteDataSource

The **DeleteDataSource** element specifies the input data for the **DeleteDataSource WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a **DataSource**.

#### 3.1.4.11.2.2 DeleteDataSourceResponse

The **DeleteDataSourceResponse** element specifies the result data for the **DeleteDataSource WSDL operation**.

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

#### 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 DeleteFilter

The **DeleteFilter** operation deletes a **Filter** complex type (section [2.2.4.98](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteFilter WSDL operation**.

```
<wsdl:operation name="DeleteFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteFilterSoapIn"/>
  <wsdl:output message="tns:DeleteFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteFilterSoapIn** request message (section [3.1.4.12.1.1](#)), and the server (2) responds with a **DeleteFilterSoapOut** response message (section [3.1.4.12.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Filter**.
- The server (2) MUST delete the **Filter**.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCODeleteFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCODeleteFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|----------------------------|--|
| <b>DeleteFilterSoapIn</b>  | The request WSDL message for the <b>DeleteFilter WSDL operation</b> .  |
| <b>DeleteFilterSoapOut</b> | The response WSDL message for the <b>DeleteFilter WSDL operation</b> . |

#### 3.1.4.12.1.1 DeleteFilterSoapIn

The request **WSDL message** for the **DeleteFilter WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteFilter
```

The **SOAP body** contains the **DeleteFilter** element.

### 3.1.4.12.1.2 DeleteFilterSoapOut

The response **WSDL message** for the **DeleteFilter WSDL operation**.

The **SOAP body** contains the **DeleteFilterResponse** element.

### 3.1.4.12.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>DeleteFilter</b>         | The input data for the <b>DeleteFilter WSDL operation</b> .  |
| <b>DeleteFilterResponse</b> | The result data for the <b>DeleteFilter WSDL operation</b> . |

#### 3.1.4.12.2.1 DeleteFilter

The **DeleteFilter** element specifies the input data for the **DeleteFilter WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element **MUST** be present. It **MUST** contain the location of a **Filter**.

#### 3.1.4.12.2.2 DeleteFilterResponse

The **DeleteFilterResponse** element specifies the result data for the **DeleteFilter WSDL operation**.

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

### 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 DeleteIndicator

The **DeleteIndicator** operation deletes an **Indicator** complex type (section [2.2.4.125](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteIndicator WSDL operation**.

```
<wsdl:operation name="DeleteIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteIndicatorSoapIn"/>
  <wsdl:output message="tns:DeleteIndicatorSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteIndicatorSoapIn** request message (section [3.1.4.13.1.1](#)), and the server (2) responds with a **DeleteIndicatorSoapOut** response message (section [3.1.4.13.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of an **Indicator**.
- The server (2) MUST delete the **Indicator**.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCODeleteFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCODeleteFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------|---|
| <b>DeleteIndicatorSoapIn</b>  | The request WSDL message for the <b>DeleteIndicator WSDL operation</b> .  |
| <b>DeleteIndicatorSoapOut</b> | The response WSDL message for the <b>DeleteIndicator WSDL operation</b> . |

#### 3.1.4.13.1.1 DeleteIndicatorSoapIn

The request **WSDL message** for the **DeleteIndicator WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteIndicator
```

The **SOAP body** contains the **DeleteIndicator** element.

### 3.1.4.13.1.2 DeleteIndicatorSoapOut

The response **WSDL message** for the **DeleteIndicator WSDL operation**.

The **SOAP body** contains the **DeleteIndicatorResponse** element.

### 3.1.4.13.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>DeleteIndicator</b>         | The input data for the <b>DeleteIndicator WSDL operation</b> .  |
| <b>DeleteIndicatorResponse</b> | The result data for the <b>DeleteIndicator WSDL operation</b> . |

#### 3.1.4.13.2.1 DeleteIndicator

The **DeleteIndicator** element specifies the input data for the **DeleteIndicator WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of an Indicator.

#### 3.1.4.13.2.2 DeleteIndicatorResponse

The **DeleteIndicatorResponse** element specifies the result data for the **DeleteIndicator WSDL operation**.

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

### 3.1.4.13.3 Complex Types

None.

### 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 DeleteKpi

The **DeleteKpi** operation deletes a **Kpi** complex type (section [2.2.4.128](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteKpi WSDL operation**.

```
<wsdl:operation name="DeleteKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteKpiSoapIn"/>
  <wsdl:output message="tns:DeleteKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteKpiSoapIn** request message (section [3.1.4.14.1.1](#)), and the server (2) responds with a **DeleteKpiSoapOut** response message (section [3.1.4.14.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Kpi**.
- The server (2) MUST delete the **Kpi**.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCODeleteFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCODeleteFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------|---|
| <b>DeleteKpiSoapIn</b>  | The request WSDL message for the <b>DeleteKpi WSDL operation</b> .  |
| <b>DeleteKpiSoapOut</b> | The response WSDL message for the <b>DeleteKpi WSDL operation</b> . |

#### 3.1.4.14.1.1 DeleteKpiSoapIn

The request **WSDL message** for the **DeleteKpi WSDL operation**.

The **SOAP action** value is:

The **SOAP body** contains the **DeleteKpi** element.

#### 3.1.4.14.1.2 DeleteKpiSoapOut

The response **WSDL message** for the **DeleteKpi WSDL operation**.

The **SOAP body** contains the **DeleteKpiResponse** element.

#### 3.1.4.14.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                  | Description   |
|--------------------------|---|
| <b>DeleteKpi</b>         | The input data for the <b>DeleteKpi WSDL operation</b> .  |
| <b>DeleteKpiResponse</b> | The result data for the <b>DeleteKpi WSDL operation</b> . |

##### 3.1.4.14.2.1 DeleteKpi

The **DeleteKpi** element specifies the input data for the **DeleteKpi WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element **MUST** be present. It **MUST** contain the location of a **KPI**.

##### 3.1.4.14.2.2 DeleteKpiResponse

The **DeleteKpiResponse** element specifies the result data for the **DeleteKpi WSDL operation**.

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

#### 3.1.4.14.3 Complex Types

None.

#### 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 DeleteReportView

The **DeleteReportView** operation deletes a **ReportView** complex type (section [2.2.4.160](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteReportView WSDL operation**.

```
<wsdl:operation name="DeleteReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteReportViewSoapIn"/>
  <wsdl:output message="tns:DeleteReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteReportViewSoapIn** request message (section [3.1.4.15.1.1](#)), and the server (2) responds with a **DeleteReportViewSoapOut** response message (section [3.1.4.15.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **ReportView**.
- The server (2) MUST delete the **ReportView**.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCODeleteFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCODeleteFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|--------------------------------|--|
| <b>DeleteReportViewSoapIn</b>  | The request WSDL message for the <b>DeleteReportView WSDL operation</b> .  |
| <b>DeleteReportViewSoapOut</b> | The response WSDL message for the <b>DeleteReportView WSDL operation</b> . |

#### 3.1.4.15.1.1 DeleteReportViewSoapIn

The request **WSDL message** for the **DeleteReportView WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteReportView
```

The **SOAP body** contains the **DeleteReportView** element.

### 3.1.4.15.1.2 DeleteReportViewSoapOut

The response **WSDL message** for the **DeleteReportView WSDL operation**.

The **SOAP body** contains the **DeleteReportViewResponse** element.

### 3.1.4.15.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>DeleteReportView</b>         | The input data for the <b>DeleteReportView WSDL operation</b> .  |
| <b>DeleteReportViewResponse</b> | The result data for the <b>DeleteReportView WSDL operation</b> . |

#### 3.1.4.15.2.1 DeleteReportView

The **DeleteReportView** element specifies the input data for the **DeleteReportView WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a **ReportView** complex type (section [2.2.4.160](#)).

#### 3.1.4.15.2.2 DeleteReportViewResponse

The **DeleteReportViewResponse** element specifies the result data for the **DeleteReportView WSDL operation**.

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

### 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 DeleteScorecard

The **DeleteScorecard** operation deletes a **Scorecard** complex type (section [2.2.4.162](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **DeleteScorecard WSDL operation**.

```
<wsdl:operation name="DeleteScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteScorecardSoapIn"/>
  <wsdl:output message="tns:DeleteScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteScorecardSoapIn** request message (section [3.1.4.16.1.1](#)), and the server (2) responds with a **DeleteScorecardSoapOut** response message (section [3.1.4.16.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Scorecard**.
- The server (2) MUST delete the **Scorecard**.

#### Exceptions:

| Error code                       | Description   |
|----------------------------------|---|
| <b>InvalidPermission</b>         | The content store<25> containing this object no longer exists or the object has already been deleted. |
| <b>FCODEleteFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                  |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------|---|
| <b>DeleteScorecardSoapIn</b>  | The request WSDL message for the <b>DeleteScorecard WSDL operation</b> .  |
| <b>DeleteScorecardSoapOut</b> | The response WSDL message for the <b>DeleteScorecard WSDL operation</b> . |

### 3.1.4.16.1.1 DeleteScorecardSoapIn

The request **WSDL message** for the **DeleteScorecard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteScorecard
```

The **SOAP body** contains the **DeleteScorecard** element.

### 3.1.4.16.1.2 DeleteScorecardSoapOut

The response **WSDL message** for the **DeleteScorecard WSDL operation**.

The **SOAP body** contains the **DeleteScorecardResponse** element.

### 3.1.4.16.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>DeleteScorecard</b>         | The input data for the <b>DeleteScorecard WSDL operation</b> .  |
| <b>DeleteScorecardResponse</b> | The result data for the <b>DeleteScorecard WSDL operation</b> . |

#### 3.1.4.16.2.1 DeleteScorecard

The **DeleteScorecard** element specifies the input data for the **DeleteScorecard WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a **Scorecard** complex type (section [2.2.4.162](#)).

#### 3.1.4.16.2.2 DeleteScorecardResponse

The **DeleteScorecardResponse** element specifies the result data for the **DeleteScorecard WSDL operation**.

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

### 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 ExportDashboard

The **ExportDashboard** operation [<26>](#) is used to export **dashboard** pages and their associated content from the **server (2)** into a specified Deployment Package ([\[MS-PRIMEPF\]](#)).

The following is the **WSDL** port type specification of the **ExportDashboard WSDL operation**.

```
<wsdl:operation name="ExportDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ExportDashboardSoapIn"/>
  <wsdl:output message="tns:ExportDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **ExportDashboardSoapIn** request message (section [3.1.4.17.1.1](#)), and the server (2) responds with an **ExportDashboardSoapOut** response message (section [3.1.4.17.1.2](#)) as follows:

- The server (2) exports the items specified in **itemUrls** into the Deployment Package located at the filename.
- If there was an application error on the server (2) during the operation, the server (2) MUST return a **SOAP fault** response, which SHOULD include one of exceptions specified below, but MAY contain any other exceptions.

#### Exceptions:

| Error code                   | Description  |
|------------------------------|--|
| <b>InvalidUrl</b>            | An invalid <b>URL</b> was specified                                  |
| <b>FCOUnauthorizedAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------|---|
| <b>ExportDashboardSoapIn</b>  | The request WSDL message for the <b>ExportDashboard WSDL operation</b> .  |
| <b>ExportDashboardSoapOut</b> | The response WSDL message for the <b>ExportDashboard WSDL operation</b> . |

#### 3.1.4.17.1.1 ExportDashboardSoapIn

The request **WSDL message** for the **ExportDashboard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/ExportDashboard
```

The **SOAP body** contains the **ExportDashboard** element.

#### 3.1.4.17.1.2 ExportDashboardSoapOut

The response **WSDL message** for the **ExportDashboard WSDL operation**.

The **SOAP body** contains the **ExportDashboardResponse** element.

### 3.1.4.17.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>ExportDashboard</b>         | The input data for the <b>ExportDashboard WSDL operation</b> .  |
| <b>ExportDashboardResponse</b> | The result data for the <b>ExportDashboard WSDL operation</b> . |

#### 3.1.4.17.2.1 ExportDashboard

The **ExportDashboard** element specifies the input data for the **ExportDashboard WSDL operation**.

```
<xs:element name="ExportDashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="filename" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="siteCollectionUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemUrls" type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

**filename:** Contains the **site collection** relative path and file name of the Deployment Package ([\[MS-PRIMEPF\]](#)) to use for the export. The path specified **MUST** be the relative path of a **document library** in the site collection specified in **siteCollectionUrl**. This element **MUST** be present.

**siteCollectionUrl:** Contains the site collection **URL** to use for the export. This element **MUST** be present.

**itemUrls:** Contains an array of strings containing the site relative URLs of the items to include in the Deployment Package. This element **MUST** be present. It **MUST** contain at least one item URL.

### 3.1.4.17.2.2 ExportDashboardResponse

The **ExportDashboardResponse** element specifies the result data for the **ExportDashboard WSDL operation**.

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

### 3.1.4.17.3 Complex Types

None.

### 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 GenerateView

The **GenerateView** operation generates the data structure that represents a **scorecard** grid view, the **GridViewData** complex type (section [2.2.4.121](#)), based on information stored on the **server (2)**.

The following is the **WSDL** port type specification of the **GenerateView WSDL operation**.

```
<wsdl:operation name="GenerateView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GenerateViewSoapIn"/>
  <wsdl:output message="tns:GenerateViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GenerateViewSoapIn** request message (section [3.1.4.18.1.1](#)), and the server (2) responds with a **GenerateViewSoapOut** response message (section [3.1.4.18.1.2](#)) as follows:

- The server (2) protocol uses the **scorecardLocation** to retrieve the scorecard for which the view will be generated.
- **pageFilters** MAY be used to **slice** the scorecard data.
- **propertyBags** MUST NOT be null, but MAY be empty or SHOULD contain information that will be consumed by the server (2) defined **transforms** for the scorecard. See the **GridViewTransformReference** complex type (section [2.2.4.123](#)) for details.
- If there was an application error on the server (2) during the operation, the server (2) MUST return a **SOAP fault** response, which SHOULD include one of the exceptions specified in the **GetScorecard** (section [3.1.4.51](#)) and **GetDataSource** (section [3.1.4.35](#)) operations, but MAY instead contain any other exceptions.

### 3.1.4.18.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                    | Description  |
|----------------------------|--|
| <b>GenerateViewSoapIn</b>  | The request WSDL message for the <b>GenerateView WSDL operation</b> .  |
| <b>GenerateViewSoapOut</b> | The response WSDL message for the <b>GenerateView WSDL operation</b> . |

#### 3.1.4.18.1.1 GenerateViewSoapIn

The request **WSDL message** for the **GenerateView WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/GenerateView`

The **SOAP body** contains the **GenerateView** element.

#### 3.1.4.18.1.2 GenerateViewSoapOut

The response **WSDL message** for the **GenerateView WSDL operation**.

The **SOAP body** contains the **GenerateViewResponse** element.

### 3.1.4.18.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>GenerateView</b>         | The input data for the <b>GenerateView WSDL operation</b> .  |
| <b>GenerateViewResponse</b> | The result data for the <b>GenerateView WSDL operation</b> . |

### 3.1.4.18.2.1 GenerateView

The **GenerateView** element specifies the input data for the **GenerateView WSDL operation**.

```
<xs:element name="GenerateView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pageFilters" type="tns:ArrayOfMember"/>
      <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** Points to the **scorecard** for which the grid view will be generated, as defined in the **RepositoryLocation** complex type (section [2.2.4.161](#)). It MUST NOT be null or empty, and it MUST point to a valid scorecard location. If ANY of those conditions are not met, the returned view is null.

**pageFilters:** Represents a collection of **members (2)** used to **slice** the scorecard values, as defined in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

**propertyBags:** Is a dictionary, as defined in the **DictionaryWrapperOfStringPropertyBag** complex type (section [2.2.4.89](#)), containing specific settings that will be consumed by each individual transformation defined for the scorecard. See the **GridViewTransformReference** complex type in section [2.2.4.123](#) for details. This element MUST NOT be null, but MAY be empty.

### 3.1.4.18.2.2 GenerateViewResponse

The **GenerateViewResponse** element specifies the result data for the **GenerateView WSDL operation**.

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

**GenerateViewResult:** Represents a **scorecard** grid view data, as defined in the **GridViewData** complex type (section [2.2.4.121](#)). The returned result is **NULL**, if **scorecardLocation** is null, empty or invalid.

### 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 GenerateViewDirect

The **GenerateViewDirect** operation generates the data structure that represents a **scorecard** grid view (see **GridViewData** complex type, section [2.2.4.121](#)), using information sent from the client.

The following is the **WSDL** port type specification of the **GenerateViewDirect WSDL operation**.

```
<wsdl:operation name="GenerateViewDirect" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GenerateViewDirectSoapIn"/>
  <wsdl:output message="tns:GenerateViewDirectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GenerateViewDirectSoapIn** request message (section [3.1.4.19.1.1](#)), and the **server (2)** responds with a **GenerateViewDirectSoapOut** response message (section [3.1.4.19.1.2](#)) as follows:

- The server (2) protocol uses the **scorecard**, **kpis**, **dataSources** and **indicators** to build the scorecard view. The provided information can be incomplete, in which case the missing information will be retrieved from the server (2).
- **pageFilters** MAY be used to **slice** the scorecard data.
- **propertyBags** MUST NOT be null but MAY be empty or SHOULD contain information that will be consumed by the server-defined **transforms** for the scorecard. See the **GridViewTransformReference** complex type (section [2.2.4.123](#)) for details.

#### 3.1.4.19.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                          | Description  |
|----------------------------------|--|
| <b>GenerateViewDirectSoapIn</b>  | The request WSDL message for the <b>GenerateViewDirect WSDL operation</b> .  |
| <b>GenerateViewDirectSoapOut</b> | The response WSDL message for the <b>GenerateViewDirect WSDL operation</b> . |

##### 3.1.4.19.1.1 GenerateViewDirectSoapIn

The request **WSDL message** for the **GenerateViewDirect WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect
```

The **SOAP body** contains the **GenerateViewDirect** element.

### 3.1.4.19.1.2 GenerateViewDirectSoapOut

The response **WSDL message** for the **GenerateViewDirect WSDL operation**.

The **SOAP body** contains the **GenerateViewDirectResponse** element.

### 3.1.4.19.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                           | Description  |
|-----------------------------------|--|
| <b>GenerateViewDirect</b>         | The input data for the <b>GenerateViewDirect WSDL operation</b> .  |
| <b>GenerateViewDirectResponse</b> | The result data for the <b>GenerateViewDirect WSDL operation</b> . |

#### 3.1.4.19.2.1 GenerateViewDirect

The **GenerateViewDirect** element specifies the input data for the **GenerateViewDirect WSDL operation**.

```
<xs:element name="GenerateViewDirect" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
      <xs:element minOccurs="0" maxOccurs="1" name="kpis" type="tns:ArrayOfKpi"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSources"
type="tns:ArrayOfDataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="indicators" type="tns:ArrayOfIndicator"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pageFilters" type="tns:ArrayOfMember"/>
      <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecard:** The **scorecard** for which the grid view will be generated. The element MUST NOT be null.

**kpis:** Represents a **list (1)** of **Kpi** complex types (section [2.2.4.128](#)) used by **scorecard**, as defined in the **ArrayOfKpi** complex type (section [2.2.4.41](#)). It MAY be null and it SHOULD contain all the **Kpis** referenced by **scorecard**. It MUST contain at least all the **Kpis** referenced by **scorecard** that are not yet stored on the **server (2)**.

**dataSources:** Represents a list (1) of **data sources (1)** used by **scorecard**, as defined in the **ArrayOfDataSource** complex type (section [3.1.4.19.3.2](#)). It MAY be null and it SHOULD contain all the data sources referenced by **scorecard**. It MUST contain at least all the data sources (1) referenced by **scorecard** that are not yet stored on the server (2).

**indicators:** Represents a list (1) of **indicators** used by **scorecard**, as defined in the **ArrayOfIndicator** complex type (section [3.1.4.19.3.1](#)). It MAY be null and it SHOULD contain all the **indicators** referenced by **scorecard**. It MUST contain at least all the **indicators** referenced by **scorecard** that are not yet stored on the server (2).

**pageFilters:** Represents a collection of **members (2)** used to **slice** the scorecard values, as defined in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

**propertyBags:** Is a dictionary, as defined in the **DictionaryWrapperOfStringPropertyBag** complex type (section [2.2.4.89](#)), containing specific settings that will be consumed by each individual transformation defined for the scorecard. See the **GridViewTransformReference** complex type (section [2.2.4.123](#)) for details. The element MUST NOT be null, but MAY be empty.

### 3.1.4.19.2.2 GenerateViewDirectResponse

The **GenerateViewDirectResponse** element specifies the result data for the **GenerateViewDirect WSDL operation**.

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

**GenerateViewDirectResult:** Represents a **scorecard** grid view data, as specified by the **GridViewData** complex type (section [2.2.4.121](#)). The returned result is a **BpmException** complex type (section [2.2.4.61](#)), if **scorecard** is null or invalid or if **kpis**, **dataSources**, and **indicators** together with the **server (2)** store do not contain all necessary dependencies.

### 3.1.4.19.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

| Complex type             | Description                                       |
|--------------------------|---|
| <b>ArrayOfDataSource</b> | Specifies an array of data sources.               |
| <b>ArrayOfIndicator</b>  | Specifies an array of indicators for a scorecard. |

#### 3.1.4.19.3.1 ArrayOfIndicator

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfIndicator** complex type specifies an array of indicators for a **scorecard**.

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

**Indicator:** This element MUST NOT be null. It MUST conform to the schema of the **Indicator** complex type (section [2.2.4.125](#)).

#### 3.1.4.19.3.2 ArrayOfDataSource

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfDataSource** complex type specifies an array of data sources.

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

**DataSource:** This element MUST NOT be null and MUST conform to the schema of the **DataSource** (section [2.2.4.85](#)) complex type.

#### 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 GetAllAnnotationsByScorecardLocation

The **GetAllAnnotationsByScorecardLocation** operation retrieves an array of **Annotation** complex type elements (section [2.2.4.18](#)) associated with a **scorecard**.

The following is the **WSDL** port type specification of the **GetAllAnnotationsByScorecardLocation WSDL operation**.

```
<wsdl:operation name="GetAllAnnotationsByScorecardLocation"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAllAnnotationsByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:GetAllAnnotationsByScorecardLocationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAllAnnotationsByScorecardLocationSoapIn** request message (section [3.1.4.20.1.1](#)), and the **server (2)** responds with a **GetAllAnnotationsByScorecardLocationSoapOut** response message (section [3.1.4.20.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a scorecard.
- The server (2) MUST retrieve an array of **Annotation** elements.

#### Exceptions:

| Error code               | Description  |
|--------------------------|--|
| <b>InvalidPermission</b> | Caused by not having access to the scorecard.<br>See section <a href="#">2.2.2.1.3</a> for the Common list of Error Codes. |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|--|--|
| <b>GetAllAnnotationsByScorecardLocationSoapIn</b>  | The request WSDL message for the <b>GetAllAnnotationsByScorecardLocation WSDL operation</b> .  |
| <b>GetAllAnnotationsByScorecardLocationSoapOut</b> | The response WSDL message for the <b>GetAllAnnotationsByScorecardLocation WSDL operation</b> . |

#### 3.1.4.20.1.1 GetAllAnnotationsByScorecardLocationSoapIn

The request **WSDL message** for the **GetAllAnnotationsByScorecardLocation WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/GetAllAnnotationsByScorecardLocation`

The **SOAP body** contains the **GetAllAnnotationsByScorecardLocation** element.

#### 3.1.4.20.1.2 GetAllAnnotationsByScorecardLocationSoapOut

The response **WSDL message** for the **GetAllAnnotationsByScorecardLocation WSDL operation**.

The **SOAP body** contains the **GetAllAnnotationsByScorecardLocationResponse** element.

### 3.1.4.20.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element   | Description  |
|---|--|
| <b>GetAllAnnotationsByScorecardLocation</b>         | The input data for the <b>GetAllAnnotationsByScorecardLocation WSDL operation</b> .  |
| <b>GetAllAnnotationsByScorecardLocationResponse</b> | The result data for the <b>GetAllAnnotationsByScorecardLocation WSDL operation</b> . |

#### 3.1.4.20.2.1 GetAllAnnotationsByScorecardLocation

The **GetAllAnnotationsByScorecardLocation** element specifies the input data for the **GetAllAnnotationsByScorecardLocation WSDL operation**.

```

<xs:element name="GetAllAnnotationsByScorecardLocation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**scorecardLocation:** The location of a **scorecard**, as specified by a **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

### 3.1.4.20.2.2 GetAllAnnotationsByScorecardLocationResponse

The **GetAllAnnotationsByScorecardLocationResponse** element specifies the result data for the **GetAllAnnotationsByScorecardLocation** **WSDL operation**.

```

<xs:element name="GetAllAnnotationsByScorecardLocationResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
name="GetAllAnnotationsByScorecardLocationResult" type="tns:ArrayOfAnnotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetAllAnnotationsByScorecardLocationResult:** An array of **Annotation** complex type elements (section [2.2.4.18](#)) associated with the **scorecardLocation** that was requested from the **server (2)**.

### 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                                       |
|--------------------------|---|
| <b>ArrayOfAnnotation</b> | Specifies an array of <b>Annotation</b> elements. |

#### 3.1.4.20.3.1 ArrayOfAnnotation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfAnnotation** complex type specifies an array of **Annotation** elements.

```

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

```

**Annotation:** This element **MUST NOT** be null and **MUST** conform to the schema of the **Annotation** complex type (section [2.2.4.18](#)).

#### 3.1.4.20.4 Simple Types

None.

#### 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 GetAnalyticReportView

The **GetAnalyticReportView** operation retrieves a **report view** from the **server (2)** that has been created through the **SaveTemporaryAnalyticReport** (section [3.1.4.65](#)) or **CreateReportView** (section [3.1.4.7](#)) operation.

The following is the **WSDL** port type specification of the **GetAnalyticReportView WSDL operation**.

```
<wsdl:operation name="GetAnalyticReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnalyticReportViewSoapIn"/>
  <wsdl:output message="tns:GetAnalyticReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAnalyticReportViewSoapIn** request message (section [3.1.4.21.1.1](#)), and the server (2) responds with a **GetAnalyticReportViewSoapOut** response message (section [3.1.4.21.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the report view to be retrieved.
- The server (2) sends the corresponding report view.
- In the event that a report view cannot be retrieved, the server (2) SHOULD [<27>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description   |
|--------------------------------|---|
| <b>InvalidPermission</b>       | If the report view was created with <b>SaveTemporaryAnalyticReport</b> , the security permissions are inherited from the parent report view. The location of the parent report view can be determined from the <b>RepositoryLocation</b> object "ParentReportViewLocation" embedded within "CustomData" of the report view. |
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).  |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).  |

In case of any other failure, the error code MUST be one of the values specified in section 2.2.2.1.2. A detailed specification of how exceptions are reported by the server (2) is in section 2.2.2.1.

### 3.1.4.21.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                             | Description   |
|-------------------------------------|---|
| <b>GetAnalyticReportViewSoapIn</b>  | The request WSDL message for the <b>GetAnalyticReportView WSDL operation</b> .  |
| <b>GetAnalyticReportViewSoapOut</b> | The response WSDL message for the <b>GetAnalyticReportView WSDL operation</b> . |

#### 3.1.4.21.1.1 GetAnalyticReportViewSoapIn

The request **WSDL message** for the **GetAnalyticReportView WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView
```

The **SOAP body** contains the **GetAnalyticReportView** element.

#### 3.1.4.21.1.2 GetAnalyticReportViewSoapOut

The response **WSDL message** for the **GetAnalyticReportView WSDL operation**.

The **SOAP body** contains the **GetAnalyticReportViewResponse** element.

### 3.1.4.21.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                              | Description   |
|--------------------------------------|---|
| <b>GetAnalyticReportView</b>         | The input data for the <b>GetAnalyticReportView WSDL operation</b> .  |
| <b>GetAnalyticReportViewResponse</b> | The result data for the <b>GetAnalyticReportView WSDL operation</b> . |

#### 3.1.4.21.2.1 GetAnalyticReportView

The **GetAnalyticReportView** element specifies the input data for the **GetAnalyticReportView WSDL operation**.

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

```
</xs:sequence>
</xs:complexType>
</xs:element>
```

**analyticReportViewLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the **report view** on the **server (2)**.

- If the report view to be retrieved was created with the **SaveTemporaryAnalyticReport** operation (section [3.1.4.65](#)):
  - The **ItemGuid** property MUST equal the **GUID** that was returned from **SaveTemporaryAnalyticReport**.
  - The **ItemType** property MUST equal **TempReportView** as specified by the **FirstClassObjectType** simple type (section [2.2.5.20](#)).
  - The **ItemUrl** property MUST equal an empty string.
- If the report view to be retrieved was created with the **CreateReportView** (section [3.1.4.7](#)), the **ItemUrl** property MUST be set to the location of the report view.

### 3.1.4.21.2.2 GetAnalyticReportViewResponse

The **GetAnalyticReportViewResponse** element specifies the result data for the **GetAnalyticReportView WSDL operation**.

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

**GetAnalyticReportViewResult:** The **ReportView** complex type object (section [2.2.4.160](#)) that was requested from the **server (2)**.

### 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 GetAnnotation

The **GetAnnotation** operation retrieves an **Annotation** complex type (section [2.2.4.18](#)) associated with a **scorecard cell** from the **server (2)**.

The following is the **WSDL** port type specification of the **GetAnnotation WSDL operation**.

```
<wsdl:operation name="GetAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnnotationSoapIn"/>
  <wsdl:output message="tns:GetAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAnnotationSoapIn** request message (section [3.1.4.22.1.1](#)), and the server (2) responds with a **GetAnnotationSoapOut** response message (section [3.1.4.22.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the scorecard containing the **Annotation**. It also sends an array of **Tuple** complex type objects (section [3.1.4.22.3.2](#)) and a string that specifies the **Annotation** within the scorecard to be retrieved. All of these objects **MUST** be present.
- The server (2) sends the corresponding **Annotation**.

#### Exceptions:

| Error code               | Description  |
|--------------------------|--|
| <b>InvalidPermission</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.22.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                     | Description   |
|-----------------------------|---|
| <b>GetAnnotationSoapIn</b>  | The request WSDL message for the <b>GetAnnotation WSDL operation</b> .  |
| <b>GetAnnotationSoapOut</b> | The response WSDL message for the <b>GetAnnotation WSDL operation</b> . |

#### 3.1.4.22.1.1 GetAnnotationSoapIn

The request **WSDL message** for the **GetAnnotation WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotation
```

The **SOAP body** contains the **GetAnnotation** element.

#### 3.1.4.22.1.2 GetAnnotationSoapOut

The response **WSDL message** for the **GetAnnotation WSDL operation**.

The **SOAP body** contains the **GetAnnotationResponse** element.

### 3.1.4.22.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                      | Description   |
|------------------------------|---|
| <b>GetAnnotation</b>         | The input data for the <b>GetAnnotation WSDL operation</b> .  |
| <b>GetAnnotationResponse</b> | The result data for the <b>GetAnnotation WSDL operation</b> . |

#### 3.1.4.22.2.1 GetAnnotation

The **GetAnnotation** element specifies the input data for the **GetAnnotation WSDL operation**.

```
<xs:element name="GetAnnotation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="tupleCollection"
type="tns:ArrayOfTuple"/>
      <xs:element minOccurs="0" maxOccurs="1" name="cellPath" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the **scorecard** on the **server (2)** containing the **Annotation**.

- This element MUST be present.
- The **ItemUrl** property MUST be set to the location of the **report view** associated with the **Annotation**.

**tupleCollection:** An array of **Tuple** complex type objects (section [3.1.4.22.3.2](#)) that aggregates all the column, row, and page filter selections corresponding to the **cell** or cells in the scorecard for which this **Annotation** is applicable. This element MUST be present.

**cellPath:** **CellpathCoordinates** property, as specified in the **Annotation** complex type (section [2.2.4.18](#)). This element MUST be present.

#### 3.1.4.22.2.2 GetAnnotationResponse

The **GetAnnotationResponse** element specifies the result data for the **GetAnnotation WSDL operation**.

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

</xs:element>

**GetAnnotationResult:** The **Annotation** complex type object (see section [2.2.4.18](#)) that was requested from the **server (2)**.

### 3.1.4.22.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

| Complex type        | Description   |
|---------------------|---|
| <b>ArrayOfTuple</b> | Specifies an array of Tuple.  |
| <b>Tuple</b>        | Specifies an ordered collection of one or more members from different dimensions. |

#### 3.1.4.22.3.1 ArrayOfTuple

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfTuple** complex type specifies an array of **Tuple** (section [3.1.4.22.3.2](#)).

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

**Tuple:** This element MUST NOT be null and MUST conform to the schema of the **Tuple** complex type (section 3.1.4.22.3.2).

#### 3.1.4.22.3.2 Tuple

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Tuple** complex type represents an ordered collection of one or more members from different dimensions and it contains an instance of **ArrayOfMember** (see section [2.2.4.45](#)).

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

**DimensionMembers:** This element MUST NOT be **null**.

### 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 GetAnnotationByID

The **GetAnnotationByID** operation retrieves an **Annotation** complex type (section [2.2.4.18](#)) from a specified **GUID** from the **server (2)**.

The following is the **WSDL** port type specification of the **GetAnnotationByID WSDL operation**.

```
<wsdl:operation name="GetAnnotationByID" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnnotationByIDSoapIn"/>
  <wsdl:output message="tns:GetAnnotationByIDSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAnnotationByIDSoapIn** request message (section [3.1.4.23.1.1](#)), and the server (2) responds with a **GetAnnotationByIDSoapOut** response message (section [3.1.4.23.1.2](#)) as follows:

- The protocol client sends a GUID that specifies the **Annotation** to be retrieved.
- The server (2) sends the corresponding **Annotation**.

#### Exceptions:

| Error code               | Description  |
|--------------------------|--|
| <b>InvalidPermission</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.23.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                         | Description   |
|---------------------------------|---|
| <b>GetAnnotationByIDSoapIn</b>  | The request WSDL message for the <b>GetAnnotationByID WSDL operation</b> .  |
| <b>GetAnnotationByIDSoapOut</b> | The response WSDL message for the <b>GetAnnotationByID WSDL operation</b> . |

#### 3.1.4.23.1.1 GetAnnotationByIDSoapIn

The request **WSDL message** for the **GetAnnotationByID WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotationByID
```

The **SOAP body** contains the **GetAnnotationByID** element.

### 3.1.4.23.1.2 GetAnnotationByIDSoapOut

The response **WSDL message** for the **GetAnnotationByID WSDL operation**.

The **SOAP body** contains the **GetAnnotationByIDResponse** element.

### 3.1.4.23.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                          | Description   |
|----------------------------------|---|
| <b>GetAnnotationByID</b>         | The input data for the <b>GetAnnotationByID WSDL operation</b> .  |
| <b>GetAnnotationByIDResponse</b> | The result data for the <b>GetAnnotationByID WSDL operation</b> . |

#### 3.1.4.23.2.1 GetAnnotationByID

The **GetAnnotationByID** element specifies the input data for the **GetAnnotationByID WSDL operation**.

```
<xs:element name="GetAnnotationByID" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="1" maxOccurs="1" name="annotationID"  
        xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**annotationID:** A **GUID** that specifies the **Annotation** complex type (section [2.2.4.18](#)) to be retrieved. This element **MUST** be present.

#### 3.1.4.23.2.2 GetAnnotationByIDResponse

The **GetAnnotationByIDResponse** element specifies the result data for the **GetAnnotationByID WSDL operation**.

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

**GetAnnotationByIDResult:** The **Annotation** complex type object (section [2.2.4.18](#)) that was requested from the **server (2)**.

### 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 GetAnnotationSetting

The **Attribute Groups** operation retrieves an **AnnotationSetting** complex type object (section [3.1.4.24.3.1](#)) that contains the annotation settings for the **server (2)**.

The following is the **WSDL** port type specification of the **GetAnnotationSetting WSDL operation**.

```
<wsdl:operation name="GetAnnotationSetting" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnnotationSettingSoapIn"/>
  <wsdl:output message="tns:GetAnnotationSettingSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAnnotationSettingSoapIn** request message (section [3.1.4.24.1.1](#)), and the server (2) responds with a **GetAnnotationSettingSoapOut** response message (section [3.1.4.24.1.2](#)) as follows:

- The server (2) MUST retrieve an **AnnotationSetting** object.

### 3.1.4.24.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                            | Description  |
|------------------------------------|--|
| <b>GetAnnotationSettingSoapIn</b>  | The request WSDL message for the <b>GetAnnotationSetting WSDL operation</b> .  |
| <b>GetAnnotationSettingSoapOut</b> | The response WSDL message for the <b>GetAnnotationSetting WSDL operation</b> . |

### 3.1.4.24.1.1 GetAnnotationSettingSoapIn

The request **WSDL message** for the **GetAnnotationSetting WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting
```

The **SOAP body** contains the **GetAnnotationSetting** element.

### 3.1.4.24.1.2 GetAnnotationSettingSoapOut

The response **WSDL message** for the **GetAnnotationSetting WSDL operation**.

The **SOAP body** contains the **GetAnnotationSettingResponse** element.

### 3.1.4.24.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                             | Description  |
|-------------------------------------|--|
| <b>GetAnnotationSetting</b>         | The input data for the <b>GetAnnotationSetting WSDL operation</b> .  |
| <b>GetAnnotationSettingResponse</b> | The result data for the <b>GetAnnotationSetting WSDL operation</b> . |

#### 3.1.4.24.2.1 GetAnnotationSetting

The **GetAnnotationSetting** element specifies the input data for the **GetAnnotationSetting WSDL operation**.

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

#### 3.1.4.24.2.2 GetAnnotationSettingResponse

The **GetAnnotationSettingResponse** element specifies the result data for the **GetAnnotationSetting WSDL operation**.

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

**GetAnnotationSettingResult:** An **AnnotationSetting** complex type object (section [3.1.4.24.3.1](#)) that was requested from the **server (2)**.

### 3.1.4.24.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

| Complex type             | Description   |
|--------------------------|---|
| <b>AnnotationSetting</b> | Specifies annotation settings for this service application. |

### 3.1.4.24.3.1 AnnotationSetting

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **AnnotationSetting** complex type specifies annotation settings for this service application.

```
<xs:complexType name="AnnotationSetting" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="IsAnnotationEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsAnnotationEnabledDefault" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDeletionByAuthorEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDeletionByAuthorEnabledDefault" type="xs:boolean" use="required"/>
  <xs:attribute name="MaxAnnotationAllowed" type="xs:int" use="required"/>
</xs:complexType>
```

**IsAnnotationEnabled:** Specifies whether annotations are enabled for scorecards; if set to **true**, annotations are enabled; otherwise, annotations are not enabled.

**IsAnnotationEnabledDefault:** Specifies the default value of **IsAnnotationEnabled** used by the **server (2)**. The default value is **true**.

**IsDeletionByAuthorEnabled:** Specifies whether annotations can be deleted by the user; if set to **true**, annotations can be deleted; otherwise, annotations cannot be deleted.

**IsDeletionByAuthorEnabledDefault:** Specifies the default value of **IsDeletionByAuthorEnabled** used by the server (2). The default is **true**.

**MaxAnnotationAllowed:** Specifies the maximum number of annotations that can be added for a scorecard. This value **MUST** be an integer greater than or equal to zero.

#### 3.1.4.24.4 Simple Types

None.

#### 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 GetAsKpis

The **GetAsKpis** operation takes in an **Analysis Services** data source along with a **server-relative URL** to a **Kpi** complex type (section [2.2.4.128](#)) **list (1)**, and returns a collection of **Kpis** as defined in the **ArrayOfKpi** complex type (see section [2.2.4.41](#)).

The following is the **WSDL** port type specification of the **GetAsKpis WSDL operation**.

```
<wsdl:operation name="GetAsKpis" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAsKpisSoapIn"/>
  <wsdl:output message="tns:GetAsKpisSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAsKpisSoapIn** request message (section [3.1.4.25.1.1](#)), and the **server (2)** responds with a **GetAsKpisSoapOut** message (section [3.1.4.25.1.2](#)) as follows:

- The server (2) validates the data source as to whether it is a **trusted location**, along with the user's access permissions. If it is from an un-trusted location, it is added to the list (1) of untrusted data sources.
- The server (2) retrieves the **Cube** complex type object (section [2.2.4.78](#)) represented by the data source.
- The server (2) returns the list (1) of Kpis from the **Cube**.

#### 3.1.4.25.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                 | Description   |
|-------------------------|---|
| <b>GetAsKpisSoapIn</b>  | The request WSDL message for the <b>GetAsKpis WSDL operation</b> .  |
| <b>GetAsKpisSoapOut</b> | The response WSDL message for the <b>GetAsKpis WSDL operation</b> . |

##### 3.1.4.25.1.1 GetAsKpisSoapIn

The request **WSDL message** for the **GetAsKpis WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAsKpis
```

The **SOAP body** contains the **GetAsKpis** element.

##### 3.1.4.25.1.2 GetAsKpisSoapOut

The response **WSDL message** for the **GetAsKpis WSDL operation**.

The **SOAP body** contains the **GetAsKpisResponse** element.

#### 3.1.4.25.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                  | Description   |
|--------------------------|---|
| <b>GetAsKpis</b>         | The input data for the <b>GetAsKpis WSDL operation</b> .  |
| <b>GetAsKpisResponse</b> | The result data for the <b>GetAsKpis WSDL operation</b> . |

### 3.1.4.25.2.1 GetAsKpis

The **GetAsKpis** element specifies the input data for the **GetAsKpis WSDL operation**.

```
<xs:element name="GetAsKpis" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** This element MUST be an **Analysis Services** data source.

**listUrl:** This element MUST be a **server-relative URL** to the Analysis Services data source (see section [2.2.4.85](#)) **list (1)**.

### 3.1.4.25.2.2 GetAsKpisResponse

The **GetAsKpisResponse** element specifies the result data for the **GetAsKpis WSDL operation**.

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

**GetAsKpisResult:** This element MUST return a collection of **Kpi** complex types (section [2.2.4.128](#)), as defined in the **ArrayOfKpi** complex type (section [2.2.4.41](#)).

### 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 GetCube

The **GetCube** operation takes in a **RepositoryLocation** complex type object (section [2.2.4.161](#)), and returns the associated **Cube** complex type object (section [2.2.4.78](#)).

The following is the **WSDL** port type specification of the **GetCube WSDL operation**.

```
<wsdl:operation name="GetCube" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeSoapIn"/>
  <wsdl:output message="tns:GetCubeSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeSoapIn** request message (section [3.1.4.26.1.1](#)), and the **server (2)** responds with a **GetCubeSoapOut** message (section [3.1.4.26.1.2](#)) as follows:

- The server (2) retrieves the data source from the **RepositoryLocation**.
- The server (2) validates the data source as to whether it is a **trusted location**, along with the user's access permissions. If it is from an un-trusted location, it is added to the **list (1)** of untrusted data sources. Valid data source types include **Analysis Services** and Tabular sources.
- The server (2) returns a **Cube** complex type object (section [2.2.4.78](#)) represented by the data source.

#### Exceptions:

| Error code                             | Description   |
|--|---|
| <b>DataSourceHostNotFound</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceConnectionUnsupported</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceDatabaseNotFound</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceCubeNotFound</b>          | See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ). |
| <b>NotTrustedLocation</b>              | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|----------------------|--|
| <b>GetCubeSoapIn</b> | The request WSDL message for the <b>GetCube WSDL operation</b> . |

| Message               | Description  |
|-----------------------|--|
| <b>GetCubeSoapOut</b> | The response WSDL message for the <b>GetCube</b> WSDL operation. |

### 3.1.4.26.1.1 GetCubeSoapIn

The request **WSDL message** for the **GetCube WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCube
```

The **SOAP body** contains the **GetCube** element.

### 3.1.4.26.1.2 GetCubeSoapOut

The response **WSDL message** for the **GetCube WSDL operation**.

The **SOAP body** contains the **GetCubeResponse** element.

### 3.1.4.26.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                | Description  |
|------------------------|--|
| <b>GetCube</b>         | The input data for the <b>GetCube WSDL operation</b> . |
| <b>GetCubeResponse</b> | The result data for the <b>GetCube</b> WSDL operation. |

#### 3.1.4.26.2.1 GetCube

The **GetCube** element specifies the input data for the **GetCube WSDL operation**.

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

**dataSourceLocation:** This element MUST be a valid **RepositoryLocation** complex type (section [2.2.4.161](#)).

#### 3.1.4.26.2.2 GetCubeResponse

The **GetCubeResponse** element specifies the result data for the **GetCube WSDL operation**.

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

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="GetCubeResult" type="tns:Cube"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

**GetCubeResult:** This element MUST return **NULL**, if input fails validation; otherwise, MUST return the **Cube** complex type (section [2.2.4.78](#)) represented by the **RepositoryLocation** complex type (section [2.2.4.161](#)).

### 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 GetCubeFromDataSource

The **GetCubeFromDataSource** operation takes in a data source object and returns the associated **Cube** complex type object section [2.2.4.78](#)().

The following is the **WSDL** port type specification of the **GetCubeFromDataSource WSDL operation**.

```

<wsdl:operation name="GetCubeFromDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeFromDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetCubeFromDataSourceSoapIn** request message (section [3.1.4.27.1.1](#)), and the **server (2)** responds with a **GetCubeFromDataSourceSoapOut** message (section [3.1.4.27.1.2](#)) as follows:

- The server (2) validates the data source as to whether it is in a **trusted location**, along with the user's access permissions. If it is from an un-trusted location, it is added to the **list (1)** of untrusted data sources. Valid data source types include **Analysis Services** and Tabular sources.
- The server (2) returns a **Cube** complex type object (section [2.2.4.78](#)) represented by the data source.

#### Exceptions:

| Error code                        | Description  |
|-----------------------------------|--|
| <b>InvalidPermission</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceDatabaseNotFound</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceCubeNotFound</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>         | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------------|---|
| <b>GetCubeFromDataSourceSoapIn</b>  | The request WSDL message for the <b>GetCubeFromDataSource WSDL operation</b> .  |
| <b>GetCubeFromDataSourceSoapOut</b> | The response WSDL message for the <b>GetCubeFromDataSource WSDL operation</b> . |

#### 3.1.4.27.1.1 GetCubeFromDataSourceSoapIn

The request **WSDL message** for the **GetCubeFromDataSource WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/GetCubeFromDataSource`

The **SOAP body** contains the **GetCubeFromDataSource** element.

#### 3.1.4.27.1.2 GetCubeFromDataSourceSoapOut

The response **WSDL message** for the **GetCubeFromDataSource WSDL operation**.

The **SOAP body** contains the **GetCubeFromDataSourceResponse** element.

### 3.1.4.27.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                              | Description   |
|--------------------------------------|---|
| <b>GetCubeFromDataSource</b>         | The input data for the <b>GetCubeFromDataSource WSDL operation</b> .  |
| <b>GetCubeFromDataSourceResponse</b> | The result data for the <b>GetCubeFromDataSource WSDL operation</b> . |

### 3.1.4.27.2.1 GetCubeFromDataSource

The **GetCubeFromDataSource** element specifies the input data for the **GetCubeFromDataSource WSDL operation**.

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

**dataSource:** A **DataSource** complex type (section [2.2.4.85](#)) to be used for the request. This element MUST be present.

### 3.1.4.27.2.2 GetCubeFromDataSourceResponse

The **GetCubeFromDataSourceResponse** element specifies the result data for the **GetCubeFromDataSource WSDL operation**.

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

**GetCubeFromDataSourceResult:** This element MUST return 'Null' when the Input does not match the **DataSource** complex type (section [2.2.4.85](#)) stored on the **server (2)**, or when the Input is not read-only and the user does not have adequate permissions to open and edit the **DataSource**. Otherwise, it MUST return the **Cube** complex type (section [2.2.4.78](#)) represented by that **DataSource**.

### 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 GetCubeMetaData

The **GetCubeMetaData** operation takes in an **Analysis Services RepositoryLocation** complex type object (section [2.2.4.161](#)) and returns the associated **Cube** complex type object (section [2.2.4.78](#)).

The following is the **WSDL** port type specification of the **GetCubeMetaData WSDL operation**.

```
<wsdl:operation name="GetCubeMetaData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeMetaDataSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeMetaDataSoapIn** request message (section [3.1.4.28.1.1](#)), and the **server (2)** responds with a **GetCubeMetaDataSoapOut** message (section [3.1.4.28.1.2](#)) as follows:

- The server (2) retrieves the data source from the **RepositoryLocation**.
- The server (2) validates whether it is a **trusted location**, along with the user's access permissions. If it is from an un-trusted location, it is added to the **list (1)** of untrusted data sources.
- The server (2) retrieves the **Cube** definition represented by the data source, and generates a generic **Cube** object with **dimensions** as defined in the **Dimension** complex type object (section [2.2.4.90](#)) with only hierarchies and levels from the specified **Analysis Services** cube definition.

#### Exceptions:

| Error code                             | Description   |
|--|---|
| <b>UnableToLoadFCODao</b>              | See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ). |
| <b>DataSourceCubeNotFound</b>          | See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ). |
| <b>DatabaseConnectionNotOpen</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceHostNotFound</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceConnectionUnsupported</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>NotTrustedLocation</b>              | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceDatabaseNotFound</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------|---|
| <b>GetCubeMetaDataSoapIn</b>  | The request WSDL message for the <b>GetCubeMetaData WSDL operation</b> .  |
| <b>GetCubeMetaDataSoapOut</b> | The response WSDL message for the <b>GetCubeMetaData WSDL operation</b> . |

### 3.1.4.28.1.1 GetCubeMetaDataSoapIn

The request **WSDL message** for the **GetCubeMetaData WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData
```

The **SOAP body** contains the **GetCubeMetaData** element.

### 3.1.4.28.1.2 GetCubeMetaDataSoapOut

The response **WSDL message** for the **GetCubeMetaData WSDL operation**.

The **SOAP body** contains the **GetCubeMetaDataResponse** element.

### 3.1.4.28.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>GetCubeMetaData</b>         | The input data for the <b>GetCubeMetaData WSDL operation</b> .  |
| <b>GetCubeMetaDataResponse</b> | The result data for the <b>GetCubeMetaData WSDL operation</b> . |

#### 3.1.4.28.2.1 GetCubeMetaData

The **GetCubeMetaData** element specifies the input data for the **GetCubeMetaData WSDL operation**.

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

**dataSourceLocation:** This element MUST be an **Analysis Services** data source **RepositoryLocation** complex type (section [2.2.4.161](#)).

#### 3.1.4.28.2.2 GetCubeMetaDataResponse

The **GetCubeMetaDataResponse** element specifies the result data for the **GetCubeMetaData WSDL operation**.

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

```
</xs:sequence>
</xs:complexType>
</xs:element>
```

**GetCubeMetaDataResult:** This element MUST return the **Cube** complex type object (section [2.2.4.78](#)) associated with the **RepositoryLocation** complex type (section [2.2.4.161](#)).

### 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 GetCubeMetaDataForDataSource

The **GetCubeMetaDataForDataSource** operation takes in an **Analysis Services** data source object and returns the associated **Cube** complex type object (section [2.2.4.78](#)). This operation is valid for Analysis Services data sources only.

The following is the **WSDL** port type specification of the **GetCubeMetaDataForDataSource WSDL operation**.

```
<wsdl:operation name="GetCubeMetaDataForDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeMetaDataForDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataForDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeMetaDataForDataSourceSoapIn** request message (section [3.1.4.29.1.1](#)), and the **server (2)** responds with a **GetCubeMetaDataForDataSourceSoapOut** message (section [3.1.4.29.1.2](#)) as follows:

- The server (2) validates whether it is a trusted data source, along with the user's access permissions. If it is from an un-trusted location, it is added to the **list (1)** of untrusted data sources.
- The server (2) retrieves the **Cube** definition represented by the data source, and generates a generic **Cube** complex type object (section [2.2.4.78](#)) with **dimensions** as defined in the **Dimension** complex type object (section [2.2.4.90](#)) from the **Analysis Services cube** definition.

#### Exceptions:

| Error code                             | Description   |
|--|---|
| <b>UnableToLoadFCODao</b>              | See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ). |
| <b>DataSourceCubeNotFound</b>          | See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ). |
| <b>DatabaseConnectionNotOpen</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceHostNotFound</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceConnectionUnsupported</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>NotTrustedLocation</b>              | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |
| <b>DataSourceDatabaseNotFound</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).        |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.29.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                                    | Description  |
|--|--|
| <b>GetCubeMetaDataForDataSourceSoapIn</b>  | The request WSDL message for the <b>GetCubeMetaDataForDataSource WSDL operation</b> .  |
| <b>GetCubeMetaDataForDataSourceSoapOut</b> | The response WSDL message for the <b>GetCubeMetaDataForDataSource WSDL operation</b> . |

#### 3.1.4.29.1.1 GetCubeMetaDataForDataSourceSoapIn

The request **WSDL message** for the **GetCubeMetaDataForDataSource WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaDataForDataSource`

The **SOAP body** contains the **GetCubeMetaDataForDataSource** element.

#### 3.1.4.29.1.2 GetCubeMetaDataForDataSourceSoapOut

The response **WSDL message** for the **GetCubeMetaDataForDataSource WSDL operation**.

The **SOAP body** contains the **GetCubeMetaDataForDataSourceResponse** element.

### 3.1.4.29.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                 | Description  |
|---|--|
| <b>GetCubeMetaForDataSource</b>         | The input data for the <b>GetCubeMetaForDataSource WSDL operation</b> .  |
| <b>GetCubeMetaForDataSourceResponse</b> | The result data for the <b>GetCubeMetaForDataSource WSDL operation</b> . |

### 3.1.4.29.2.1 GetCubeMetaForDataSource

The **GetCubeMetaForDataSource** element specifies the input data for the **GetCubeMetaForDataSource WSDL operation**.

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

**dataSource:** This element MUST be an **Analysis Services** data source, as specified in section [2.2.4.85](#).

### 3.1.4.29.2.2 GetCubeMetaForDataSourceResponse

The **GetCubeMetaForDataSourceResponse** element specifies the result data for the **GetCubeMetaForDataSource WSDL operation**.

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

**GetCubeMetaForDataSourceResult:** This element MUST return the **Cube** complex type object (section [2.2.4.78](#)) associated with the specified data source.

### 3.1.4.29.3 Complex Types

None.

### 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 GetCubeNameInfos

The **GetCubeNameInfos** operation retrieves an **ArrayOfNameInfo** complex type (section [2.2.4.48](#)) that describes the **cubes** of the **data source (1)**.

The following is the **WSDL** port type specification of the **GetCubeNameInfos WSDL operation**.

```
<wsdl:operation name="GetCubeNameInfos" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeNameInfosSoapIn"/>
  <wsdl:output message="tns:GetCubeNameInfosSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeNameInfoSoapIn** request message (section [3.1.4.30.1.1](#)), and the **server (2)** responds with a **GetCubeNameInfoSoapOut** response message (section [3.1.4.30.1.2](#)) as follows:

- The server (2) receives a data source (1).
- The server (2) sends the **NameInfo** complex type object (section [2.2.4.149](#)) for each of the corresponding cubes.

#### Exceptions:

| Error code                        | Description  |
|-----------------------------------|--|
| <b>DataSourceDatabaseNotFound</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceConnectionFailed</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>         | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.30.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                        | Description  |
|--------------------------------|--|
| <b>GetCubeNameInfosSoapIn</b>  | The request WSDL message for the <b>GetCubeNameInfos WSDL operation</b> .  |
| <b>GetCubeNameInfosSoapOut</b> | The response WSDL message for the <b>GetCubeNameInfos WSDL operation</b> . |

#### 3.1.4.30.1.1 GetCubeNameInfosSoapIn

The request **WSDL message** for the **GetCubeNameInfos WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos
```

The **SOAP body** contains the **GetCubeNameInfos** element.

### 3.1.4.30.1.2 GetCubeNameInfosSoapOut

The response **WSDL message** for the **GetCubeNameInfos WSDL operation**.

The **SOAP body** contains the **GetCubeNameInfosResponse** element.

### 3.1.4.30.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>GetCubeNameInfos</b>         | The input data for the <b>GetCubeNameInfos WSDL operation</b> .  |
| <b>GetCubeNameInfosResponse</b> | The result data for the <b>GetCubeNameInfos WSDL operation</b> . |

#### 3.1.4.30.2.1 GetCubeNameInfos

The **GetCubeNameInfos** element specifies the input data for the **GetCubeNameInfos WSDL operation**.

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

**dataSource:** The **data source (1)**. This element **MUST** be present.

#### 3.1.4.30.2.2 GetCubeNameInfosResponse

The **GetCubeNameInfosResponse** element specifies the result data for the **GetCubeNameInfos WSDL operation**.

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

**GetCubeNameInfosResult:** An **ArrayOfNameInfo** complex type (section [2.2.4.48](#)). This element **MUST** be present.

### 3.1.4.30.3 Complex Types

None.

### 3.1.4.30.4 Simple Types

None.

### 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 GetCurrentCultureLcid

The **GetCurrentCultureLcid** operation retrieves the current culture locale identifier.

The following is the **WSDL** port type specification of the **GetCurrentCultureLcid WSDL operation**.

```
<wsdl:operation name="GetCurrentCultureLcid" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCurrentCultureLcidSoapIn"/>
  <wsdl:output message="tns:GetCurrentCultureLcidSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCurrentCultureLcidSoapIn** request message (section [3.1.4.31.1.1](#)), and the **server (2)** responds with a **GetCurrentCultureLcidSoapOut** response message (section [3.1.4.31.1.2](#)) as follows:

- The server (2) MUST respond by retrieving the current culture locale identifier.
- If there was an application error on the server (2) during the operation, the server (2) MUST return a **SOAP fault** response. The error code MUST be one of the values specified in section [2.2.2.1.2](#).

### 3.1.4.31.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                             | Description   |
|-------------------------------------|---|
| <b>GetCurrentCultureLcidSoapIn</b>  | The request WSDL message for the <b>GetCurrentCultureLcid WSDL operation</b> .  |
| <b>GetCurrentCultureLcidSoapOut</b> | The response WSDL message for the <b>GetCurrentCultureLcid WSDL operation</b> . |

### 3.1.4.31.1.1 GetCurrentCultureLcidSoapIn

The request **WSDL message** for the **GetCurrentCultureLcid WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid
```

The **SOAP body** contains the **GetCurrentCultureLcid** element.

### 3.1.4.31.1.2 GetCurrentCultureLcidSoapOut

The response **WSDL message** for the **GetCurrentCultureLcid WSDL operation**.

The **SOAP body** contains the **GetCurrentCultureLcidResponse** element.

### 3.1.4.31.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                              | Description   |
|--------------------------------------|---|
| <b>GetCurrentCultureLcid</b>         | The input data for the <b>GetCurrentCultureLcid WSDL operation</b> .  |
| <b>GetCurrentCultureLcidResponse</b> | The result data for the <b>GetCurrentCultureLcid WSDL operation</b> . |

#### 3.1.4.31.2.1 GetCurrentCultureLcid

The **GetCurrentCultureLcid** element specifies the input data for the **GetCurrentCultureLcid WSDL operation**.

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

#### 3.1.4.31.2.2 GetCurrentCultureLcidResponse

The **GetCurrentCultureLcidResponse** element specifies the result data for the **GetCurrentCultureLcid WSDL operation**.

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

**GetCurrentCultureLcidResult:** An integer representing the current culture locale identifier, which determines how dates, times, numbers, currencies, calendar preferences, input methods, and sorting preferences are formatted.

### 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 GetCurrentUserInfo

The **GetCurrentUserInfo** operation retrieves the user name and display name information of the **current user**.

The following is the **WSDL** port type specification of the **GetCurrentUserInfo WSDL operation**.

```
<wsdl:operation name="GetCurrentUserInfo" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCurrentUserInfoSoapIn"/>
  <wsdl:output message="tns:GetCurrentUserInfoSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCurrentUserInfoSoapIn** request message (section [3.1.4.32.1.1](#)), and the **server (2)** responds with a **GetCurrentUserInfoSoapOut** response message (section [3.1.4.32.1.2](#)) as follows:

- The protocol client **MUST** provide out parameters to hold the current user name and display name.
- The server (2) **MUST** set those parameters to the current user name and user display name.
- In the event of an application error, the server (2) **MUST** set the current user name to the string "i:Anonymous" and user display name to the string "Anonymous".

#### 3.1.4.32.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                          | Description  |
|----------------------------------|--|
| <b>GetCurrentUserInfoSoapIn</b>  | The request WSDL message for the <b>GetCurrentUserInfo WSDL operation</b> .  |
| <b>GetCurrentUserInfoSoapOut</b> | The response WSDL message for the <b>GetCurrentUserInfo WSDL operation</b> . |

#### 3.1.4.32.1.1 GetCurrentUserInfoSoapIn

The request **WSDL message** for the **GetCurrentUserInfo WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo
```

The **SOAP body** contains the **GetCurrentUserInfo** element.

### 3.1.4.32.1.2 GetCurrentUserInfoSoapOut

The response **WSDL message** for the **GetCurrentUserInfo WSDL operation**.

The **SOAP body** contains the **GetCurrentUserInfoResponse** element.

### 3.1.4.32.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                           | Description  |
|-----------------------------------|--|
| <b>GetCurrentUserInfo</b>         | The input data for the <b>GetCurrentUserInfo WSDL operation</b> .  |
| <b>GetCurrentUserInfoResponse</b> | The result data for the <b>GetCurrentUserInfo WSDL operation</b> . |

#### 3.1.4.32.2.1 GetCurrentUserInfo

The **GetCurrentUserInfo** element specifies the input data for the **GetCurrentUserInfo WSDL operation**.

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

#### 3.1.4.32.2.2 GetCurrentUserInfoResponse

The **GetCurrentUserInfoResponse** element specifies the result data for the **GetCurrentUserInfo WSDL operation**.

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

**userName:** User name information of **current user**.

**userDisplayName:** Display name information of current user.

### 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 GetDashboard

The **GetDashboard** operation retrieves a **dashboard**.

The following is the **WSDL** port type specification of the **GetDashboard WSDL operation**.

```
<wsdl:operation name="GetDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDashboardSoapIn"/>
  <wsdl:output message="tns:GetDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDashboardSoapIn** request message (section [3.1.4.33.1.1](#)), and the **server (2)** responds with a **GetDashboardSoapOut** response message (section [3.1.4.33.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the dashboard to be retrieved.
- The server (2) responds with the corresponding dashboard.
- In the event the dashboard cannot be retrieved, the server (2) SHOULD [<28>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.33.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                    | Description  |
|----------------------------|--|
| <b>GetDashboardSoapIn</b>  | The request WSDL message for the <b>GetDashboard WSDL operation</b> .  |
| <b>GetDashboardSoapOut</b> | The response WSDL message for the <b>GetDashboard WSDL operation</b> . |

### 3.1.4.33.1.1 GetDashboardSoapIn

The request **WSDL message** for the **GetDashboard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDashboard
```

The **SOAP body** contains the **GetDashboard** element.

### 3.1.4.33.1.2 GetDashboardSoapOut

The response **WSDL message** for the **GetDashboard WSDL operation**.

The **SOAP body** contains the **GetDashboardResponse** element.

### 3.1.4.33.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>GetDashboard</b>         | The input data for the <b>GetDashboard WSDL operation</b> .  |
| <b>GetDashboardResponse</b> | The result data for the <b>GetDashboard WSDL operation</b> . |

#### 3.1.4.33.2.1 GetDashboard

The **GetDashboard** element specifies the input data for the **GetDashboard WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. The **ItemUrl** property MUST contain a valid **URL**.

#### 3.1.4.33.2.2 GetDashboardResponse

The **GetDashboardResponse** element specifies the result data for the **GetDashboard WSDL operation**.

```

<xs:element name="GetDashboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDashboardResult"
type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetDashboardResult:** A **Dashboard** complex type, as specified in section [2.2.4.79](#). This element SHOULD 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 GetDatabaseNamesFromDataSource

The **GetDatabaseNamesFromDataSource** operation retrieves an array of database names associated with the **data source (1)**.

The following is the **WSDL** port type specification of the **GetDatabaseNamesFromDataSource WSDL operation**.

```

<wsdl:operation name="GetDatabaseNamesFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDatabaseNamesFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDatabaseNamesFromDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetDatabaseNamesSoapIn** request message (section [3.1.4.34.1.1](#)), and the **server (2)** responds with a **GetDatabaseNamesSoapOut** response message (section [3.1.4.34.1.2](#)) as follows:

- The server (2) receives a **DataSource** complex type (section [2.2.4.79](#)).
- The server (2) returns the name for each database associated with the data source (2).

### Exceptions:

| Error code                        | Description  |
|-----------------------------------|--|
| <b>DataSourceDatabaseNotFound</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceConnectionFailed</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>         | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section 2.2.2.1.2. A detailed specification of how exceptions are reported by the server (2) is 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  |
|--|--|
| <b>GetDatabaseNamesFromDataSourceSoapIn</b>  | The request WSDL message for the <b>GetDatabaseNamesFromDataSource WSDL operation</b> .  |
| <b>GetDatabaseNamesFromDataSourceSoapOut</b> | The response WSDL message for the <b>GetDatabaseNamesFromDataSource WSDL operation</b> . |

#### 3.1.4.34.1.1 GetDatabaseNamesFromDataSourceSoapIn

The request **WSDL message** for the **GetDatabaseNamesFromDataSource WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/GetDatabaseNamesFromDataSource`

The **SOAP body** contains the **GetDatabaseNamesFromDataSource** element.

#### 3.1.4.34.1.2 GetDatabaseNamesFromDataSourceSoapOut

The response **WSDL message** for the **GetDatabaseNamesFromDataSource WSDL operation**.

The **SOAP body** contains the **GetDatabaseNamesFromDataSourceResponse** element.

### 3.1.4.34.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                       | Description  |
|---|--|
| <b>GetDatabaseNamesFromDataSource</b>         | The input data for the <b>GetDatabaseNamesFromDataSource WSDL operation</b> .  |
| <b>GetDatabaseNamesFromDataSourceResponse</b> | The result data for the <b>GetDatabaseNamesFromDataSource WSDL operation</b> . |

### 3.1.4.34.2.1 GetDatabaseNamesFromDataSource

The **GetDatabaseNamesFromDataSource** element specifies the input data for the **GetDatabaseNamesFromDataSource WSDL operation**.

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

**dataSource:** The **data source (1)**. This element MUST be present.

### 3.1.4.34.2.2 GetDatabaseNamesFromDataSourceResponse

The **GetDatabaseNamesFromDataSourceResponse** element specifies the result data for the **GetDatabaseNamesFromDataSource WSDL operation**.

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

**GetDatabaseNamesFromDataSourceResult:** An array of strings. This element MUST be present.

### 3.1.4.34.3 Complex Types

None.

### 3.1.4.34.4 Simple Types

None.

### 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 GetDataSource

The **GetDataSource** operation retrieves a **data source (1)**.

The following is the **WSDL** port type specification of the **GetDataSource WSDL operation**.

```

<wsdl:operation name="GetDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetDataSourceSoapIn** request message (section [3.1.4.35.1.1](#)), and the **server (2)** responds with a **GetDataSourceSoapOut** response message (section [3.1.4.35.1.2](#)) as follows:

- Receives a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source (1) to be retrieved.
- The server (2) sends the corresponding data source (1).
- In the event that a data source (1) cannot be retrieved, the server (2) SHOULD [<29>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.35.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                     | Description   |
|-----------------------------|---|
| <b>GetDataSourceSoapIn</b>  | The request WSDL message for the <b>GetDataSource WSDL operation</b> .  |
| <b>GetDataSourceSoapOut</b> | The response WSDL message for the <b>GetDataSource WSDL operation</b> . |

#### 3.1.4.35.1.1 GetDataSourceSoapIn

The request **WSDL message** for the **GetDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDataSource
```

The **SOAP body** contains the **GetDataSource** element.

#### 3.1.4.35.1.2 GetDataSourceSoapOut

The response **WSDL message** for the **GetDataSource WSDL operation**.

The **SOAP body** contains the **GetDataSourceResponse** element.

### 3.1.4.35.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                      | Description   |
|------------------------------|---|
| <b>GetDataSource</b>         | The input data for the <b>GetDataSource WSDL operation</b> .  |
| <b>GetDataSourceResponse</b> | The result data for the <b>GetDataSource WSDL operation</b> . |

#### 3.1.4.35.2.1 GetDataSource

The **GetDataSource** element specifies the input data for the **GetDataSource WSDL operation**.

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

**location:** A **RepositoryLocation** complex type (section [2.2.4.161](#)) of a data source. This element **MUST** be present.

#### 3.1.4.35.2.2 GetDataSourceResponse

The **GetDataSourceResponse** element specifies the result data for the **GetDataSource WSDL operation**.

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

**GetDataSourceResult:** A **data source (1)**, as specified in the **DataSource** complex type (section [2.2.4.85](#)). This element **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 GetDependentElements

The **GetDependentElements** operation retrieves from the **server (2)** all **FirstClassElement** complex types (section [2.2.4.99](#)) associated with a **list (1)** of repository locations. In addition, all **FirstClassElements** that are related by reference are also included in the response. For example, for a requested scorecard, all **Kpis**, **Indicators**, and **DataSources** that the scorecard depends on will also be retrieved.

The following is the **WSDL** port type specification of the **GetDependentElements WSDL operation**.

```
<wsdl:operation name="GetDependentElements" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDependentElementsSoapIn"/>
  <wsdl:output message="tns:GetDependentElementsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDependentElementsSoapIn** request message (section [3.1.4.36.1.1](#)), and the server (2) responds with a **GetDependentElementsSoapOut** response message (section [3.1.4.36.1.2](#)) as follows:

- The protocol client sends a list (1) of **RepositoryLocation** complex types (section [2.2.4.161](#)).
- The server (2) responds with a **DependentElementInfo** complex type (section [3.1.4.36.3.2](#)) containing all **FirstClassElement items** specified by the list of **RepositoryLocations**, all associated sub-items, and all containing list **URLs**.
- In the event that all **FirstClassElement** items and sub-items referenced by the list cannot be retrieved, the server (2) SHOULD [<30>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                    | Description  |
|-------------------------------|--|
| <b>FCORedFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCORedFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.36.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                            | Description   |
|------------------------------------|---|
| <b>GetDependentElementsSoapIn</b>  | The request WSDL message for the <b>GetDependentElements WSDL operation</b> . |
| <b>GetDependentElementsSoapOut</b> | The response WSDL message for the <b>GetDependentElements WSDL</b>            |

| Message | Description |
|---------|-------------|
|         | operation.  |

### 3.1.4.36.1.1 GetDependentElementsSoapIn

The request **WSDL message** for the **GetDependentElements WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDependentElements
```

The **SOAP body** contains the **GetDependentElements** element.

### 3.1.4.36.1.2 GetDependentElementsSoapOut

The response **WSDL message** for the **GetDependentElements WSDL operation**.

The **SOAP body** contains the **GetDependentElementsResponse** element.

## 3.1.4.36.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                             | Description  |
|-------------------------------------|--|
| <b>GetDependentElements</b>         | The input data for the <b>GetDependentElements WSDL operation</b> .  |
| <b>GetDependentElementsResponse</b> | The result data for the <b>GetDependentElements WSDL operation</b> . |

### 3.1.4.36.2.1 GetDependentElements

The **GetDependentElements** element specifies the input data for the **GetDependentElements WSDL operation**.

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

**missingItems:** An **ArrayOfRepositoryLocation** complex type, as specified in section [3.1.4.36.3.1](#). This element specifies which **items** to retrieve.

### 3.1.4.36.2.2 GetDependentElementsResponse

The **GetDependentElementsResponse** element specifies the result data for the **GetDependentElements WSDL operation**.

```

<xs:element name="GetDependentElementsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDependentElementsResult"
type="tns:DependentElementInfo"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetDependentElementsResult:** A **DependentElementInfo** complex type, as specified in section [3.1.4.36.3.2](#). This element **MUST** be present.

### 3.1.4.36.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

| Complex type                     | Description  |
|----------------------------------|--|
| <b>ArrayOfRepositoryList</b>     | Specifies an array of RepositoryList elements.   |
| <b>ArrayOfRepositoryLocation</b> | Specifies an array of <b>RepositoryLocation</b> .  |
| <b>DependentElementInfo</b>      | Contains elements and associated list references.  |
| <b>ListLocation</b>              | Contains the necessary information to identify a <b>list (1)</b> on the <b>server (2)</b> .                                    |
| <b>RepositoryList</b>            | Specifies a location where <b>FirstClassElement</b> (section <a href="#">2.2.4.99</a> ) <b>items</b> are stored on the server. |

#### 3.1.4.36.3.1 ArrayOfRepositoryLocation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfRepositoryLocation** complex type specifies an array of **RepositoryLocation** complex types (section [2.2.4.161](#)).

```

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

```

**RepositoryLocation:** This element **MUST NOT** be null and **MUST** conform to the schema of the **RepositoryLocation**.

#### 3.1.4.36.3.2 DependentElementInfo

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DependentElementInfo** complex type contains elements and associated list references.

```

<xs:complexType name="DependentElementInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DependentLists"
type="tns:ArrayOfRepositoryList"/>
  </xs:sequence>
</xs:complexType>

```

```

    <xs:element minOccurs="0" maxOccurs="1" name="DependentElements"
type="tns:ArrayOfFirstClassElement"/>
  </xs:sequence>
</xs:complexType>

```

**DependentLists:** An **ArrayOfRepositoryList** complex type (section [3.1.4.36.3.3](#)). A collection of **lists (1)** associated with the **items** in **DependentElements**.

**DependentElements:** An **ArrayOfFirstClassElement** complex type (section [2.2.4.34](#)). A collection of **FirstClassElement** complex type items (section [2.2.4.99](#)), and all items associated through **FirstClassElement** references.

### 3.1.4.36.3.3 ArrayOfRepositoryList

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfRepositoryList** complex type specifies an array of **RepositoryList** elements (section [3.1.4.36.3.4](#)).

```

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

```

**RepositoryList:** This element MUST NOT be null and MUST conform to the schema of the **RepositoryList** complex type (section [3.1.4.36.3.4](#)).

### 3.1.4.36.3.4 RepositoryList

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **RepositoryList** complex type specifies a location where **FirstClassElement** complex type **items** (section [2.2.4.99](#)) are stored on the **server (2)**.

```

<xs:complexType name="RepositoryList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Location" type="tns:ListLocation"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SupportedTypes" type="tns:FCOContentType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Title" type="xs:string"/>
    <xs:element xmlns:s1="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
name="ListId" type="s1:guid"/>
  </xs:sequence>
</xs:complexType>

```

**Location:** Specifies the **ListLocation** complex type (section [3.1.4.36.3.5](#)). This element MUST be present.

**SupportedTypes:** The content types that are supported in the form of the **FCOContentType** simple type (section [3.1.4.36.4.1](#)).

**Title:** Specifies the title for the **RepositoryList**. This element MUST be present. The value MUST NOT be empty and MUST NOT consist of only **whitespace** characters.

**ListId:** Specifies the identity for this **RepositoryList**. This element MUST be formatted as a **GUID**.

### 3.1.4.36.3.5 ListLocation

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **ListLocation** complex type contains the necessary information to identify a **list (1)** on the **server (2)**.

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

**SiteUrl:** The url for the server where the list (1) is located. The attribute MUST be a valid [\[RFC1738\]](#) URL.

**ListUrl:** The location on the server where the list (1) is located. MUST be present. MUST be a valid URL as specified in [\[RFC1738\]](#).

### 3.1.4.36.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

| Simple type           | Description                           |
|-----------------------|---------------------------------------|
| <b>FCOContentType</b> | Specifies the type of an <b>FCO</b> . |

#### 3.1.4.36.4.1 FCOContentType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **FCOContentType** simple type specifies the type of an **FCO**.

```
<xs:simpleType name="FCOContentType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="PpsDashboard"/>
        <xs:enumeration value="PpsScorecard"/>
        <xs:enumeration value="PpsKpi"/>
        <xs:enumeration value="PpsReportView"/>
        <xs:enumeration value="PpsIndicator"/>
        <xs:enumeration value="PpsDataSource"/>
        <xs:enumeration value="PpsFilter"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **FCOContentType** simple type.

| Value        | Meaning                                     |
|--------------|---|
| None         | The type of object is unknown.              |
| PpsDashboard | The object is a <a href="#">Dashboard</a> . |

| Value         | Meaning                                      |
|---------------|--|
| PpsScorecard  | The object is a <a href="#">Scorecard</a> .  |
| PpsKpi        | The object is a <a href="#">Kpi</a> .        |
| PpsReportView | The object is a <a href="#">ReportView</a> . |
| PpsIndicator  | The object is an <a href="#">Indicator</a> . |
| PpsDataSource | The object is a <a href="#">DataSource</a> . |
| PpsFilter     | The object is a <a href="#">Filter</a> .     |

### 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 GetDimensions

The **GetDimensions** operation retrieves an array of **dimension** objects.

The following is the **WSDL** port type specification of the **GetDimensions WSDL operation**.

```
<wsdl:operation name="GetDimensions" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDimensionsSoapIn"/>
  <wsdl:output message="tns:GetDimensionsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDimensionsSoapIn** request message (section [3.1.4.37.1.1](#)), and the **server (2)** responds with a **GetDimensionsSoapOut** response message (section [3.1.4.37.1.2](#)) as follows:

- Receives a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the associated **data source (1)**.
- The server (2) sends the corresponding **ArrayOfDimension** complex type (section [2.2.4.32](#)).

#### Exceptions:

| Error code                             | Description  |
|--|--|
| <b>DataSourceConnectionFailed</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceHostNotFound</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceConnectionUnsupported</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceDatabaseNotFound</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

| Error code         | Description   |
|--------------------|---|
| NotTrustedLocation | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.37.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message              | Description   |
|----------------------|---|
| GetDimensionsSoapIn  | The request WSDL message for the <b>GetDimensions WSDL operation</b> .  |
| GetDimensionsSoapOut | The response WSDL message for the <b>GetDimensions WSDL operation</b> . |

#### 3.1.4.37.1.1 GetDimensionsSoapIn

The request **WSDL message** for the **GetDimensions WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensions
```

The **SOAP body** contains the **GetDimensions** element.

#### 3.1.4.37.1.2 GetDimensionsSoapOut

The response **WSDL message** for the **GetDimensions WSDL operation**.

The **SOAP body** contains the **GetDimensionsResponse** element.

### 3.1.4.37.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element               | Description   |
|-----------------------|---|
| GetDimensions         | The input data for the <b>GetDimensions WSDL operation</b> .  |
| GetDimensionsResponse | The result data for the <b>GetDimensions WSDL operation</b> . |

#### 3.1.4.37.2.1 GetDimensions

The **GetDimensions** element specifies the input data for the **GetDimensions WSDL operation**.

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

```

    <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

**dataSourceLocation:** A **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

### 3.1.4.37.2.2 GetDimensionsResponse

The **GetDimensionsResponse** element specifies the result data for the **GetDimensions WSDL operation**.

```

<xs:element name="GetDimensionsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsResult"
type="tns:ArrayOfDimension"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetDimensionsResult:** An **ArrayOfDimension** complex type (section [2.2.4.32](#)). This element **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 GetDimensionsFromDataSource

The **GetDimensionsFromDataSource** operation retrieves an array of **dimension** objects (see section [2.2.4.90](#)).

The following is the **WSDL** port type specification of the **GetDimensionsFromDataSource WSDL operation**.

```

<wsdl:operation name="GetDimensionsFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDimensionsFromDataSourceSoapIn"/>

```

```
<wsdl:output message="tns:GetDimensionsFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDimensionsFromDataSourceSoapIn** request message (section [3.1.4.38.1.1](#)), and the **server (2)** responds with a **GetDimensionsFromDataSourceSoapOut** response message (section [3.1.4.38.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)).
- The server (2) sends the corresponding **ArrayOfDimension** complex type (section [2.2.4.32](#)).

#### Exceptions:

| Error code                             | Description  |
|--|--|
| <b>DataSourceConnectionFailed</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceHostNotFound</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceConnectionUnsupported</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceDatabaseNotFound</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>              | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.38.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                                   | Description   |
|---|---|
| <b>GetDimensionsFromDataSourceSoapIn</b>  | The request WSDL message for the <b>GetDimensionsFromDataSource WSDL operation</b> .  |
| <b>GetDimensionsFromDataSourceSoapOut</b> | The response WSDL message for the <b>GetDimensionsFromDataSource WSDL operation</b> . |

#### 3.1.4.38.1.1 GetDimensionsFromDataSourceSoapIn

The request **WSDL message** for the **GetDimensionsFromDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource
```

The **SOAP body** contains the **GetDimensionsFromDataSource** element.

#### 3.1.4.38.1.2 GetDimensionsFromDataSourceSoapOut

The response **WSDL message** for the **GetDimensionsFromDataSource WSDL operation**.

The **SOAP body** contains the **GetDimensionsFromDataSourceResponse** element.

### 3.1.4.38.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                    | Description   |
|--|---|
| <b>GetDimensionsFromDataSource</b>         | The input data for the <b>GetDimensionsFromDataSource WSDL operation</b> .  |
| <b>GetDimensionsFromDataSourceResponse</b> | The result data for the <b>GetDimensionsFromDataSource WSDL operation</b> . |

#### 3.1.4.38.2.1 GetDimensionsFromDataSource

The **GetDimensionsFromDataSource** element specifies the input data for the **GetDimensionsFromDataSource WSDL operation**.

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

**dataSource:** A **data source (1)**, as specified in section [2.2.4.85](#). This element MUST be present.

#### 3.1.4.38.2.2 GetDimensionsFromDataSourceResponse

The **GetDimensionsFromDataSourceResponse** element specifies the result data for the **GetDimensionsFromDataSource WSDL operation**.

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

**GetDimensionsFromDataSourceResult:** An **ArrayOfDimension** complex type (section [2.2.4.32](#)). This element MUST be present.

#### 3.1.4.38.3 Complex Types

None.

#### 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 GetFilter

The **GetFilter** operation retrieves a **Filter** complex type (section [2.2.4.98](#)).

The following is the **WSDL** port type specification of the **GetFilter WSDL operation**.

```
<wsdl:operation name="GetFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetFilterSoapIn"/>
  <wsdl:output message="tns:GetFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetFilterSoapIn** request message (section [3.1.4.39.1.1](#)), and the **server (2)** responds with a **GetFilterSoapOut** response message (section [3.1.4.39.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **Filter** to be retrieved.
- The server (2) responds with the corresponding **Filter**.
- In the event the **Filter** cannot be retrieved, the server (2) SHOULD [<31>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.39.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                 | Description   |
|-------------------------|---|
| <b>GetFilterSoapIn</b>  | The request WSDL message for the <b>GetFilter WSDL operation</b> .  |
| <b>GetFilterSoapOut</b> | The response WSDL message for the <b>GetFilter WSDL operation</b> . |

### 3.1.4.39.1.1 GetFilterSoapIn

The request **WSDL message** for the **GetFilter WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetFilter
```

The **SOAP body** contains the **GetFilter** element.

### 3.1.4.39.1.2 GetFilterSoapOut

The response **WSDL message** for the **GetFilter WSDL operation**.

The **SOAP body** contains the **GetFilterResponse** element.

## 3.1.4.39.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                  | Description   |
|--------------------------|---|
| <b>GetFilter</b>         | The input data for the <b>GetFilter WSDL operation</b> .  |
| <b>GetFilterResponse</b> | The result data for the <b>GetFilter WSDL operation</b> . |

### 3.1.4.39.2.1 GetFilter

The **GetFilter** element specifies the input data for the **GetFilter WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element **MUST** be present. The **ItemUrl** property **MUST** contain a valid **URL**.

### 3.1.4.39.2.2 GetFilterResponse

The **GetFilterResponse** element specifies the result data for the **GetFilter WSDL operation**.

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

**GetFilterResult:** A **Filter** complex type, as specified in section [2.2.4.98](#). This element SHOULD 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 GetIndicator

The **GetIndicator** operation retrieves an **Indicator** complex type (section [2.2.4.125](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **GetIndicator WSDL operation**.

```
<wsdl:operation name="GetIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetIndicatorSoapIn"/>
  <wsdl:output message="tns:GetIndicatorSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetIndicatorSoapIn** request message (section [3.1.4.40.1.1](#)), and the server (2) responds with a **GetIndicatorSoapOut** response message (section [3.1.4.40.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **Indicator** to be retrieved.
- The server (2) sends the corresponding **Indicator**.
- In the event that an **indicator** cannot be retrieved, the server (2) SHOULD [<32>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.40.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                    | Description  |
|----------------------------|--|
| <b>GetIndicatorSoapIn</b>  | The request WSDL message for the <b>GetIndicator WSDL operation</b> .  |
| <b>GetIndicatorSoapOut</b> | The response WSDL message for the <b>GetIndicator WSDL operation</b> . |

#### 3.1.4.40.1.1 GetIndicatorSoapIn

The request **WSDL message** for the **GetIndicator WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetIndicator
```

The **SOAP body** contains the **GetIndicator** element.

#### 3.1.4.40.1.2 GetIndicatorSoapOut

The response **WSDL message** for the **GetIndicator WSDL operation**.

The **SOAP body** contains the **GetIndicatorResponse** element.

### 3.1.4.40.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>GetIndicator</b>         | The input data for the <b>GetIndicator WSDL operation</b> .  |
| <b>GetIndicatorResponse</b> | The result data for the <b>GetIndicator WSDL operation</b> . |

#### 3.1.4.40.2.1 GetIndicator

The **GetIndicator** element specifies the input data for the **GetIndicator WSDL operation**.

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

**location:** The **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the indicator on the **server (2)**.

- It **MUST** be present.
- The **ItemUrl** property **MUST** be set to the location of the **indicator**.

### 3.1.4.40.2.2 GetIndicatorResponse

The **GetIndicatorResponse** element specifies the result data for the **GetIndicator WSDL operation**.

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

**GetIndicatorResult:** The **Indicator** complex type object (section [2.2.4.125](#)) that was requested from the **server (2)**.

### 3.1.4.40.3 Complex Types

None.

### 3.1.4.40.4 Simple Types

None.

### 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 GetKpi

The **GetKpi** operation retrieves a **Kpi** complex type object (section [2.2.4.128](#)).

The following is the **WSDL** port type specification of the **GetKpi WSDL operation**.

```
<wsdl:operation name="GetKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetKpiSoapIn"/>
  <wsdl:output message="tns:GetKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetKpiSoapIn** request message (section [3.1.4.41.1.1](#)), and the **server (2)** responds with a **GetKpiSoapOut** response message (section [3.1.4.41.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Kpi**.

- The server (2) MUST retrieve the **Kpi**.
- In the event that a **Kpi** cannot be retrieved, the server (2) SHOULD [<33>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|----------------------|--|
| <b>GetKpiSoapIn</b>  | The request WSDL message for the <b>GetKpi WSDL operation</b> .  |
| <b>GetKpiSoapOut</b> | The response WSDL message for the <b>GetKpi WSDL operation</b> . |

#### 3.1.4.41.1.1 GetKpiSoapIn

The request **WSDL message** for the **GetKpi WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/GetKpi`

The **SOAP body** contains the **GetKpi** element.

#### 3.1.4.41.1.2 GetKpiSoapOut

The response **WSDL message** for the **GetKpi WSDL operation**.

The **SOAP body** contains the **GetKpiResponse** element.

### 3.1.4.41.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element               | Description  |
|-----------------------|--|
| <b>GetKpi</b>         | The input data for the <b>GetKpi WSDL operation</b> .  |
| <b>GetKpiResponse</b> | The result data for the <b>GetKpi WSDL operation</b> . |

### 3.1.4.41.2.1 GetKpi

The **GetKpi** element specifies the input data for the **GetKpi WSDL operation**.

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

**location:** The location of the **KPI** to be retrieved, as specified by a **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

### 3.1.4.41.2.2 GetKpiResponse

The **GetKpiResponse** element specifies the result data for the **GetKpi WSDL operation**.

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

**GetKpiResult:** The **Kpi** complex type object (section [2.2.4.128](#)) that was requested from the **server (2)**.

### 3.1.4.41.3 Complex Types

None.

### 3.1.4.41.4 Simple Types

None.

### 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 GetKpisFromScorecard

The **GetKpisFromScorecard** operation retrieves an array of **Kpi** complex type objects (section [2.2.4.128](#)) associated with a **scorecard**.

The following is the **WSDL** port type specification of the **GetKpisFromScorecard WSDL operation**.

```
<wsdl:operation name="GetKpisFromScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetKpisFromScorecardSoapIn"/>
  <wsdl:output message="tns:GetKpisFromScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetKpisFromScorecardSoapIn** request message (section [3.1.4.42.1.1](#)), and the **server (2)** responds with a **GetKpisFromScorecardSoapOut** response message (section [3.1.4.42.1.2](#)) as follows:

- The server (2) receives a **RepositoryLocation** complex type (section [2.2.4.161](#)) of a scorecard.
- The server (2) MUST retrieve the array of **Kpi** elements.

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.42.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                            | Description  |
|------------------------------------|--|
| <b>GetKpisFromScorecardSoapIn</b>  | The request WSDL message for the <b>GetKpisFromScorecard WSDL operation</b> .  |
| <b>GetKpisFromScorecardSoapOut</b> | The response WSDL message for the <b>GetKpisFromScorecard WSDL operation</b> . |

#### 3.1.4.42.1.1 GetKpisFromScorecardSoapIn

The request **WSDL message** for the **GetKpisFromScorecard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetKpisFromScorecard
```

The **SOAP body** contains the **GetKpisFromScorecard** element.

#### 3.1.4.42.1.2 GetKpisFromScorecardSoapOut

The response **WSDL message** for the **GetKpisFromScorecard WSDL operation**.

The **SOAP body** contains the **GetKpisFromScorecardResponse** element.

### 3.1.4.42.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                             | Description  |
|-------------------------------------|--|
| <b>GetKpisFromScorecard</b>         | The input data for the <b>GetKpisFromScorecard WSDL operation</b> .  |
| <b>GetKpisFromScorecardResponse</b> | The result data for the <b>GetKpisFromScorecard WSDL operation</b> . |

#### 3.1.4.42.2.1 GetKpisFromScorecard

The **GetKpisFromScorecard** element specifies the input data for the **GetKpisFromScorecard WSDL operation**.

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

**scorecardLocation:** The location of a **scorecard**, as specified by the **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

#### 3.1.4.42.2.2 GetKpisFromScorecardResponse

The **GetKpisFromScorecardResponse** element specifies the result data for the **GetKpisFromScorecard WSDL operation**.

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

**GetKpisFromScorecardResult:** An array of **Kpi** complex type elements (section [2.2.4.128](#)) that was requested from the **server (2)**.

#### 3.1.4.42.3 Complex Types

None.

#### 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 GetLatestAnalyticReportVersion

The **GetLatestAnalyticReportVersion** operation retrieves from the **server (2)** the version number for a **report view** that has been created through **SaveTemporaryAnalyticReport** operation (section [3.1.4.65](#)).

The following is the **WSDL** port type specification of the **GetLatestAnalyticReportVersion WSDL operation**.

```
<wsdl:operation name="GetLatestAnalyticReportVersion"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetLatestAnalyticReportVersionSoapIn"/>
  <wsdl:output message="tns:GetLatestAnalyticReportVersionSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetReportViewSoapIn** request message (section [3.1.4.43.1.1](#)) and the server (2) responds with a **GetReportViewSoapOut** response message (section [3.1.4.43.1.2](#)) as follows:

- The protocol client sends a **GUID** that uniquely identifies a report view.
- The server (2) sends an integer representing the latest version number of the corresponding report view.

In case of failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is specified in section [2.2.2.1](#).

#### 3.1.4.43.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                                      | Description  |
|--|--|
| <b>GetLatestAnalyticReportVersionSoapIn</b>  | The request WSDL message for the <b>GetLatestAnalyticReportVersion WSDL operation</b> .  |
| <b>GetLatestAnalyticReportVersionSoapOut</b> | The response WSDL message for the <b>GetLatestAnalyticReportVersion WSDL operation</b> . |

#### 3.1.4.43.1.1 GetLatestAnalyticReportVersionSoapIn

The request **WSDL message** for the **GetLatestAnalyticReportVersion WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetLatestAnalyticReportVersion
```

The **SOAP body** contains the **GetLatestAnalyticReportVersion** element.

### 3.1.4.43.1.2 GetLatestAnalyticReportVersionSoapOut

The response **WSDL message** for the **GetLatestAnalyticReportVersion WSDL operation**.

The **SOAP body** contains the **GetLatestAnalyticReportVersionResponse** element.

### 3.1.4.43.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                       | Description  |
|---|--|
| <b>GetLatestAnalyticReportVersion</b>         | The input data for the <b>GetLatestAnalyticReportVersion WSDL operation</b> .  |
| <b>GetLatestAnalyticReportVersionResponse</b> | The result data for the <b>GetLatestAnalyticReportVersion WSDL operation</b> . |

#### 3.1.4.43.2.1 GetLatestAnalyticReportVersion

The **GetLatestAnalyticReportVersion** element specifies the input data for the **GetLatestAnalyticReportVersion WSDL operation**.

```
<xs:element name="GetLatestAnalyticReportVersion"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="analyticReportViewId"
        xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewId:** The **SaveTemporaryAnalyticReportResult** element (section [3.1.4.65.2.2](#)) returned when the **report view** was saved. This element **MUST** be present.

#### 3.1.4.43.2.2 GetLatestAnalyticReportVersionResponse

The **GetLatestAnalyticReportVersionResponse** element specifies the result data for the **GetLatestAnalyticReportVersion WSDL operation**.

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

**GetLatestAnalyticReportVersionResult:** The version number of the **report view**. This element **MUST** be present.

### 3.1.4.43.3 Complex Types

None.

### 3.1.4.43.4 Simple Types

None.

### 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 GetListItems

The **GetListItems** operation retrieves all **FirstClassElements** complex types (section [2.2.4.99](#)) associated with a given repository **list (1)** from the **server (2)**.

The following is the **WSDL** port type specification of the **GetListItems WSDL operation**.

```
<wsdl:operation name="GetListItems" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetListItemsSoapIn"/>
  <wsdl:output message="tns:GetListItemsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetListItemsSoapIn** request message (section [3.1.4.44.1.1](#)), and the server (2) responds with a **GetListItemsSoapOut** response message (section [3.1.4.44.1.2](#)) as follows:

- The protocol client sends the **URL** of the list (1) from which to retrieve **items**.
- The server (2) responds with a collection of corresponding **FirstClassElement** items.
- In the event that all **FirstClassElement** items in the list (1) cannot be retrieved, the server (2) SHOULD [<34>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.44.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                    | Description  |
|----------------------------|--|
| <b>GetListItemsSoapIn</b>  | The request WSDL message for the <b>GetListItems WSDL operation</b> .  |
| <b>GetListItemsSoapOut</b> | The response WSDL message for the <b>GetListItems WSDL operation</b> . |

#### 3.1.4.44.1.1 GetListItemsSoapIn

The request **WSDL message** for the **GetListItems WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetListItems
```

The **SOAP body** contains the **GetListItems** element.

#### 3.1.4.44.1.2 GetListItemsSoapOut

The response **WSDL message** for the **GetListItems WSDL operation**.

The **SOAP body** contains the **GetListItemsResponse** element.

#### 3.1.4.44.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>GetListItems</b>         | The input data for the <b>GetListItems WSDL operation</b> .  |
| <b>GetListItemsResponse</b> | The result data for the <b>GetListItems WSDL operation</b> . |

#### 3.1.4.44.2.1 GetListItems

The **GetListItems** element specifies the input data for the **GetListItems WSDL operation**.

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

**listUrl**: A **server-relative URL** that references the **list (1)** on the **server (2)** from which to retrieve the **items**. This element **MUST** be present and **MUST** be a valid **URL**.

#### 3.1.4.44.2.2 GetListItemsResponse

The **GetListItemsResponse** element specifies the result data for the **GetListItems WSDL operation**.

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

**GetListItemsResult:** An array of **FirstClassElement** complex type objects (section [2.2.4.99](#)), as specified in the **ArrayOfFirstClassElement** (section [2.2.4.34](#)). This element **MUST** be present. This array **MUST** contain one element for each **item** in the requested **list (1)** and **SHOULD NOT** contain null elements.

### 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 GetMdx

The **GetMdx** operation retrieves an **MDX** that can be used to query data sources for the given analytic report. The Analytic Chart and Analytic Grid **report view** types contain custom data that is used to generate MDX queries. See the **ReportView** complex type (section [2.2.4.160](#)) for more detail.

The following is the **WSDL** port type specification of the **GetMdx WSDL operation**.

```
<wsdl:operation name="GetMdx" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetMdxSoapIn"/>
  <wsdl:output message="tns:GetMdxSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetMdxSoapIn** request message (section [3.1.4.45.1.1](#)), and the **server (2)** responds with a **GetMdxSoapOut** response message (section [3.1.4.45.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) referencing the analytic report from which to generate the MDX.
- The server (2) responds with an MDX expression.

- In the event the MDX cannot be retrieved, the server (2) SHOULD [<35>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                    | Description  |
|-------------------------------|--|
| <b>FCORedFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCORedFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|----------------------|--|
| <b>GetMdxSoapIn</b>  | The request WSDL message for the <b>GetMdx WSDL operation</b> .  |
| <b>GetMdxSoapOut</b> | The response WSDL message for the <b>GetMdx WSDL operation</b> . |

##### 3.1.4.45.1.1 GetMdxSoapIn

The request **WSDL message** for the **GetMdx WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetMdx
```

The **SOAP body** contains the **GetMdx** element.

##### 3.1.4.45.1.2 GetMdxSoapOut

The response **WSDL message** for the **GetMdx WSDL operation**.

The **SOAP body** contains the **GetMdxResponse** element.

#### 3.1.4.45.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element               | Description  |
|-----------------------|--|
| <b>GetMdx</b>         | The input data for the <b>GetMdx WSDL operation</b> .  |
| <b>GetMdxResponse</b> | The result data for the <b>GetMdx WSDL operation</b> . |

### 3.1.4.45.2.1 GetMdx

The **GetMdx** element specifies the input data for the **GetMdx WSDL operation**.

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

**analyticReportViewLocation:** A **RepositoryLocation** complex type (section [2.2.4.161](#)). This element MUST be present.

- If the **report view** was created with the **CreateReportView** operation (section [3.1.4.7](#)), the **ItemUrl** property MUST contain a valid **URL**. **ItemType** and **ItemGuid** are set by the **server (2)**.
- If the report view was created with the **SaveTemporaryAnalyticReport** operation (section [3.1.4.65](#)):
  - The **ItemGuid** property MUST equal the **GUID** that was returned from **SaveTemporaryAnalyticReport**.
  - The **ItemType** property MUST equal **TempReportView**, as specified by **FirstClassObjectType** simple type (section [2.2.5.20](#)).
  - The **ItemUrl** property MUST equal an empty string.

### 3.1.4.45.2.2 GetMdxResponse

The **GetMdxResponse** element specifies the result data for the **GetMdx WSDL operation**.

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

**GetMdxResult:** A string that represents an **MDX**. This string SHOULD NOT be empty.

### 3.1.4.45.3 Complex Types

None.

### 3.1.4.45.4 Simple Types

None.

### 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 GetParameterDisplayData

The **GetParameterDisplayData** operation builds a template data table containing only the columns produced by a specific parameter type. The referred parameter represents a specific kind of connection between two **Web Parts**. The resulting **DataTable** (as described in [\[DataTable\]](#)) represents an empty sample of the information that gets passed on that connection.

The following is the **WSDL** port type specification of the **GetParameterDisplayData WSDL operation**.

```
<wsdl:operation name="GetParameterDisplayData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetParameterDisplayDataSoapIn"/>
  <wsdl:output message="tns:GetParameterDisplayDataSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetParameterDisplayDataSoapIn** request message (section [3.1.4.46.1.1](#)), and the **server (2)** responds with a **GetParameterDisplayDataSoapOut** response message (section [3.1.4.46.1.2](#)) as follows:

- The server (2) uses the **ParameterProviderId** property from the **ParameterDefinition** complex type (section [2.2.4.155](#)) to identify one of the parameter providers registered on the server (2).
- The server (2) creates the **DataTable** containing all columns used by that parameter type. The server (2) uses the **data source (1)** referenced by **parameterSourceLocation** and the **GridViewData<36>** complex type (section [2.2.4.121](#)) referenced by **gridViewData** element (see section [3.1.4.46.2.1](#)) to create the **DataTable**.

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.46.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                               | Description  |
|---------------------------------------|--|
| <b>GetParameterDisplayDataSoapIn</b>  | The request WSDL message for the <b>GetParameterDisplayData WSDL operation</b> . |
| <b>GetParameterDisplayDataSoapOut</b> | The response WSDL message for the <b>GetParameterDisplayData WSDL</b>            |

| Message | Description |
|---------|-------------|
|         | operation.  |

### 3.1.4.46.1.1 GetParameterDisplayDataSoapIn

The request **WSDL message** for the **GetParameterDisplayData WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData
```

The **SOAP body** contains the **GetParameterDisplayData** element.

### 3.1.4.46.1.2 GetParameterDisplayDataSoapOut

The response **WSDL message** for the **GetParameterDisplayData WSDL operation**.

The **SOAP body** contains the **GetParameterDisplayDataResponse** element.

### 3.1.4.46.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                | Description   |
|--|---|
| <b>GetParameterDisplayData</b>         | The input data for the <b>GetParameterDisplayData WSDL operation</b> .  |
| <b>GetParameterDisplayDataResponse</b> | The result data for the <b>GetParameterDisplayData WSDL operation</b> . |

#### 3.1.4.46.2.1 GetParameterDisplayData

The **GetParameterDisplayData** element specifies the input data for the **GetParameterDisplayData WSDL operation**.

```
<xs:element name="GetParameterDisplayData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterDefinition"
type="tns:ParameterDefinition"/>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="gridViewData" type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**parameterDefinition:** Specifies the **ParameterDefinition** complex type (section [2.2.4.155](#)). This element MUST NOT be null and the **ParameterProviderId** property MUST refer to one of the parameter data providers registered on the **server (2)**. This function supports only filter-type parameters shown in the following table.

| ParameterProviderId                 | CustomDefinition  |
|-------------------------------------|---|
| MDXParameterDataProvider            | A <a href="#">MdxParameterDefinition</a> object.                |
| MemberParameterDataProvider         | A <a href="#">MemberParameterDefinition</a> object.             |
| NamedSetParameterDataProvider       | A <a href="#">NamedSetParameterDefinition</a> object.           |
| TimeIntelligencePostFormulaProvider | A <a href="#">TimeIntelligencePostFormulaDefinition</a> object. |
| TimeIntelligenceProvider            | A <a href="#">TimeIntelligenceDefinition</a> object.            |

**parameterSourceLocation:** Specifies a data source location as defined in a **RepositoryLocation** complex type (section [2.2.4.161](#)). This element MAY be null or empty, in which case if the parameter type requires a data source location, the resulting **DataTable** (as described in [\[DataTable\]](#)) is **NULL**.

The following parameter providers require an **MDX** capable **OLAP data source (1)**.

| ParameterProviderId           | CustomDefinition                      |
|-------------------------------|---------------------------------------|
| MDXParameterDataProvider      | A MdxParameterDefinition object.      |
| MemberParameterDataProvider   | A MemberParameterDefinition object.   |
| NamedSetParameterDataProvider | A NamedSetParameterDefinition object. |

**gridViewData:** Unused. This element MUST be set to **NULL** and MUST be ignored by the protocol client.

### 3.1.4.46.2.2 GetParameterDisplayDataResponse

The **GetParameterDisplayDataResponse** element specifies the result data for the **GetParameterDisplayData WSDL operation**.

```
<xs:element name="GetParameterDisplayDataResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetParameterDisplayDataResult">
        <xs:complexType>
          <xs:sequence>
            <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
            <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetParameterDisplayDataResult:** This defines the template data table that contains only the columns produced by a specific parameter type.

### 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 GetPreviewDataSet

The **GetPreviewDataSet** method retrieves a data set from a data source, which is suitable for previewing results.

The following is the **WSDL** port type specification of the **GetPreviewDataSet WSDL operation**.

```
<wsdl:operation name="GetPreviewDataSet" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetPreviewDataSetSoapIn"/>
  <wsdl:output message="tns:GetPreviewDataSetSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetPreviewDataSetSoapIn** request message (section [3.1.4.47.1.1](#)), and the **server (2)** responds with a **GetPreviewDataSetSoapOut** response message (section [3.1.4.47.1.2](#)) as follows:

- The protocol client sends a **DataSource** complex type (section [2.2.4.85](#)) that defines the data to be retrieved.
- The server (2) responds with a data set suitable for previewing the data.
- In the event a data set cannot be retrieved, the server (2) MUST return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                             | Description  |
|--|--|
| <b>InvalidPermission</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceConnectionFailed</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>DataSourceConnectionUnsupported</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>              | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.47.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                         | Description   |
|---------------------------------|---|
| <b>GetPreviewDataSetSoapIn</b>  | The request WSDL message for the <b>GetPreviewDataSet WSDL operation</b> .  |
| <b>GetPreviewDataSetSoapOut</b> | The response WSDL message for the <b>GetPreviewDataSet WSDL operation</b> . |

#### 3.1.4.47.1.1 GetPreviewDataSetSoapIn

The request **WSDL message** for the **GetPreviewDataSet WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetPreviewDataSet
```

The **SOAP body** contains the **GetPreviewDataSet** element.

#### 3.1.4.47.1.2 GetPreviewDataSetSoapOut

The response **WSDL message** for the **GetPreviewDataSet WSDL operation**.

The **SOAP body** contains the **GetPreviewDataSetResponse** element.

### 3.1.4.47.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                          | Description   |
|----------------------------------|---|
| <b>GetPreviewDataSet</b>         | The input data for the <b>GetPreviewDataSet WSDL operation</b> .  |
| <b>GetPreviewDataSetResponse</b> | The result data for the <b>GetPreviewDataSet WSDL operation</b> . |

#### 3.1.4.47.2.1 GetPreviewDataSet

The **GetPreviewDataSet** element specifies the input data for the **GetPreviewDataSet WSDL operation**.

```
<xs:element name="GetPreviewDataSet" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="maxRecords" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**maxRecords:** The maximum number of records to retrieve.

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST allow the query of preview data sets. [<37>](#)

### 3.1.4.47.2.2 GetPreviewDataSetResponse

The **GetPreviewDataSetResponse** element specifies the result data for the **GetPreviewDataSet WSDL operation**.

```
<xs:element name="GetPreviewDataSetResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPreviewDataSetResult">
        <xs:complexType mixed="true">
          <xs:sequence>
            <xs:any/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetPreviewDataSetResult:** The data set matching the specifications in the **DataSource** complex type (section [2.2.4.85](#)). The data set MUST include two elements: a schema element and a data element. The content of the data element MUST conform to the schema in the schema element. The data set SHOULD include one table, but SHOULD be empty if the **dataSource** is invalid. The data table MUST include the columns specified in **DataSource**.

### 3.1.4.47.3 Complex Types

None.

### 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 GetQueryResultMembers

The **GetQueryResultMembers** operation retrieves an array of **members (2)** associated with the specified **report**.

The following is the **WSDL** port type specification of the **GetQueryResultMembers WSDL operation**.

```
<wsdl:operation name="GetQueryResultMembers" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetQueryResultMembersSoapIn"/>
</wsdl:operation>
```

```
<wsdl:output message="tns:GetQueryResultMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetQueryResultMembersSoapIn** request message (section [3.1.4.48.1.1](#)), and the **server (2)** responds with a **GetQueryResultMembersSoapOut** response message (section [3.1.4.48.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **report view**. It also sends a unique **dimension** name.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

#### Exceptions:

| Error code                | Description   |
|---------------------------|---|
| <b>InvalidDataSource</b>  | Current operation on the <b>data source (1)</b> cannot be finished because the data source (1) has failed basic validation. |
| <b>InvalidReportView</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).  |
| <b>NotTrustedLocation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).  |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------------|---|
| <b>GetQueryResultMembersSoapIn</b>  | The request WSDL message for the <b>GetQueryResultMembers WSDL operation</b> .  |
| <b>GetQueryResultMembersSoapOut</b> | The response WSDL message for the <b>GetQueryResultMembers WSDL operation</b> . |

#### 3.1.4.48.1.1 GetQueryResultMembersSoapIn

The request **WSDL message** for the **GetQueryResultMembers WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetQueryResultMembers
```

The **SOAP body** contains the **GetQueryResultMembers** element.

#### 3.1.4.48.1.2 GetQueryResultMembersSoapOut

The response **WSDL message** for the **GetQueryResultMembers WSDL operation**.

The **SOAP body** contains the **GetQueryResultMembersResponse** element.

### 3.1.4.48.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                              | Description   |
|--------------------------------------|---|
| <b>GetQueryResultMembers</b>         | The input data for the <b>GetQueryResultMembers WSDL operation</b> .  |
| <b>GetQueryResultMembersResponse</b> | The result data for the <b>GetQueryResultMembers WSDL operation</b> . |

#### 3.1.4.48.2.1 GetQueryResultMembers

The **GetQueryResultMembers** element specifies the input data for the **GetQueryResultMembers WSDL operation**.

```
<xs:element name="GetQueryResultMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formattingDimensionName"
type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewLocation:** A **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

**formattingDimensionName:** The unique name of the formatting **dimension**. The element **MUST** be present.

#### 3.1.4.48.2.2 GetQueryResultMembersResponse

The **GetQueryResultMembersResponse** element specifies the result data for the **GetQueryResultMembers WSDL operation**.

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

**GetQueryResultMembersResult:** This element **MUST** contain an **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 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 GetRegisteredCustomFCOs

The **GetRegisteredCustomFCOs** operation retrieves custom object definitions registered on the **server (2)**.

The following is the **WSDL** port type specification of the **GetRegisteredCustomFCOs WSDL operation**.

```
<wsdl:operation name="GetRegisteredCustomFCOs" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetRegisteredCustomFCOsSoapIn"/>
  <wsdl:output message="tns:GetRegisteredCustomFCOsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetRegisteredCustomFCOsSoapIn** request message (section [3.1.4.49.1.1](#)), and the server (2) responds with a **GetRegisteredCustomFCOsSoapOut** response message (section [3.1.4.49.1.2](#)) as follows:

- The protocol client sends the type of custom objects to be returned by the server (2). The informed type MUST be one of the following: All, **DataSource**, **Filter**, and **ReportView**, as defined in the **CustomFCOType** simple type (section [3.1.4.49.4.1](#)).
- The server (2) reads all the custom object entries registered on the server (2) and returns only those matching the type provided by the client protocol.
- The result is a collection of **CustomFCODefinition** complex type objects (section [3.1.4.49.3.2](#)), as defined in the **ArrayOfCustomFCODefinition** complex type (section [3.1.4.49.3.1](#)).

### 3.1.4.49.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                               | Description   |
|---------------------------------------|---|
| <b>GetRegisteredCustomFCOsSoapIn</b>  | The request WSDL message for the <b>GetRegisteredCustomFCOs WSDL operation</b> .  |
| <b>GetRegisteredCustomFCOsSoapOut</b> | The response WSDL message for the <b>GetRegisteredCustomFCOs WSDL operation</b> . |

#### 3.1.4.49.1.1 GetRegisteredCustomFCOsSoapIn

The request **WSDL message** for the **GetRegisteredCustomFCOs WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs
```

The **SOAP body** contains the **GetRegisteredCustomFCOs** element.

### 3.1.4.49.1.2 GetRegisteredCustomFCOsSoapOut

The response **WSDL message** for the **GetRegisteredCustomFCOs WSDL operation**.

The **SOAP body** contains the **GetRegisteredCustomFCOsResponse** element.

### 3.1.4.49.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                | Description   |
|--|---|
| <b>GetRegisteredCustomFCOs</b>         | The input data for the <b>GetRegisteredCustomFCOs WSDL operation</b> .  |
| <b>GetRegisteredCustomFCOsResponse</b> | The result data for the <b>GetRegisteredCustomFCOs WSDL operation</b> . |

#### 3.1.4.49.2.1 GetRegisteredCustomFCOs

The **GetRegisteredCustomFCOs** element specifies the input data for the **GetRegisteredCustomFCOs WSDL operation**.

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

**type:** Specifies the type of custom objects to be returned by the **server (2)**. The informed type **MUST** be one of the following: **All**, **DataSource**, **Filter**, and **ReportView**, as defined in **CustomFCOType** simple type (section [3.1.4.49.4.1](#)).

#### 3.1.4.49.2.2 GetRegisteredCustomFCOsResponse

The **GetRegisteredCustomFCOsResponse** element specifies the result data for the **GetRegisteredCustomFCOs WSDL operation**.

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

</xs:element>

**GetRegisteredCustomFCOsResult:** Specifies a collection of **CustomFCODefinition** complex type objects (section [3.1.4.49.3.2](#)), as defined in the **ArrayOfCustomFCODefinition** complex type (section [3.1.4.49.3.1](#)). This collection MUST contain all the valid custom objects registered on the **server (2)** that equal the type sent from the protocol client.

### 3.1.4.49.3 Complex Types

The following table summarizes the **XML schema** complex type definitions that are specific to this operation.

| Complex type                      | Description   |
|-----------------------------------|---|
| <b>ArrayOfCustomFCODefinition</b> | Specifies an array of definitions for a custom object.  |
| <b>CustomFCODefinition</b>        | Specifies how instances of a custom object class are created, modified, and rendered in dashboards. |

#### 3.1.4.49.3.1 ArrayOfCustomFCODefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfCustomFCODefinition** complex type specifies an array of definitions for a custom object.

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

**CustomFCODefinition:** This element MUST NOT be null and MUST conform to the schema of the **CustomFCODefinition** complex type (section [3.1.4.49.3.2](#)).

#### 3.1.4.49.3.2 CustomFCODefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **CustomFCODefinition** complex type specifies how instances of a custom object class are created, modified, and rendered in **dashboards**.

```
<xs:complexType name="CustomFCODefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="TemplateIconSerialized" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Type" type="tns:CustomFCOType" use="required"/>
  <xs:attribute name="SubType" type="xs:string"/>
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
  <xs:attribute name="RendererClass" type="xs:string"/>
  <xs:attribute name="EditorUri" type="xs:string"/>
</xs:complexType>
```

**TemplateIconSerialized:** Specifies an image that represents the custom object. The value MUST be either empty or a **base64 encoding** of a bitmap.

**Type:** The type of custom object class instance, as specified in the **CustomFCOType** simple type (section [3.1.4.49.4.1](#)). The value MUST be **DataSource**, **Filter**, or **ReportView**.

**SubType:** The sub-type instances of the custom object class.

- The value MUST NOT be empty.
- The value MUST NOT be longer than 60 characters.
- The value MUST NOT contain the following characters: apostrophe ('), quotation mark ("), or backslash (\).

**Name:** The name of the custom object class.

**Description:** The description of the custom object class.

**RendererClass:** The assembly-qualified name of a type that renders the custom object. When the **Type** attribute equals "DataSource", the value MUST be empty.

**EditorUri:** The **URL** of the associated application used to create and modify the custom object. The value MUST NOT be empty.

#### 3.1.4.49.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

| Simple type          | Description                            |
|----------------------|--|
| <b>CustomFCOType</b> | Specifies the type of a custom object. |

##### 3.1.4.49.4.1 CustomFCOType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **CustomFCOType** enumeration specifies the type of a custom object.

```
<xs:simpleType name="CustomFCOType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="DataSource"/>
        <xs:enumeration value="Filter"/>
        <xs:enumeration value="ReportView"/>
        <xs:enumeration value="All"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **CustomFCOType** simple type.

| Value      | Meaning   |
|------------|---|
| None       | The object type is not specified.   |
| DataSource | The object is a <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ).   |
| Filter     | The object is a <b>Filter</b> complex type (section <a href="#">2.2.4.98</a> ).   |
| ReportView | The object is a <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ).  |
| All        | This object is a <b>DataSource</b> , <b>Filter</b> or <b>ReportView</b> .<br>This value MUST only be used when <b>GetRegisteredCustomFCOs</b> operation (section <a href="#">3.1.4.49</a> ) is invoked. |

### 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 GetReportView

The **GetReportView** operation retrieves a **ReportView** complex type (section [2.2.4.160](#)) from the **server (2)**.

The following is the **WSDL** port type specification of the **GetReportView WSDL operation**.

```
<wsdl:operation name="GetReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetReportViewSoapIn"/>
  <wsdl:output message="tns:GetReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetReportViewSoapIn** request message (section [3.1.4.50.1.1](#)), and the server (2) responds with a **GetReportViewSoapOut** response message (section [3.1.4.50.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **ReportView** to be retrieved.
- The server (2) sends the corresponding **ReportView**.
- In the event that a **ReportView** cannot be retrieved, the server (2) SHOULD [<38>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code           | Description  |
|----------------------|--|
| <b>FCOReadFailed</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

| Error code                     | Description   |
|--------------------------------|---|
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section 2.2.2.1.

### 3.1.4.50.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                     | Description   |
|-----------------------------|---|
| <b>GetReportViewSoapIn</b>  | The request WSDL message for the <b>GetReportView WSDL operation</b> .  |
| <b>GetReportViewSoapOut</b> | The response WSDL message for the <b>GetReportView WSDL operation</b> . |

#### 3.1.4.50.1.1 GetReportViewSoapIn

The request **WSDL message** for the **GetReportView WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetReportView
```

The **SOAP body** contains the **GetReportView** element.

#### 3.1.4.50.1.2 GetReportViewSoapOut

The response **WSDL message** for the **GetReportView WSDL operation**.

The **SOAP body** contains the **GetReportViewResponse** element.

### 3.1.4.50.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                      | Description   |
|------------------------------|---|
| <b>GetReportView</b>         | The input data for the <b>GetReportView WSDL operation</b> .  |
| <b>GetReportViewResponse</b> | The result data for the <b>GetReportView WSDL operation</b> . |

#### 3.1.4.50.2.1 GetReportView

The **GetReportView** element specifies the input data for the **GetReportView WSDL operation**.

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

```

        <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

**location:** The **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the **ReportView** complex type (section [2.2.4.160](#)) on the **server (2)**.

- This element **MUST** be present.
- The **ItemUrl** property **MUST** be set to the location of the **ReportView**.

### 3.1.4.50.2.2 GetReportViewResponse

The **GetReportViewResponse** element specifies the result data for the **GetReportView WSDL operation**.

```

<xs:element name="GetReportViewResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetReportViewResult:** The **ReportView** complex type object (section [2.2.4.160](#)) that was requested from the **server (2)**.

### 3.1.4.50.3 Complex Types

None.

### 3.1.4.50.4 Simple Types

None.

### 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 GetScorecard

The **GetScorecard** operation retrieves a **Scorecard** complex type (section [2.2.4.162](#)).

The following is the **WSDL** port type specification of the **GetScorecard WSDL operation**.

```

<wsdl:operation name="GetScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetScorecardSoapIn"/>

```

```
<wsdl:output message="tns:GetScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetScorecardSoapIn** request message (section [3.1.4.51.1.1](#)), and the **server (2)** responds with a **GetScorecardSoapOut** response message (section [3.1.4.51.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **Scorecard** to be retrieved.
- The server (2) responds with the corresponding **Scorecard**.
- In the event that the **Scorecard** cannot be retrieved, the server (2) SHOULD [<39>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.51.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                    | Description  |
|----------------------------|--|
| <b>GetScorecardSoapIn</b>  | The request WSDL message for the <b>GetScorecard WSDL operation</b> .  |
| <b>GetScorecardSoapOut</b> | The response WSDL message for the <b>GetScorecard WSDL operation</b> . |

#### 3.1.4.51.1.1 GetScorecardSoapIn

The request **WSDL message** for the **GetScorecard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetScorecard
```

The **SOAP body** contains the **GetScorecard** element.

#### 3.1.4.51.1.2 GetScorecardSoapOut

The response **WSDL message** for the **GetScorecard WSDL operation**.

The **SOAP body** contains the **GetScorecardResponse** element.

### 3.1.4.51.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>GetScorecard</b>         | The input data for the <b>GetScorecard WSDL operation</b> .  |
| <b>GetScorecardResponse</b> | The result data for the <b>GetScorecard WSDL operation</b> . |

#### 3.1.4.51.2.1 GetScorecard

The **GetScorecard** element specifies the input data for the **GetScorecard WSDL operation**.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element **MUST** be present. The **ItemUrl** property **MUST** contain a valid **URL**.

#### 3.1.4.51.2.2 GetScorecardResponse

The **GetScorecardResponse** element specifies the result data for the **GetScorecard WSDL operation**.

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

**GetScorecardResult:** A **Scorecard** complex type, as specified in section [2.2.4.162](#). This element **SHOULD** be present.

### 3.1.4.51.3 Complex Types

None.

### 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 ImportDashboard

The **ImportDashboard** operation [<40>](#) is used to import content from a specified Deployment Package ([\[MS-PRIMEPF\]](#)) to the **server (2)**.

The following is the **WSDL** port type specification of the **ImportDashboard WSDL operation**.

```
<wsdl:operation name="ImportDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ImportDashboardSoapIn"/>
  <wsdl:output message="tns:ImportDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **ImportDashboardSoapIn** request message (section [3.1.4.52.1.1](#)), and the server (2) responds with an **ImportDashboardSoapOut** response message (section [3.1.4.52.1.2](#)) as follows:

- The server (2) imports the items from the Deployment Package ([\[MS-PRIMEPF\]](#)) specified in the filename.
- If there was an application error on the server (2) during the operation, the server (2) **MUST** return a **SOAP fault** response, which **SHOULD** include one of exceptions specified below, but **MAY** contain any other exceptions.

#### Exceptions:

| Error code                   | Description  |
|------------------------------|--|
| <b>InvalidUrl</b>            | An invalid <b>URL</b> was specified                                  |
| <b>FCOUnauthorizedAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------|---|
| <b>ImportDashboardSoapIn</b>  | The request WSDL message for the <b>ImportDashboard WSDL operation</b> .  |
| <b>ImportDashboardSoapOut</b> | The response WSDL message for the <b>ImportDashboard WSDL operation</b> . |

#### 3.1.4.52.1.1 ImportDashboardSoapIn

The request **WSDL message** for the **ImportDashboard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/ImportDashboard
```

The **SOAP body** contains the **ImportDashboard** element.

### 3.1.4.52.1.2 ImportDashboardSoapOut

The response **WSDL message** for the **ImportDashboard WSDL operation**.

The **SOAP body** contains the **ImportDashboardResponse** element.

### 3.1.4.52.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>ImportDashboard</b>         | The input data for the <b>ImportDashboard WSDL operation</b> .  |
| <b>ImportDashboardResponse</b> | The result data for the <b>ImportDashboard WSDL operation</b> . |

### 3.1.4.52.2.1 ImportDashboard

The **ImportDashboard** element specifies the input data for the **ImportDashboard WSDL operation**.

```
<xs:element name="ImportDashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="siteUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="filename" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="locationMap">
        <xs:complexType mixed="true">
          <xs:sequence>
            <xs:any/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element minOccurs="0" maxOccurs="1" name="datasourceMap">
        <xs:complexType mixed="true">
          <xs:sequence>
            <xs:any/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element minOccurs="0" maxOccurs="1" name="masterPageUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**siteUrl:** Contains the **site collection URL** to use for the import. This element **MUST** be present.

**filename:** Contains the site collection relative path and file name of the Deployment Package ([MS-PRIMEPF]) to import. The path specified MUST be the relative path of a document library in the site collection specified in **siteUrl**. This element MUST be present.

**locationMap:** Contains a **SerializableDictionary** complex type (section 2.2.4.164) containing keys of type string and values of type string where:

- **Key** contains the **server-relative URL** of the source **list** in the Deployment Package ([MS-PRIMEPF])
- **Value** contains the server-relative URL of the destination list

During the import, all **list items** in the Deployment Package in one of the list URLs specified in **Keys** MUST be imported to the corresponding new destination list URL specified in the corresponding **Value**. If the parent list URL of a list item in the Deployment Package does not have an entry specified in **Keys**, then the list item MUST be imported to the same destination list as specified in the Deployment Package.

This element MUST be present.

**datasourceMap:** Contains a **SerializableDictionary** containing keys of type string and values of type string where:

- **Key** contains the server-relative URL of a **DataSource** complex type (section 2.2.4.85) in the Deployment Package ([MS-PRIMEPF]).
- **Value** contains the server-relative URL of an existing **DataSource** in the destination site.

During the import, all **FirstClassElement** complex types (section 2.2.4.99) with references to the **DataSources** specified in **Keys** MUST be updated to use the new **DataSource** specified in the corresponding **Value**.

This element MUST be present.

**masterPageUrl:** Contains the **site** relative URL of the **master page** to be used by the **dashboard** pages in the Deployment Package ([MS-PRIMEPF]). If this element is specified, the **server (2)** MUST update the dashboard pages to use the given master page; otherwise, the server (2) MUST NOT change the master page during import.

### 3.1.4.52.2 ImportDashboardResponse

The **ImportDashboardResponse** element specifies the result data for the **ImportDashboard WSDL operation**.

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

### 3.1.4.52.3 Complex Types

None.

### 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 QueryChildMembers

The **QueryChildMembers** operation uses a data source for the specified member, and returns a collection of members.

The following is the **WSDL** port type specification of the **QueryChildMembers WSDL operation**.

```
<wsdl:operation name="QueryChildMembers" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryChildMembersSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersSoapIn** request message (section [3.1.4.53.1.1](#)), and the **server (2)** responds with a **QueryChildMembersSoapOut** response message (section [3.1.4.53.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

#### Exceptions:

| Error code                | Description  |
|---------------------------|--|
| <b>InvalidPermission</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|---------------------------------|---|
| <b>QueryChildMembersSoapIn</b>  | The request WSDL message for the <b>QueryChildMembers WSDL operation</b> .  |
| <b>QueryChildMembersSoapOut</b> | The response WSDL message for the <b>QueryChildMembers WSDL operation</b> . |

#### 3.1.4.53.1.1 QueryChildMembersSoapIn

The request **WSDL message** for the **QueryChildMembers WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers
```

The **SOAP body** contains the **QueryChildMembers** element.

### 3.1.4.53.1.2 QueryChildMembersSoapOut

The response **WSDL message** for the **QueryChildMembers WSDL operation**.

The **SOAP body** contains the **QueryChildMembersResponse** element.

### 3.1.4.53.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                          | Description   |
|----------------------------------|---|
| <b>QueryChildMembers</b>         | The input data for the <b>QueryChildMembers WSDL operation</b> .  |
| <b>QueryChildMembersResponse</b> | The result data for the <b>QueryChildMembers WSDL operation</b> . |

### 3.1.4.53.2.1 QueryChildMembers

The **QueryChildMembers** element specifies the input data for the **QueryChildMembers WSDL operation**.

```
<xs:element name="QueryChildMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the data source for the **members (2)** on the **server (2)**.

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified **URL**.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of **child** members for a specified member name.

**memberUniqueName:** A value that uniquely identifies this element within the hierarchy. The value MUST be less than 255 characters and MUST NOT be null or empty.

### 3.1.4.53.2.2 QueryChildMembersResponse

The **QueryChildMembersResponse** element specifies the result data for the **QueryChildMembers WSDL operation**.

```

<xs:element name="QueryChildMembersResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryChildMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**QueryChildMembersResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.53.3 Complex Types

None.

### 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 QueryChildMembersByRangeFromDataSource

The **QueryChildMembersByRangeFromDataSource** operation queries the **DataSource** complex type (section [2.2.4.85](#)), and returns a collection of **child** members.

The following is the **WSDL** port type specification of the **QueryChildMembersByRangeFromDataSource WSDL operation**.

```

<wsdl:operation name="QueryChildMembersByRangeFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryChildMembersByRangeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersByRangeFromDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **QueryChildMembersByRangeFromDataSourceSoapIn** request message (section [3.1.4.54.1.1](#)), and the **server (2)** responds with a **QueryChildMembersByRangeFromDataSourceSoapOut** response message (section [3.1.4.54.1.2](#)) as follows:

- The protocol client sends a **DataSource** to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

#### Exceptions:

| Error code                | Description  |
|---------------------------|--|
| <b>InvalidPermission</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|--|--|
| <b>QueryChildMembersByRangeFromDataSourceSoapIn</b>  | The request WSDL message for the <b>QueryChildMembersByRangeFromDataSource WSDL operation</b> .  |
| <b>QueryChildMembersByRangeFromDataSourceSoapOut</b> | The response WSDL message for the <b>QueryChildMembersByRangeFromDataSource WSDL operation</b> . |

#### 3.1.4.54.1.1 QueryChildMembersByRangeFromDataSourceSoapIn

The request **WSDL message** for the **QueryChildMembersByRangeFromDataSource WSDL operation**.

The **SOAP action** value is:

<http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFromDataSource>

The **SOAP body** contains the **QueryChildMembersByRangeFromDataSource** element.

#### 3.1.4.54.1.2 QueryChildMembersByRangeFromDataSourceSoapOut

The response **WSDL message** for the **QueryChildMembersByRangeFromDataSource WSDL operation**.

The **SOAP body** contains the **QueryChildMembersByRangeFromDataSourceResponse** element.

### 3.1.4.54.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element   | Description   |
|---|---|
| <b>QueryChildMembersByRangeFromDataSource</b>         | The input data for the <b>QueryChildMembersByRangeFromDataSource WSDL operation</b> . |
| <b>QueryChildMembersByRangeFromDataSourceResponse</b> | The result data for the <b>QueryChildMembersByRangeFromDataSource</b>                 |

| Element | Description       |
|---------|-------------------|
| e       | e WSDL operation. |

### 3.1.4.54.2.1 QueryChildMembersByRangeFromDataSource

The **QueryChildMembersByRangeFromDataSource** element specifies the input data for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

```
<xs:element name="QueryChildMembersByRangeFromDataSource"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="self" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="start" type="xs:long"/>
      <xs:element minOccurs="1" maxOccurs="1" name="count" type="xs:long"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST allow the query of **child** members for a specified member.

**self:** A name identifying a member within a **DataSource**. This element MUST NOT be null or empty, or contain more than 255 characters.

**start:** The starting index of the records in the returned **ArrayOfMember** complex type (section [2.2.4.45](#)). The starting index MUST NOT be greater than the number of members in the requested range.

**count:** The number of records to be returned in the **ArrayOfMember**. The value MUST NOT be less than zero.

### 3.1.4.54.2.2 QueryChildMembersByRangeFromDataSourceResponse

The **QueryChildMembersByRangeFromDataSourceResponse** element specifies the result data for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

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

**QueryChildMembersByRangeFromDataSourceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.54.3 Complex Types

None.

#### 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 QueryChildMembersFromDataSource

The **QueryChildMembersFromDataSource** operation uses the data source to retrieve a collection of **child** members for the specified member name.

The following is the **WSDL** port type specification of the **QueryChildMembersFromDataSource WSDL operation**.

```
<wsdl:operation name="QueryChildMembersFromDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryChildMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersFromDataSourceSoapIn** request message (section [3.1.4.55.1.1](#)), and the **server (2)** responds with a **QueryChildMembersFromDataSourceSoapOut** response message (section [3.1.4.55.1.2](#)) as follows:

- The protocol client sends a **DataSource** complex type ( section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

#### Exceptions:

| Error code                | Description  |
|---------------------------|--|
| <b>InvalidPermission</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|---|---|
| <b>QueryChildMembersFromDataSourceSoapIn</b>  | The request WSDL message for the <b>QueryChildMembersFromDataSource WSDL operation</b> .  |
| <b>QueryChildMembersFromDataSourceSoapOut</b> | The response WSDL message for the <b>QueryChildMembersFromDataSource WSDL operation</b> . |

### 3.1.4.55.1.1 QueryChildMembersFromDataSourceSoapIn

The request **WSDL message** for the **QueryChildMembersFromDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource
```

The **SOAP body** contains the **QueryChildMembersFromDataSource** element.

### 3.1.4.55.1.2 QueryChildMembersFromDataSourceSoapOut

The response **WSDL message** for the **QueryChildMembersFromDataSource WSDL operation**.

The **SOAP body** contains the **QueryChildMembersFromDataSourceResponse** element.

### 3.1.4.55.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element  | Description   |
|--|---|
| <b>QueryChildMembersFromDataSource</b>         | The input data for the <b>QueryChildMembersFromDataSource WSDL operation</b> .  |
| <b>QueryChildMembersFromDataSourceResponse</b> | The result data for the <b>QueryChildMembersFromDataSource WSDL operation</b> . |

### 3.1.4.55.2.1 QueryChildMembersFromDataSource

The **QueryChildMembersFromDataSource** element specifies the input data for the **QueryChildMembersFromDataSource WSDL operation**.

```
<xs:element name="QueryChildMembersFromDataSource"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST support the query of **child** members for a specified member.

**memberUniqueName:** A value that uniquely identifies this element within the hierarchy. This value MUST NOT be null or empty, and MUST be less than 255 characters.

### 3.1.4.55.2 QueryChildMembersFromDataSourceResponse

The **QueryChildMembersFromDataSourceResponse** element specifies the result data for the **QueryChildMembersFromDataSource** **WSDL operation**.

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

**QueryChildMembersFromDataSourceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 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 QueryDimensionRootMembers

The **QueryDimensionRootMembers** operation uses a **data source (1)** from the repository location for the specified member, and returns a collection of root members.

The following is the **WSDL** port type specification of the **QueryDimensionRootMembers** **WSDL operation**.

```
<wsdl:operation name="QueryDimensionRootMembers"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryDimensionRootMembersSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersSoapOut"/>
</wsdl:operation>
```

</wsdl:operation>

The protocol client sends a **QueryDimensionRootMembersSoapIn** request message (section [3.1.4.56.1.1](#)), and the **server (2)** responds with a **QueryDimensionRootMembersSoapOut** response message (section [3.1.4.56.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

**Exceptions:**

| Error code                | Description  |
|---------------------------|--|
| <b>InvalidPermission</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.56.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                                 | Description   |
|---|---|
| <b>QueryDimensionRootMembersSoapIn</b>  | The request WSDL message for the <b>QueryDimensionRootMembers WSDL operation</b> .  |
| <b>QueryDimensionRootMembersSoapOut</b> | The response WSDL message for the <b>QueryDimensionRootMembers WSDL operation</b> . |

#### 3.1.4.56.1.1 QueryDimensionRootMembersSoapIn

The request **WSDL message** for the **QueryDimensionRootMembers WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers`

The **SOAP body** contains the **QueryDimensionRootMembers** element.

#### 3.1.4.56.1.2 QueryDimensionRootMembersSoapOut

The response **WSDL message** for the **QueryDimensionRootMembers WSDL operation**.

The **SOAP body** contains the **QueryDimensionRootMembersResponse** element.

### 3.1.4.56.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                  | Description   |
|--|---|
| <b>QueryDimensionRootMembers</b>         | The input data for the <b>QueryDimensionRootMembers WSDL operation</b> .  |
| <b>QueryDimensionRootMembersResponse</b> | The result data for the <b>QueryDimensionRootMembers WSDL operation</b> . |

### 3.1.4.56.2.1 QueryDimensionRootMembers

The **QueryDimensionRootMembers** element specifies the input data for the **QueryDimensionRootMembers WSDL operation**.

```
<xs:element name="QueryDimensionRootMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dimensionName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The **RepositoryLocation** complex type (section [2.2.4.161](#)) that specifies the location of the data source for the **members (2)** on the **server (2)**.

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified **URL**.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of root members for a specified member name.

**dimensionName:** A value that uniquely identifies this **dimension**. The value MUST be less than 255 characters and MUST NOT be null or empty.

### 3.1.4.56.2.2 QueryDimensionRootMembersResponse

The **QueryDimensionRootMembersResponse** element specifies the result data for the **QueryDimensionRootMembers WSDL operation**.

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

**QueryDimensionRootMembersResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.56.3 Complex Types

None.

### 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 QueryDimensionRootMembersFromDataSource

The **QueryDimensionRootMembersFromDataSource** method uses the data source to retrieve a collection of root members for the specified member name.

The following is the **WSDL** port type specification of the **QueryDimensionRootMembersFromDataSource** **WSDL operation**.

```
<wsdl:operation name="QueryDimensionRootMembersFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryDimensionRootMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryDimensionRootMembersFromDataSourceSoapIn** request message (section [3.1.4.57.1.1](#)), and the **server (2)** responds with a **QueryDimensionRootMembersFromDataSourceSoapOut** response message (section [3.1.4.57.1.2](#)) as follows:

- The protocol client sends a **DataSource** complex type (section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

#### Exceptions:

| Error code                | Description  |
|---------------------------|--|
| <b>InvalidPermission</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|---|---|
| <b>QueryDimensionRootMembersFromDataSourceSoapIn</b>  | The request WSDL message for the <b>QueryDimensionRootMembersFromDataSource WSDL operation</b> .  |
| <b>QueryDimensionRootMembersFromDataSourceSoapOut</b> | The response WSDL message for the <b>QueryDimensionRootMembersFromDataSource WSDL operation</b> . |

### 3.1.4.57.1.1 QueryDimensionRootMembersFromDataSourceSoapIn

The request **WSDL message** for the **QueryDimensionRootMembersFromDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource
```

The **SOAP body** contains the **QueryDimensionRootMembersFromDataSource** element.

### 3.1.4.57.1.2 QueryDimensionRootMembersFromDataSourceSoapOut

The response **WSDL message** for the **QueryDimensionRootMembersFromDataSource WSDL operation**.

The **SOAP body** contains the **QueryDimensionRootMembersFromDataSourceResponse** element.

### 3.1.4.57.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element  | Description   |
|--|---|
| <b>QueryDimensionRootMembersFromDataSource</b>         | The input data for the <b>QueryDimensionRootMembersFromDataSource WSDL operation</b> .  |
| <b>QueryDimensionRootMembersFromDataSourceResponse</b> | The result data for the <b>QueryDimensionRootMembersFromDataSource WSDL operation</b> . |

### 3.1.4.57.2.1 QueryDimensionRootMembersFromDataSource

The **QueryDimensionRootMembersFromDataSource** element specifies the input data for the **QueryDimensionRootMembersFromDataSource WSDL operation**.

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

```

<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
  <xs:element minOccurs="0" maxOccurs="1" name="dimensionName" type="xs:string"/>
</xs:sequence>
</xs:complexType>
</xs:element>

```

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST support the query of root members for a specified **dimension**.

**dimensionName:** A value that uniquely identifies this dimension. This value MUST NOT be null or empty and MUST be less than 255 characters.

### 3.1.4.57.2.2 QueryDimensionRootMembersFromDataSourceResponse

The **QueryDimensionRootMembersFromDataSourceResponse** element specifies the result data for the **QueryDimensionRootMembersFromDataSource** **WSDL operation**.

```

<xs:element name="QueryDimensionRootMembersFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
        name="QueryDimensionRootMembersFromDataSourceResult" type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**QueryDimensionRootMembersFromDataSourceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 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 QueryNamedSets

The **QueryNamedSets** operation is used to retrieve the **named sets** that are defined by a **data source (1)** when given the **RepositoryLocation** complex type (section [2.2.4.161](#)) of the data source (1).

The following is the **WSDL** port type specification of the **QueryNamedSets WSDL operation**.

```
<wsdl:operation name="QueryNamedSets" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryNamedSetsSoapIn"/>
  <wsdl:output message="tns:QueryNamedSetsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryNamedSetsSoapIn** request message (section [3.1.4.58.1.1](#)), and the **server (2)** responds with a **QueryNamedSetsSoapOut** response message (section [3.1.4.58.1.2](#)) as follows:

- Receives a **RepositoryLocation** for the data source (1) to be queried for named sets.
- The server (2) queries the corresponding data source (1).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved for the query, the server (2) SHOULD [<41>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.58.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                      | Description  |
|------------------------------|--|
| <b>QueryNamedSetsSoapIn</b>  | The request WSDL message for the <b>QueryNamedSets WSDL operation</b> .  |
| <b>QueryNamedSetsSoapOut</b> | The response WSDL message for the <b>QueryNamedSets WSDL operation</b> . |

##### 3.1.4.58.1.1 QueryNamedSetsSoapIn

The request **WSDL message** for the **QueryNamedSets WSDL operation**.

The **SOAP action** value is:

The **SOAP body** contains the **QueryNamedSets** element.

### 3.1.4.58.1.2 QueryNamedSetsSoapOut

The response **WSDL message** for the **QueryNamedSets WSDL operation**.

The **SOAP body** contains the **QueryNamedSetsResponse** element.

### 3.1.4.58.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                       | Description  |
|-------------------------------|--|
| <b>QueryNamedSets</b>         | The input data for the <b>QueryNamedSets WSDL operation</b> .  |
| <b>QueryNamedSetsResponse</b> | The result data for the <b>QueryNamedSets WSDL operation</b> . |

#### 3.1.4.58.2.1 QueryNamedSets

The **QueryNamedSets** element specifies the input data for the **QueryNamedSets WSDL operation**.

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

**dataSourceLocation:** The location (as specified in the complex type **RepositoryLocation** section [2.2.4.161](#)) for the **data source (1)** being queried for **named sets**. This element **MUST** be present. It **MUST** be a **RepositoryLocation** to a data source (1).

#### 3.1.4.58.2.2 QueryNamedSetsResponse

The **QueryNamedSetsResponse** element specifies the result data for the **QueryNamedSets WSDL operation**.

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

**QueryNamedSetsResult:** This element **MUST** be either a collection of **NamedSet** complex type objects (section [2.2.4.147](#)), specified in the **ArrayOfNamedSet** complex type (section [2.2.4.47](#)), or null, if there are no **named sets** defined for the **data source (1)**.

### 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 QueryNamedSetsFromDataSource

The **QueryNamedSetsFromDataSource** operation is used to retrieve the **named sets** that are defined by the given **data source (1)**.

The following is the **WSDL** port type specification of the **QueryNamedSetsFromDataSource WSDL operation**.

```
<wsdl:operation name="QueryNamedSetsFromDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryNamedSetsFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryNamedSetsFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryNamedSetsFromDataSourceSoapIn** request message (section [3.1.4.59.1.1](#)), and the **server (2)** responds with a **QueryNamedSetsFromDataSourceSoapOut** response message (section [3.1.4.59.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)) to be queried for named sets.
- The server (2) queries the received data source (1).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved for obtaining the named sets, the server (2) SHOULD [<42>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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  |
|--|--|
| <b>QueryNamedSetsFromDataSourceSoapIn</b>  | The request WSDL message for the <b>QueryNamedSetsFromDataSource WSDL operation</b> .  |
| <b>QueryNamedSetsFromDataSourceSoapOut</b> | The response WSDL message for the <b>QueryNamedSetsFromDataSource WSDL operation</b> . |

#### 3.1.4.59.1.1 QueryNamedSetsFromDataSourceSoapIn

The request **WSDL message** for the **QueryNamedSetsFromDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSource
```

The **SOAP body** contains the **QueryNamedSetsFromDataSource** element.

#### 3.1.4.59.1.2 QueryNamedSetsFromDataSourceSoapOut

The response **WSDL message** for the **QueryNamedSetsFromDataSource WSDL operation**.

The **SOAP body** contains the **QueryNamedSetsFromDataSourceResponse** element.

### 3.1.4.59.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                     | Description  |
|---|--|
| <b>QueryNamedSetsFromDataSource</b>         | The input data for the <b>QueryNamedSetsFromDataSource WSDL operation</b> .  |
| <b>QueryNamedSetsFromDataSourceResponse</b> | The result data for the <b>QueryNamedSetsFromDataSource WSDL operation</b> . |

#### 3.1.4.59.2.1 QueryNamedSetsFromDataSource

The **QueryNamedSetsFromDataSource** element specifies the input data for the **QueryNamedSetsFromDataSource WSDL operation**.

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

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**dataSource:** The **data source (1)** to be queried for **named sets**, as specified in the **DataSource** complex type (section [2.2.4.85](#)). This element **MUST** be present.

### 3.1.4.59.2.2 QueryNamedSetsFromDataSourceResponse

The **QueryNamedSetsFromDataSourceResponse** element specifies the result data for the **QueryNamedSetsFromDataSource WSDL operation**.

```

<xs:element name="QueryNamedSetsFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryNamedSetsFromDataSourceResult"
        type="tns:ArrayOfNamedSet"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**QueryNamedSetsFromDataSourceResult:** This element **MUST** be either a collection of **NamedSet** complex type objects (section [2.2.4.147](#)), specified in the **ArrayOfNamedSet** complex type (section [2.2.4.47](#)), or null, if there are no **named sets** defined for the **data source (1)**.

### 3.1.4.59.3 Complex Types

None.

### 3.1.4.59.4 Simple Types

None.

### 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 QueryRelatedMember

The **QueryRelatedMember** operation is used to retrieve a **member (2)** having the specified relationship to the specified member from the **data source (1)** at the given **RepositoryLocation** complex type (section [2.2.4.161](#)).

The following is the **WSDL** port type specification of the **QueryRelatedMember WSDL operation**.

```

<wsdl:operation name="QueryRelatedMember" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">

```

```

    <wsdl:input message="tns:QueryRelatedMemberSoapIn"/>
    <wsdl:output message="tns:QueryRelatedMemberSoapOut"/>
  </wsdl:operation>

```

The protocol client sends a **QueryRelatedMemberSoapIn** request message (section [3.1.4.60.1.1](#)), and the **server (2)** responds with a **QueryRelatedMemberSoapOut** response message (section [3.1.4.60.1.2](#)) as follows:

- Receives a **RepositoryLocation** for the data source (1) to be queried for a related member (2) along with the unique member (2) name and the **MemberRelationship** simple type (section [2.2.5.36](#)) being queried for.
- The server (2) queries the corresponding data source (1) for the related member (3).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved from the **RepositoryLocation**, the server (2) SHOULD [<43>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.60.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                          | Description  |
|----------------------------------|--|
| <b>QueryRelatedMemberSoapIn</b>  | The request WSDL message for the <b>QueryRelatedMember WSDL operation</b> .  |
| <b>QueryRelatedMemberSoapOut</b> | The response WSDL message for the <b>QueryRelatedMember WSDL operation</b> . |

#### 3.1.4.60.1.1 QueryRelatedMemberSoapIn

The request **WSDL message** for the **QueryRelatedMember WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember
```

The **SOAP body** contains the **QueryRelatedMember** element.

### 3.1.4.60.1.2 QueryRelatedMemberSoapOut

The response **WSDL message** for the **QueryRelatedMember WSDL operation**.

The **SOAP body** contains the **QueryRelatedMemberResponse** element.

### 3.1.4.60.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                           | Description  |
|-----------------------------------|--|
| <b>QueryRelatedMember</b>         | The input data for the <b>QueryRelatedMember WSDL operation</b> .  |
| <b>QueryRelatedMemberResponse</b> | The result data for the <b>QueryRelatedMember WSDL operation</b> . |

#### 3.1.4.60.2.1 QueryRelatedMember

The **QueryRelatedMember** element specifies the input data for the **QueryRelatedMember WSDL operation**.

```
<xs:element name="QueryRelatedMember" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="relationship"
type="tns:MemberRelationship"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The location (as specified in the complex type **RepositoryLocation** complex type section [2.2.4.161](#)) for the **data source (1)** being queried for a related **member (2)**. This element **MUST** be present. It **MUST** be a **RepositoryLocation** to a data source (1).

**memberUniqueName:** A value that uniquely identifies this element within the data source (1).

**relationship:** The relationship, as specified in the simple type **MemberRelationship** (section [2.2.5.36](#)), between **memberUniqueName** and the result.

#### 3.1.4.60.2.2 QueryRelatedMemberResponse

The **QueryRelatedMemberResponse** element specifies the result data for the **QueryRelatedMember WSDL operation**.

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

**QueryRelatedMemberResult:** This element MUST be either the related **member (2)** as specified in the **Member** complex type (section [2.2.4.134](#)), or null, if there are no related members (2), or if the **MemberRelationship** simple type (section [2.2.5.36](#)) is "Children".

### 3.1.4.60.3 Complex Types

None.

### 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 QueryRelatedMemberFromDataSource

The **QueryRelatedMemberFromDataSource** operation queries the given **data source (1)** for the **member (2)** having the specified relationship to the specified member.

The following is the **WSDL** port type specification of the **QueryRelatedMemberFromDataSource WSDL operation**.

```
<wsdl:operation name="QueryRelatedMemberFromDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryRelatedMemberFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryRelatedMemberFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryRelatedMemberFromDataSourceSoapIn** request message (section [3.1.4.61.1.1](#)) and the **server (2)** responds with a **QueryRelatedMemberFromDataSourceSoapOut** response message (section [3.1.4.61.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)) to be queried for the related member (2) along with the unique member (2) name and the **MemberRelationship** simple type (section [2.2.5.36](#)) being queried for.
- The server (2) queries the corresponding data source (1) for the related member (2).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved for the query, the server (2) SHOULD **<44>** return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

#### Exceptions:

| Error code                     | Description  |
|--------------------------------|--|
| <b>FCOReadFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOReadFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidPermission</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b>      | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.61.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message  | Description  |
|--|--|
| <b>QueryRelatedMemberFromDataSourceSoapIn</b>  | The request WSDL message for the <b>QueryRelatedMemberFromDataSource WSDL operation</b> .  |
| <b>QueryRelatedMemberFromDataSourceSoapOut</b> | The response WSDL message for the <b>QueryRelatedMemberFromDataSource WSDL operation</b> . |

#### 3.1.4.61.1.1 QueryRelatedMemberFromDataSourceSoapIn

The request **WSDL message** for the **QueryRelatedMemberFromDataSource WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSource`

The **SOAP body** contains the **QueryRelatedMemberFromDataSource** element.

#### 3.1.4.61.1.2 QueryRelatedMemberFromDataSourceSoapOut

The response **WSDL message** for the **QueryRelatedMemberFromDataSource WSDL operation**.

The **SOAP body** contains the **QueryRelatedMemberFromDataSourceResponse** element.

### 3.1.4.61.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                 | Description   |
|---|---|
| <b>QueryRelatedMemberFromDataSource</b> | The input data for the <b>QueryRelatedMemberFromDataSource WSDL operation</b> . |

| Element   | Description   |
|---|---|
| <b>QueryRelatedMemberFromDataSourceResponse</b> | The result data for the <b>QueryRelatedMemberFromDataSource</b> WSDL operation. |

### 3.1.4.61.2.1 QueryRelatedMemberFromDataSource

The **QueryRelatedMemberFromDataSource** element specifies the input data for the **QueryRelatedMemberFromDataSource** WSDL operation.

```
<xs:element name="QueryRelatedMemberFromDataSource"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="relationship"
type="tns:MemberRelationship"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The **data source (1)** to be queried for a related member, as specified in the **DataSource** complex type (section [2.2.4.85](#)). This element **MUST** be present.

**memberUniqueName:** A value that uniquely identifies this element within the data source (1).

**relationship:** The relationship, as specified in the **MemberRelationship** simple type (section [2.2.5.36](#)), between **memberUniqueName** and the result.

### 3.1.4.61.2.2 QueryRelatedMemberFromDataSourceResponse

The **QueryRelatedMemberFromDataSourceResponse** element specifies the result data for the **QueryRelatedMemberFromDataSource** WSDL operation.

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

**QueryRelatedMemberFromDataSourceResult:** This element **MUST** be either the related **member (2)** as specified in the **Member** complex type (section [2.2.4.134](#)), or null, if there are no related members (2).

### 3.1.4.61.3 Complex Types

None.

### 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 QueryTimeIntelligence

The **QueryTimeIntelligence** operation queries a **data source (1)** location for the **members (2)** that are specified by a **time intelligence** formula.

The following is the **WSDL** port type specification of the **QueryTimeIntelligence WSDL operation**.

```
<wsdl:operation name="QueryTimeIntelligence" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTimeIntelligenceSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryTimeIntelligenceSoapIn** request message (section [3.1.4.62.1.1](#)), and the **server (2)** responds with a **QueryTimeIntelligenceSoapOut** response message (section [3.1.4.62.1.2](#)) as follows:

- Receives **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source (1) to be queried for time intelligence, along with the current time and date and a formula.
- The server (2) queries the corresponding data source (1) using the current time and date and **formula** for the related member (2).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved from the **RepositoryLocation**, the server (2) SHOULD [<45>](#) return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

### Exceptions:

| Error code                            | Description  |
|---------------------------------------|--|
| <b>FCOReadFailed</b>                  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                       |
| <b>FCOReadFailedListAccess</b>        | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                       |
| <b>TimeIntelligenceNotConfigured</b>  | The data source (1) has an invalid time intelligence configuration or time intelligence is not configured. |
| <b>InvalidTimeIntelligenceFormula</b> | The time intelligence formula is invalid   |
| <b>NotTrustedLocation</b>             | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                       |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.62.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                             | Description   |
|-------------------------------------|---|
| <b>QueryTimeIntelligenceSoapIn</b>  | The request WSDL message for the <b>QueryTimeIntelligence WSDL operation</b> .  |
| <b>QueryTimeIntelligenceSoapOut</b> | The response WSDL message for the <b>QueryTimeIntelligence WSDL operation</b> . |

#### 3.1.4.62.1.1 QueryTimeIntelligenceSoapIn

The request **WSDL message** for the **QueryTimeIntelligence WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence
```

The **SOAP body** contains the **QueryTimeIntelligence** element.

#### 3.1.4.62.1.2 QueryTimeIntelligenceSoapOut

The response **WSDL message** for the **QueryTimeIntelligence WSDL operation**.

The **SOAP body** contains the **QueryTimeIntelligenceResponse** element.

### 3.1.4.62.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                              | Description   |
|--------------------------------------|---|
| <b>QueryTimeIntelligence</b>         | The input data for the <b>QueryTimeIntelligence WSDL operation</b> .  |
| <b>QueryTimeIntelligenceResponse</b> | The result data for the <b>QueryTimeIntelligence WSDL operation</b> . |

#### 3.1.4.62.2.1 QueryTimeIntelligence

The **QueryTimeIntelligence** element specifies the input data for the **QueryTimeIntelligence WSDL operation**.

```
<xs:element name="QueryTimeIntelligence" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="1" maxOccurs="1" name="currentTime" type="xs:dateTime"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
```

</xs:element>

**dataSourceLocation:** The location (for specification see the **RepositoryLocation** complex type section [2.2.4.161](#)) for the **data source (1)** being queried for **time intelligence**. This element MUST be present. It MUST be a **RepositoryLocation** to a data source.

**currentTime:** The current time and date. This element MUST be present, and its value MUST be a valid **dateTime**.

**formula:** The STPS formula, as described in [\[MSFT-TimeIntelligence\]](#). This element MUST be present, and its value MUST be a STPS formula for the data source.

### 3.1.4.62.2.2 QueryTimeIntelligenceResponse

The **QueryTimeIntelligenceResponse** element specifies the result data for the **QueryTimeIntelligence WSDL operation**.

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

**QueryTimeIntelligenceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)). If there are no **Members** returned from the specified formula, **ArrayOfMember** MUST contain a single **Member** where the **Member's Expression** attribute MUST be set to "NULL".

### 3.1.4.62.3 Complex Types

None.

### 3.1.4.62.4 Simple Types

None.

### 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 QueryTimeIntelligenceDirect

The **QueryTimeIntelligenceDirect** operation queries the provided **data source (1)** for the **members (2)** that are specified by a **time intelligence** formula.

The following is the **WSDL** port type specification of the **QueryTimeIntelligenceDirect WSDL operation**.

```
<wsdl:operation name="QueryTimeIntelligenceDirect"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTimeIntelligenceDirectSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceDirectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryTimeIntelligenceDirectSoapIn** request message (section [3.1.4.63.1.1](#)), and the **server (2)** responds with a **QueryTimeIntelligenceDirectSoapOut** response message (section [3.1.4.63.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)) to be queried for the time intelligence, along with the current time and date and a formula.
- The server (2) queries the corresponding data source (1) using the current time and date and **formula** for the related member (2).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved for the query, the server (2) SHOULD return a **SOAP fault** response, as detailed in section [2.2.2.1](#).

**Exceptions:**

| Error code                            | Description  |
|---------------------------------------|--|
| <b>FCOReadFailed</b>                  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                       |
| <b>FCOReadFailedListAccess</b>        | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                       |
| <b>TimeIntelligenceNotConfigured</b>  | The data source (1) has an invalid time intelligence configuration or time intelligence is not configured. |
| <b>InvalidTimeIntelligenceFormula</b> | The time intelligence formula is invalid.  |
| <b>InvalidPermission</b>              | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                       |
| <b>NotTrustedLocation</b>             | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).                                       |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|---|---|
| <b>QueryTimeIntelligenceDirectSoapIn</b>  | The request WSDL message for the <b>QueryTimeIntelligenceDirect WSDL operation</b> .  |
| <b>QueryTimeIntelligenceDirectSoapOut</b> | The response WSDL message for the <b>QueryTimeIntelligenceDirect WSDL operation</b> . |

### 3.1.4.63.1.1 QueryTimeIntelligenceDirectSoapIn

The request **WSDL message** for the **QueryTimeIntelligenceDirect WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect
```

The **SOAP body** contains the **QueryTimeIntelligenceDirect** element.

### 3.1.4.63.1.2 QueryTimeIntelligenceDirectSoapOut

The response **WSDL message** for the **QueryTimeIntelligenceDirect WSDL operation**.

The **SOAP body** contains the **QueryTimeIntelligenceDirectResponse** element.

### 3.1.4.63.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                    | Description   |
|--|---|
| <b>QueryTimeIntelligenceDirect</b>         | The input data for the <b>QueryTimeIntelligenceDirect WSDL operation</b> .  |
| <b>QueryTimeIntelligenceDirectResponse</b> | The result data for the <b>QueryTimeIntelligenceDirect WSDL operation</b> . |

#### 3.1.4.63.2.1 QueryTimeIntelligenceDirect

The **QueryTimeIntelligenceDirect** element specifies the input data for the **QueryTimeIntelligenceDirect WSDL operation**.

```
<xs:element name="QueryTimeIntelligenceDirect" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="1" maxOccurs="1" name="currentTime" type="xs:dateTime"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The **data source (1)** to be queried for **time intelligence** members. See the **DataSource** complex type (section [2.2.4.85](#)) for specification. This element **MUST** be present.

**currentTime:** The current time and date. This element **MUST** be present, and its value **MUST** be a valid **dateTime**.

**formula:** The STPS formula. This element **MUST** be present, and its value **MUST** be a STPS formula for the data source.

### 3.1.4.63.2 QueryTimeIntelligenceDirectResponse

The **QueryTimeIntelligenceDirectResponse** element specifies the result data for the **QueryTimeIntelligenceDirect** **WSDL operation**.

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

**QueryTimeIntelligenceDirectResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)). If there are no **Members** returned from the specified formula, **ArrayOfMember** MUST contain a single **Member** where the **Member's Expression** attribute MUST be set to "NULL".

### 3.1.4.63.3 Complex Types

None.

### 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 QueryTransformMembers

The **QueryTransformMembers** method **transforms** any collection of **Member** complex types (section [2.2.4.134](#)) into a new member collection based on the operation passed on the **transformType** parameter of the **QueryTransformMembers** element (section [3.1.4.64.2.1](#)) as specified in section [3.1.4.64.4.1](#).

The following is the **WSDL** port type specification of the **QueryTransformMembers** **WSDL operation**.

```
<wsdl:operation name="QueryTransformMembers" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTransformMembersSoapIn"/>
  <wsdl:output message="tns:QueryTransformMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryTransformMembersSoapIn** request message (section [3.1.4.64.1.1](#)), and the **server (2)** responds with a **QueryTransformMembersSoapOut** response message (section [3.1.4.64.1.1](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source to use for retrieving members.
- The server (2) sends a corresponding **ArrayOfMember** complex type (see section [2.2.4.45](#)).

**Exceptions:**

| Error code                | Description  |
|---------------------------|--|
| <b>InvalidPermission</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>NotTrustedLocation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------------|---|
| <b>QueryTransformMembersSoapIn</b>  | The request WSDL message for the <b>QueryTransformMembers WSDL operation</b> .  |
| <b>QueryTransformMembersSoapOut</b> | The response WSDL message for the <b>QueryTransformMembers WSDL operation</b> . |

#### 3.1.4.64.1.1 QueryTransformMembersSoapIn

The request **WSDL message** for the **QueryTransformMembers WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers
```

The **SOAP body** contains the **QueryTransformMembers** element.

#### 3.1.4.64.1.2 QueryTransformMembersSoapOut

The response **WSDL message** for the **QueryTransformMembers WSDL operation**.

The **SOAP body** contains the **QueryTransformMembersResponse** element.

### 3.1.4.64.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                              | Description   |
|--------------------------------------|---|
| <b>QueryTransformMembers</b>         | The input data for the <b>QueryTransformMembers WSDL operation</b> .  |
| <b>QueryTransformMembersResponse</b> | The result data for the <b>QueryTransformMembers WSDL operation</b> . |

### 3.1.4.64.2.1 QueryTransformMembers

The **QueryTransformMembers** element specifies the input data for the **QueryTransformMembers WSDL operation**.

```
<xs:element name="QueryTransformMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberCollection"
type="tns:ArrayOfMember"/>
      <xs:element minOccurs="1" maxOccurs="1" name="transformType"
type="tns:QueryTransformMembersType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of data source for the **members (2)** on the **server (2)**.

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified **URL**.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of **child** members for a specified member name.

**memberCollection:** A collection of **Member** complex types (section [2.2.4.134](#)) that will be transformed based on the type of transformation specified in the **transformType** parameter.

**transformType:** Type of operation specified in the **QueryTransformMembersType** simple type (section [3.1.4.64.4.1](#)) that will be applied to the member collection.

### 3.1.4.64.2.2 QueryTransformMembersResponse

The **QueryTransformMembersResponse** element specifies the result data for the **QueryTransformMembers WSDL operation**.

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

**QueryTransformMembersResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.64.3 Complex Types

None.

### 3.1.4.64.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

| Simple type                      | Description   |
|----------------------------------|---|
| <b>QueryTransformMembersType</b> | Specifies the transformation type that will be applied to the collection of member. |

#### 3.1.4.64.4.1 QueryTransformMembersType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the transformation type that will be applied to the collection of **Member** complex types (section [2.2.4.134](#)).

```
<xs:simpleType name="QueryTransformMembersType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hierarchize"/>
    <xs:enumeration value="Parents"/>
    <xs:enumeration value="Ancestors"/>
    <xs:enumeration value="AscendantsIntersect"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **QueryTransformMembersType** simple type.

| Value               | Meaning  |
|---------------------|--|
| Hierarchize         | Returns the hierarchized representation of the member set.   |
| Parents             | Returns the parent of each member on the set. This operation type is reserved and <b>MUST NOT</b> be called.   |
| Ancestors           | Returns the ancestor of each member on the set. This operation type is reserved and <b>MUST NOT</b> be called. |
| AscendantsIntersect | Returns the original set plus any direct ancestor contained in the set.  |

### 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 SaveTemporaryAnalyticReport

The **SaveTemporaryAnalyticReport** operation stores a temporary copy of a **ReportView** complex type (section [2.2.4.160](#)) to the **server (2)**.

The following is the **WSDL** port type specification of the **SaveTemporaryAnalyticReport WSDL operation**.

```
<wsdl:operation name="SaveTemporaryAnalyticReport"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:SaveTemporaryAnalyticReportSoapIn"/>
  <wsdl:output message="tns:SaveTemporaryAnalyticReportSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **SaveTemporaryAnalyticReportSoapIn** request message (section [3.1.4.65.1.1](#)), and the server (2) responds with a **SaveTemporaryAnalyticReportSoapOut** response message (section [3.1.4.65.1.2](#)) as follows:

- The protocol client **MUST** send a **ReportView**.
- If the server (2) contains a **ReportView** where all attributes and elements except **Location** equal those of the passed in **ReportView**, the server (2) **MUST** return the **GUID** of the **ReportView** on the server (2). The GUID **MUST** be equal to the **RepositoryLocation** complex type's (section [2.2.4.161](#)) **ItemGuid** GUID. The stored **ReportView** **MUST NOT** be altered.
- If the server (2) does not contain a **ReportView** where all attributes and elements except **Location** equal those of the passed in **ReportView**, the server (2) **MUST** store a copy of the **ReportView** and **MUST** return a unique GUID for it. The server (2) **MUST** replace the **Location** element for the stored copy which **MUST** conform to the schema of the **RepositoryLocation**, such that the **ItemType** attribute equals **TempReportView**, as specified in the **FirstClassObjectType** simple type (section [2.2.5.20](#)), and the **ItemGuid** attribute equals the returned GUID.

#### Exceptions:

| Error code               | Description  |
|--------------------------|--|
| <b>InvalidPermission</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|---|---|
| <b>SaveTemporaryAnalyticReportSoapIn</b>  | The request WSDL message for the <b>SaveTemporaryAnalyticReport WSDL operation</b> .  |
| <b>SaveTemporaryAnalyticReportSoapOut</b> | The response WSDL message for the <b>SaveTemporaryAnalyticReport WSDL operation</b> . |

### 3.1.4.65.1.1 SaveTemporaryAnalyticReportSoapIn

The request **WSDL message** for the **SaveTemporaryAnalyticReport WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport
```

The **SOAP body** contains the **SaveTemporaryAnalyticReport** element.

### 3.1.4.65.1.2 SaveTemporaryAnalyticReportSoapOut

The response **WSDL message** for the **SaveTemporaryAnalyticReport WSDL operation**.

The **SOAP body** contains the **SaveTemporaryAnalyticReportResponse** element.

### 3.1.4.65.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                    | Description   |
|--|---|
| <b>SaveTemporaryAnalyticReport</b>         | The input data for the <b>SaveTemporaryAnalyticReport WSDL operation</b> .  |
| <b>SaveTemporaryAnalyticReportResponse</b> | The result data for the <b>SaveTemporaryAnalyticReport WSDL operation</b> . |

#### 3.1.4.65.2.1 SaveTemporaryAnalyticReport

The **SaveTemporaryAnalyticReport** element specifies the input data for the **SaveTemporaryAnalyticReport WSDL operation**.

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

**reportView:** The **report view** to store. This element **MUST** be present and **MUST** conform to the schema of the **ReportView** complex type (section [2.2.4.160](#)).

#### 3.1.4.65.2.2 SaveTemporaryAnalyticReportResponse

The **SaveTemporaryAnalyticReportResponse** element specifies the result data for the **SaveTemporaryAnalyticReport WSDL operation**.

```
<xs:element name="SaveTemporaryAnalyticReportResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="1" maxOccurs="1" name="SaveTemporaryAnalyticReportResult" xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

```
</xs:sequence>
</xs:complexType>
</xs:element>
```

**SaveTemporaryAnalyticReportResult:** A **GUID** that uniquely identifies a **ReportView** complex type (section [2.2.4.160](#)) and the values of all attributes and elements except **Location**. This element **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 TestConnection

The **TestConnection** operation is used to determine whether a connection as specified by the **dataSource** element can be established.

The following is the **WSDL** port type specification of the **TestConnection WSDL operation**.

```
<wsdl:operation name="TestConnection" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TestConnectionSoapIn"/>
  <wsdl:output message="tns:TestConnectionSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TestConnectionSoapIn** request message (section [3.1.4.66.1.1](#)), and the **server (2)** responds with a **TestConnectionSoapOut** response message (section [3.1.4.66.1.2](#)) as follows:

- The protocol client **MUST** set the **dataSource** element to a non-empty value. If the **Location** attribute of the **dataSource** element refers to a location for which the user does not have read permissions, the server (2) **MUST** return a **SOAP fault** containing the error code **InvalidPermission**.
- The server (2) **MUST** return **TRUE** if a connection as specified by the **data source (1)** can be established, and if the **Location** attribute of the **dataSource** element refers to a **trusted location**. Otherwise, the server (2) **MUST** return **FALSE**.
- Any errors that occur while making a connection as specified by the data source (1) **MUST NOT** result in a SOAP fault, and **MUST** result in a return value of **FALSE**.

#### Exceptions:

| Error code         | Description  |
|--------------------|--|
| NotTrustedLocation | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#)

### 3.1.4.66.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message               | Description  |
|-----------------------|--|
| TestConnectionSoapIn  | The request WSDL message for the <b>TestConnection WSDL operation</b> .  |
| TestConnectionSoapOut | The response WSDL message for the <b>TestConnection WSDL operation</b> . |

#### 3.1.4.66.1.1 TestConnectionSoapIn

The request **WSDL message** for the **TestConnection WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/TestConnection
```

The **SOAP body** contains the **TestConnection** element.

#### 3.1.4.66.1.2 TestConnectionSoapOut

The response **WSDL message** for the **TestConnection WSDL operation**.

The **SOAP body** contains the **TestConnectionResponse** element.

### 3.1.4.66.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                | Description  |
|------------------------|--|
| TestConnection         | The input data for the <b>TestConnection WSDL operation</b> .  |
| TestConnectionResponse | The result data for the <b>TestConnection WSDL operation</b> . |

#### 3.1.4.66.2.1 TestConnection

The **TestConnection** element specifies the input data for the **TestConnection WSDL operation**.

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

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

**dataSource:** The **data source (1)** to be tested. See the **DataSource** complex type (section [2.2.4.85](#)) for specification. This element MUST NOT be empty.

### 3.1.4.66.2 TestConnectionResponse

The **TestConnectionResponse** element specifies the result data for the **TestConnection WSDL operation**.

```

<xs:element name="TestConnectionResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="TestConnectionResult" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**TestConnectionResult:** Set to **TRUE** if the connection specified by the **data source (1)** can be made; otherwise, this element is **FALSE**.

### 3.1.4.66.3 Complex Types

None.

### 3.1.4.66.4 Simple Types

None.

### 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 TrimAnnotationByOwner

The **TrimAnnotationByOwner** operation removes all the **Annotation** complex types (section [2.2.4.18](#)) that are owned by a specific user.

The following is the **WSDL** port type specification of the **TrimAnnotationByOwner WSDL operation**.

```

<wsdl:operation name="TrimAnnotationByOwner" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TrimAnnotationByOwnerSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByOwnerSoapOut"/>

```

</wsdl:operation>

The protocol client sends a **TrimAnnotationByOwnerSoapIn** request message (section [3.1.4.67.1.1](#)), and the **server (2)** responds with a **TrimAnnotationByOwnerSoapOut** response message (section [3.1.4.67.1.2](#)) as follows:

- The protocol client MUST send the name of a user as the **Owner** property of the **TrimAnnotationByOwner** element (section [3.1.4.67.2.1](#)).
- The server (2) MUST delete all **Annotations** for which the **Owner** element equals the **Owner** element of the passed in **TrimAnnotationByOwner** element. The server (2) MUST ignore case when comparing the strings.

#### Exceptions:

| Error code                    | Description  |
|-------------------------------|--|
| <b>InvalidPermissionAdmin</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------------|---|
| <b>TrimAnnotationByOwnerSoapIn</b>  | The request WSDL message for the <b>TrimAnnotationByOwner WSDL operation</b> .  |
| <b>TrimAnnotationByOwnerSoapOut</b> | The response WSDL message for the <b>TrimAnnotationByOwner WSDL operation</b> . |

#### 3.1.4.67.1.1 TrimAnnotationByOwnerSoapIn

The request **WSDL message** for the **TrimAnnotationByOwner WSDL operation**.

The **SOAP action** value is:

<http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByOwner>

The **SOAP body** contains the **TrimAnnotationByOwner** element.

#### 3.1.4.67.1.2 TrimAnnotationByOwnerSoapOut

The response **WSDL message** for the **TrimAnnotationByOwner WSDL operation**.

The **SOAP body** contains the **TrimAnnotationByOwnerResponse** element.

### 3.1.4.67.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                              | Description   |
|--------------------------------------|---|
| <b>TrimAnnotationByOwner</b>         | The input data for the <b>TrimAnnotationByOwner WSDL operation</b> .  |
| <b>TrimAnnotationByOwnerResponse</b> | The result data for the <b>TrimAnnotationByOwner WSDL operation</b> . |

#### 3.1.4.67.2.1 TrimAnnotationByOwner

The **TrimAnnotationByOwner** element specifies the input data for the **TrimAnnotationByOwner WSDL operation**.

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

**Owner:** Specifies the name of the user. This element **MUST** be present and **MUST** have a length greater than zero.

#### 3.1.4.67.2.2 TrimAnnotationByOwnerResponse

The **TrimAnnotationByOwnerResponse** element specifies the result data for the **TrimAnnotationByOwner WSDL operation**.

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

#### 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 TrimAnnotationByScorecardLocation

The **TrimAnnotationByScorecardLocation** operation removes all the annotations that belong to a **scorecard** at a specific location.

The following is the **WSDL** port type specification of the **TrimAnnotationByScorecardLocation WSDL operation**.

```
<wsdl:operation name="TrimAnnotationByScorecardLocation"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TrimAnnotationByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByScorecardLocationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationByScorecardLocationSoapIn** request message (section [3.1.4.68.1.1](#)), and the **server (2)** responds with a **TrimAnnotationByScorecardLocationSoapOut** response message (section [3.1.4.68.1.2](#)) as follows:

- The protocol client MUST send the location of a scorecard as the **scorecardLocation** property of the **TrimAnnotationByScorecardLocation** element (section [3.1.4.68.2.1](#)).
- The server (2) MUST delete all **Annotation** complex types (section [2.2.4.18](#)) for which the **ScorecardLocation** element's **ItemUrl** attribute, as specified by **RepositoryLocation** complex type (section [2.2.4.161](#)), equals the **ItemUrl** attribute of the passed in **scorecardLocation** element.

#### Exceptions:

| Error code               | Description  |
|--------------------------|--|
| <b>InvalidPermission</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.68.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message   | Description   |
|---|---|
| <b>TrimAnnotationByScorecardLocationSoapIn</b>  | The request WSDL message for the <b>TrimAnnotationByScorecardLocation WSDL operation</b> .  |
| <b>TrimAnnotationByScorecardLocationSoapOut</b> | The response WSDL message for the <b>TrimAnnotationByScorecardLocation WSDL operation</b> . |

#### 3.1.4.68.1.1 TrimAnnotationByScorecardLocationSoapIn

The request **WSDL message** for the **TrimAnnotationByScorecardLocation WSDL operation**.

The **SOAP action** value is:

The **SOAP body** contains the **TrimAnnotationByScorecardLocation** element.

### 3.1.4.68.1.2 TrimAnnotationByScorecardLocationSoapOut

The response **WSDL message** for the **TrimAnnotationByScorecardLocation WSDL operation**.

The **SOAP body** contains the **TrimAnnotationByScorecardLocationResponse** element.

### 3.1.4.68.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element  | Description   |
|--|---|
| <b>TrimAnnotationByScorecardLocation</b>         | The input data for the <b>TrimAnnotationByScorecardLocation WSDL operation</b> .  |
| <b>TrimAnnotationByScorecardLocationResponse</b> | The result data for the <b>TrimAnnotationByScorecardLocation WSDL operation</b> . |

#### 3.1.4.68.2.1 TrimAnnotationByScorecardLocation

The **TrimAnnotationByScorecardLocation** element specifies the input data for the **TrimAnnotationByScorecardLocation WSDL operation**.

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

**scorecardLocation:** Specifies the location of the **scorecard** for which all annotations will be deleted. This element MUST conform to the schema of the **RepositoryLocation** complex type (section [2.2.4.161](#)), MUST be present, and the **ItemType** attribute MUST NOT equal **TempReportView**, as specified in the **FirstClassObjectType** complex type (section [2.2.5.20](#)).

#### 3.1.4.68.2.2 TrimAnnotationByScorecardLocationResponse

The **TrimAnnotationByScorecardLocationResponse** element specifies the result data for the **TrimAnnotationByScorecardLocation WSDL operation**.

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

### 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 TrimAnnotationUntouchedSince

The **TrimAnnotationUntouchedSince** operation removes all the **Annotation** complex types (section [2.2.4.18](#)) that haven't been updated since the specified date.

The following is the **WSDL** port type specification of the **TrimAnnotationUntouchedSince WSDL operation**.

```
<wsdl:operation name="TrimAnnotationUntouchedSince"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TrimAnnotationUntouchedSinceSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationUntouchedSinceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationUntouchedSinceSoapIn** request message (section [3.1.4.69.1.1](#)), and the **server (2)** responds with a **TrimAnnotationUntouchedSinceSoapOut** response message (section [3.1.4.69.1.2](#)) as follows:

- The protocol client **MUST** send the last modified date as the **untouchedSince** property of the **TrimAnnotationUntouchedSince** element (section [3.1.4.69.2.1](#)).
- The server (2) **MUST** delete all the **Annotations** for which the date specified by **LastUpdatedOn** property is before or equal to the date specified by the client.

#### Exceptions:

| Error code                    | Description   |
|-------------------------------|---|
| <b>InvalidPermissionAdmin</b> | User does not have sufficient administration permissions to complete the request. |

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.69.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                                    | Description  |
|--|--|
| <b>TrimAnnotationUntouchedSinceSoapIn</b>  | The request WSDL message for the <b>TrimAnnotationUntouchedSince WSDL operation</b> .  |
| <b>TrimAnnotationUntouchedSinceSoapOut</b> | The response WSDL message for the <b>TrimAnnotationUntouchedSince WSDL operation</b> . |

### 3.1.4.69.1.1 TrimAnnotationUntouchedSinceSoapIn

The request **WSDL message** for the **TrimAnnotationUntouchedSince WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationUntouchedSince
```

The **SOAP body** contains the **TrimAnnotationUntouchedSince** element.

### 3.1.4.69.1.2 TrimAnnotationUntouchedSinceSoapOut

The response **WSDL message** for the **TrimAnnotationUntouchedSince WSDL operation**.

The **SOAP body** contains the **TrimAnnotationUntouchedSinceResponse** element.

### 3.1.4.69.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                                     | Description  |
|---|--|
| <b>TrimAnnotationUntouchedSince</b>         | The input data for the <b>TrimAnnotationUntouchedSince WSDL operation</b> .  |
| <b>TrimAnnotationUntouchedSinceResponse</b> | The result data for the <b>TrimAnnotationUntouchedSince WSDL operation</b> . |

### 3.1.4.69.2.1 TrimAnnotationUntouchedSince

The **TrimAnnotationUntouchedSince** element specifies the input data for the **TrimAnnotationUntouchedSince WSDL operation**.

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

**untouchedSince:** Specifies the last modified date of the **Annotation** complex types (section [2.2.4.18](#)) which MUST be deleted. This element MUST be present and MUST be a valid dateTime.

### 3.1.4.69.2.2 TrimAnnotationUntouchedSinceResponse

The **TrimAnnotationUntouchedSinceResponse** element specifies the result data for the **TrimAnnotationUntouchedSince WSDL operation**.

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

### 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 UpdateAnnotation

The **UpdateAnnotation** operation updates an existing **Annotation** complex type (section [2.2.4.18](#)).

The following is the **WSDL** port type specification of the **UpdateAnnotation WSDL operation**.

```
<wsdl:operation name="UpdateAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateAnnotationSoapIn"/>
  <wsdl:output message="tns:UpdateAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateAnnotationSoapIn** request message (section [3.1.4.70.1.1](#)), and the **server (2)** responds with an **UpdateAnnotationSoapOut** response message (section [3.1.4.70.1.2](#)) as follows:

- The protocol client MUST send a valid **Annotation** object that specifies the new state of the annotation that is being updated.
- The server (2) MUST validate the **Annotation** object following the schema of the **Annotation**.
- The server (2) MUST verify that the **Annotation** object exists by using the **AnnotationId** property (see section [3.1.4.23.2.1](#)), and MUST verify that the **Annotation** object is unchanged since received by the client by comparing the **LastModifiedOn** value. If the **LastModifiedOn**

value is not the same, which means the **Annotation** object has been changed since it was received by the client, the update MUST be ignored and an application error raised using the **Unknown** error code.

- The server (2) MUST update the stored copy of the **Annotation** object and SHOULD generate a new **LastModifiedOn** date value with the server (2) current date. MUST NOT update the **CreatedOn** value and MUST ignore the value if changed by the protocol client.
- The server (2) MUST return the updated copy of the **Annotation** object, including the updated **LastModifiedOn** value.

#### Exceptions:

| Error code                        | Description  |
|-----------------------------------|--|
| <b>InvalidPermission</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).   |
| <b>InvalidAnnotation</b>          | The updated annotation did not validate to the conforming schema.  |
| <b>InvalidTextLength</b>          | A string attribute is null, empty or exceeds its specified maximum length.   |
| <b>InvalidCharacters</b>          | The updated <b>annotation</b> properties did not validate to the conforming schema.  |
| <b>InvalidComment</b>             | The updated <b>annotation</b> comments did not validate to the conforming schema.  |
| <b>AnnotationNotEnabled</b>       | Annotations are not enabled in the server (2).   |
| <b>AnnotationDeleteNotEnabled</b> | If Annotation Delete is not enabled in the server (2), but this request, which would delete comments, is received, the comments will not be changed on the server (2) and the <b>AnnotationDeleteNotEnabled</b> error code will be returned. |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.70.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                        | Description  |
|--------------------------------|--|
| <b>UpdateAnnotationSoapIn</b>  | The request WSDL message for the <b>UpdateAnnotation WSDL operation</b> .  |
| <b>UpdateAnnotationSoapOut</b> | The response WSDL message for the <b>UpdateAnnotation WSDL operation</b> . |

#### 3.1.4.70.1.1 UpdateAnnotationSoapIn

The request **WSDL message** for the **UpdateAnnotation WSDL operation**.

The **SOAP action** value is:

The **SOAP body** contains the **UpdateAnnotation** element.

### 3.1.4.70.1.2 UpdateAnnotationSoapOut

The response **WSDL message** for the **UpdateAnnotation WSDL operation**.

The **SOAP body** contains the **UpdateAnnotationResponse** element.

### 3.1.4.70.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>UpdateAnnotation</b>         | The input data for the <b>UpdateAnnotation WSDL operation</b> .  |
| <b>UpdateAnnotationResponse</b> | The result data for the <b>UpdateAnnotation WSDL operation</b> . |

#### 3.1.4.70.2.1 UpdateAnnotation

The **UpdateAnnotation** element specifies the input data for the **UpdateAnnotation WSDL operation**.

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

**annotation:** The updated **Annotation** complex type (section [2.2.4.18](#)). This element MUST NOT be null and MUST conform to the schema of the **Annotation**. It MUST contain the original **AnnotationId** and **LastModifiedOn** values.

#### 3.1.4.70.2.2 UpdateAnnotationResponse

The **UpdateAnnotationResponse** element specifies the result data for the **UpdateAnnotation WSDL operation**.

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

**UpdateAnnotationResult:** The updated **Annotation** complex type object (section [2.2.4.18](#)). This element MUST be a copy of the updated **Annotation** with the new **LastModifiedOn** value, as stored in the **server (2)**.

### 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 UpdateDashboard

The **UpdateDashboard** operation updates an existing **Dashboard** complex type (section [2.2.4.79](#)).

The following is the **WSDL** port type specification of the **UpdateDashboard WSDL operation**.

```
<wsdl:operation name="UpdateDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateDashboardSoapIn"/>
  <wsdl:output message="tns:UpdateDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateDashboardSoapIn** request message (section [3.1.4.71.1.1](#)), and the **server (2)** responds with an **UpdateDashboardSoapOut** response message (section [3.1.4.71.1.2](#)) as follows:

- The protocol client **MUST** send a valid **Dashboard** object that specifies the new state of the **dashboard** that is being updated.
- The server (2) **MUST** validate the **Dashboard** following the schema of the **Dashboard**.
- The server (2) **MUST** verify that the **Dashboard** exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)).
- The server (2) **MUST** update the stored copy of the **Dashboard**.
  - **ModifiedBy** **SHOULD** be updated by the server (2) with the **login name** of the **current user**.
  - **LastModified** **SHOULD** be updated by the server (2) with the date and time of when the dashboard was updated on the server (2) storage. The new value of **LastModified** **MUST** be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** **SHOULD** be updated by the server (2) with the **current version** of the dashboard object. If **Version** is updated by the server (2), it **MUST NOT** be null and **MUST** be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - The other properties of the dashboard **SHOULD** be equal to the **Dashboard** object submitted to the server (2).

- The server (2) MUST return a copy of the updated **Dashboard** object.

#### Exceptions:

| Error code                           | Description  |
|--------------------------------------|--|
| <b>InvalidPermission</b>             | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListAccess</b>     | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidItemType</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListType</b>       | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedNameCollision</b>  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is 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   |
|-------------------------------|---|
| <b>UpdateDashboardSoapIn</b>  | The request WSDL message for the <b>UpdateDashboard WSDL operation</b> .  |
| <b>UpdateDashboardSoapOut</b> | The response WSDL message for the <b>UpdateDashboard WSDL operation</b> . |

#### 3.1.4.71.1.1 UpdateDashboardSoapIn

The request **WSDL message** for the **UpdateDashboard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard
```

The **SOAP body** contains the **UpdateDashboard** element.

#### 3.1.4.71.1.2 UpdateDashboardSoapOut

The response **WSDL message** for the **UpdateDashboard WSDL operation**.

The **SOAP body** contains the **UpdateDashboardResponse** element.

### 3.1.4.71.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>UpdateDashboard</b>         | The input data for the <b>UpdateDashboard WSDL operation</b> .  |
| <b>UpdateDashboardResponse</b> | The result data for the <b>UpdateDashboard WSDL operation</b> . |

#### 3.1.4.71.2.1 UpdateDashboard

The **UpdateDashboard** element specifies the input data for the **UpdateDashboard WSDL operation**.

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

**dashboard:** The updated **dashboard**. This element **MUST NOT** be null and **MUST** conform to the schema of the **Dashboard** complex type (section [2.2.4.79](#)).

#### 3.1.4.71.2.2 UpdateDashboardResponse

The **UpdateDashboardResponse** element specifies the result data for the **UpdateDashboard WSDL operation**.

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

**UpdateDashboardResult:** The updated **Dashboard** complex type object (section [2.2.4.79](#)). This element **MUST** be a copy of the updated **dashboard**, as stored in the **server (2)**.

#### 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 UpdateDataSource

The **UpdateDataSource** operation updates an existing **DataSource** complex type (section [2.2.4.85](#)).

The following is the **WSDL** port type specification of the **UpdateDataSource WSDL operation**.

```
<wsdl:operation name="UpdateDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateDataSourceSoapIn"/>
  <wsdl:output message="tns:UpdateDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateDataSourceSoapIn** request message (section [3.1.4.72.1.1](#)), and the **server (2)** responds with an **UpdateDataSourceSoapOut** response message (section [3.1.4.72.1.2](#)) as follows:

- The protocol client **MUST** send a valid **DataSource** object that specifies the new state of the **data source (1)** that is being updated.
- The server (2) **MUST** validate the **DataSource** following the schema of the **DataSource**.
- The server (2) **MUST** verify that the **DataSource** exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)).
- The server (2) **MUST** update the stored copy of the **DataSource**. **MUST NOT** update the **SourceName** value and **MUST** ignore the value if changed by the protocol client.
  - **ModifiedBy** **SHOULD** be updated by the server (2) with the **login name** of the **current user**.
  - **LastModified** **SHOULD** be updated by the server (2) with the date and time of when the data source (1) was updated on the server (2) storage.
  - **Version** **SHOULD** be updated by the server (2) with the **current version** of the **DataSource** object. If **Version** is updated by the server (2), it **MUST NOT** be null and **MUST** be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
- The other properties of the data source (1) **SHOULD** be equal to the data source (1) submitted to the server (2).
- The server (2) **MUST** return a copy of the updated **DataSource** object.

#### Exceptions:

| Error code               | Description  |
|--------------------------|--|
| <b>InvalidPermission</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidDataSource</b> | The updated data source (1) did not validate to the conforming       |

| Error code                           | Description   |
|--------------------------------------|---|
|                                      | schema.   |
| <b>FCOUpdateFailed</b>               | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>FCOUpdateFailedListAccess</b>     | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidItemType</b>               | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>FCOUpdateFailedListType</b>       | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>FCOUpdateFailedNameCollision</b>  | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.72.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                        | Description  |
|--------------------------------|--|
| <b>UpdateDataSourceSoapIn</b>  | The request WSDL message for the <b>UpdateDataSource WSDL operation</b> .  |
| <b>UpdateDataSourceSoapOut</b> | The response WSDL message for the <b>UpdateDataSource WSDL operation</b> . |

#### 3.1.4.72.1.1 UpdateDataSourceSoapIn

The request **WSDL message** for the **UpdateDataSource WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource
```

The **SOAP body** contains the **UpdateDataSource** element.

#### 3.1.4.72.1.2 UpdateDataSourceSoapOut

The response **WSDL message** for the **UpdateDataSource WSDL operation**.

The **SOAP body** contains the **UpdateDataSourceResponse** element.

### 3.1.4.72.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>UpdateDataSource</b>         | The input data for the <b>UpdateDataSource WSDL operation</b> .  |
| <b>UpdateDataSourceResponse</b> | The result data for the <b>UpdateDataSource WSDL operation</b> . |

### 3.1.4.72.2.1 UpdateDataSource

The **UpdateDataSource** element specifies the input data for the **UpdateDataSource WSDL operation**.

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

**dataSource:** The updated **datasource**. This element **MUST NOT** be null and **MUST** conform to the schema of the **DataSource** complex type (section [2.2.4.85](#)).

### 3.1.4.72.2.2 UpdateDataSourceResponse

The **UpdateDataSourceResponse** element specifies the result data for the **UpdateDataSource WSDL operation**.

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

**UpdateDataSourceResult:** The updated **DataSource** complex type (section [2.2.4.85](#)). This element **MUST** be a copy of the updated **datasource** as stored in the **server (2)**.

### 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 UpdateFilter

The **UpdateFilter** operation is used to update the existing **filter** as specified by the **Filter** complex type object (section [2.2.4.98](#)) in the **UpdateFilter** input element (section [3.1.4.73.2.1](#)).

The following is the **WSDL** port type specification of the **UpdateFilter WSDL operation**.

```
<wsdl:operation name="UpdateFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateFilterSoapIn"/>
  <wsdl:output message="tns:UpdateFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateFilterSoapIn** request message (section [3.1.4.73.1.1](#)), and the **server (2)** responds with an **UpdateFilterSoapOut** response message (section [3.1.4.73.1.2](#)) as follows:

- The protocol client MUST send a valid **Filter** object instance that specifies the new state of the filter.
- The server (2) MUST validate the filter following the schema of the **Filter**.
- The server (2) MUST verify that the filter exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the filter.
  - **ModifiedBy** SHOULD be updated by the server (2) with the **login name** of the **current user**.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the filter was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the **current version** of the filter object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - The other properties of the filter SHOULD be equal to the **Filter** object submitted to the server (2).
- The server (2) MUST return a new **Filter** object instance that represents the updated filter.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCOUpdateFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidItemType</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListType</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

| Error code                           | Description   |
|--------------------------------------|---|
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.73.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                    | Description  |
|----------------------------|--|
| <b>UpdateFilterSoapIn</b>  | The request WSDL message for the <b>UpdateFilter WSDL operation</b> .  |
| <b>UpdateFilterSoapOut</b> | The response WSDL message for the <b>UpdateFilter WSDL operation</b> . |

#### 3.1.4.73.1.1 UpdateFilterSoapIn

The request **WSDL message** for the **UpdateFilter WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/UpdateFilter`

The **SOAP body** contains the **UpdateFilter** element.

#### 3.1.4.73.1.2 UpdateFilterSoapOut

The response **WSDL message** for the **UpdateFilter WSDL operation**.

The **SOAP body** contains the **UpdateFilterResponse** element.

### 3.1.4.73.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                     | Description  |
|-----------------------------|--|
| <b>UpdateFilter</b>         | The input data for the <b>UpdateFilter WSDL operation</b> .  |
| <b>UpdateFilterResponse</b> | The result data for the <b>UpdateFilter WSDL operation</b> . |

#### 3.1.4.73.2.1 UpdateFilter

The **UpdateFilter** element specifies the input data for the **UpdateFilter WSDL operation**.

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

**filter:** A **Filter** complex type object (section [2.2.4.98](#)) instance that specifies the new state of the **filter** that is being updated.

### 3.1.4.73.2 UpdateFilterResponse

The **UpdateFilterResponse** element specifies the result data for the **UpdateFilter WSDL operation**.

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

**UpdateFilterResult:** A **Filter** complex type object (section [2.2.4.98](#)) instance that specifies the updated **filter**.

### 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 UpdateIndicator

The **UpdateIndicator** operation is used to update the existing **Indicator** as specified by the **Indicator** complex type object (section [2.2.4.125](#)) in the **UpdateIndicator** input element (section [3.1.4.74.2.1](#)).

The following is the **WSDL** port type specification of the **UpdateIndicator WSDL operation**.

```

<wsdl:operation name="UpdateIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateIndicatorSoapIn"/>
  <wsdl:output message="tns:UpdateIndicatorSoapOut"/>
</wsdl:operation>

```

The protocol client sends an **UpdateIndicatorSoapIn** request message (section [3.1.4.74.1.1](#)), and the **server (2)** responds with an **UpdateIndicatorSoapOut** response message (section [3.1.4.74.1.2](#)) as follows:

- The protocol client MUST send a valid **Indicator** object instance that specifies the new state of the **indicator**.
- The server (2) MUST validate the **indicator** following the schema of the **Indicator**.
- The server (2) MUST verify that the **indicator** exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the **indicator**.
  - **ModifiedBy** SHOULD be updated by the server (2) with the **login name** of the **current user**.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the **indicator** was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2). **Version** SHOULD be updated by the server (2) with the **current version** of the **indicator** object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - **CreatedBy** SHOULD be updated by the server (2).
  - **CreatedDate** SHOULD be updated by the server (2).
  - The other properties of the **indicator** SHOULD be equal to the **Indicator** object submitted to the server (2).
- The server (2) MUST return a new **Indicator** object instance that represents the updated **indicator**.

**Exceptions:**

| Error code                              | Description  |
|---|--|
| <b>InvalidBuiltinIndicatorOperation</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailed</b>                  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListAccess</b>        | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidItemType</b>                  | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListType</b>          | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

|                                      |   |
|--------------------------------------|---|
| <b>InvalidIndicator</b>              | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidIndicatorBand</b>          | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidSetting</b>                | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>Unknown</b>                       | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.74.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                       | Description   |
|-------------------------------|---|
| <b>UpdateIndicatorSoapIn</b>  | The request WSDL message for the <b>UpdateIndicator WSDL operation</b> .  |
| <b>UpdateIndicatorSoapOut</b> | The response WSDL message for the <b>UpdateIndicator WSDL operation</b> . |

#### 3.1.4.74.1.1 UpdateIndicatorSoapIn

The request **WSDL message** for the **UpdateIndicator WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateIndicator
```

The **SOAP body** contains the **UpdateIndicator** element.

#### 3.1.4.74.1.2 UpdateIndicatorSoapOut

The response **WSDL message** for the **UpdateIndicator WSDL operation**.

The **SOAP body** contains the **UpdateIndicatorResponse** element.

### 3.1.4.74.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>UpdateIndicator</b>         | The input data for the <b>UpdateIndicator WSDL operation</b> .  |
| <b>UpdateIndicatorResponse</b> | The result data for the <b>UpdateIndicator WSDL operation</b> . |

#### 3.1.4.74.2.1 UpdateIndicator

The **UpdateIndicator** element specifies the input data for the **UpdateIndicator WSDL operation**.

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

**indicator:** An **Indicator** complex type object (section [2.2.4.125](#)) instance that specifies the new state of the indicator that is being updated.

#### 3.1.4.74.2.2 UpdateIndicatorResponse

The **UpdateIndicatorResponse** element specifies the result data for the **UpdateIndicator WSDL operation**.

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

**UpdateIndicatorResult:** An **Indicator** complex type object (section [2.2.4.125](#)) instance that specifies the updated indicator.

### 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 UpdateKpi

The **UpdateKpi** operation is used to update the existing **KPI** as specified by the **Kpi** complex type object (section [2.2.4.128](#)) in the **UpdateKpi** input element (section [3.1.4.75.2.1](#)).

The following is the **WSDL** port type specification of the **UpdateKpi WSDL operation**.

```
<wsdl:operation name="UpdateKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateKpiSoapIn"/>
  <wsdl:output message="tns:UpdateKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateKpiSoapIn** request message (section [3.1.4.75.1.1](#)), and the **server (2)** responds with an **UpdateKpiSoapOut** response message (section [3.1.4.75.1.2](#)) as follows:

- The protocol client MUST send a valid **Kpi** object instance that specifies the new state of the KPI.
- The server (2) MUST validate the KPI following the schema of the **Kpi**.
- The server (2) MUST verify that the KPI exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the KPI.
  - **ModifiedBy** SHOULD be updated by the server (2) with the **login name** of the **current user**.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the KPI was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the **current version** of the KPI object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - The other properties of the KPI SHOULD be equal to the **Kpi** object submitted to the server (2).
- The server (2) MUST return a new **Kpi** object instance that represents the updated KPI.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCOUpdateFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidItemType</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

| Error code                           | Description   |
|--------------------------------------|---|
| <b>FCOUpdateFailedListType</b>       | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidKpi</b>                    | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.75.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                 | Description   |
|-------------------------|---|
| <b>UpdateKpiSoapIn</b>  | The request WSDL message for the <b>UpdateKpi WSDL operation</b> .  |
| <b>UpdateKpiSoapOut</b> | The response WSDL message for the <b>UpdateKpi WSDL operation</b> . |

#### 3.1.4.75.1.1 UpdateKpiSoapIn

The request **WSDL message** for the **UpdateKpi WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/UpdateKpi`

The **SOAP body** contains the **UpdateKpi** element.

#### 3.1.4.75.1.2 UpdateKpiSoapOut

The response **WSDL message** for the **UpdateKpi WSDL operation**.

The **SOAP body** contains the **UpdateKpiResponse** element.

### 3.1.4.75.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element          | Description  |
|------------------|--|
| <b>UpdateKpi</b> | The input data for the <b>UpdateKpi WSDL operation</b> . |

| Element                  | Description  |
|--------------------------|--|
| <b>UpdateKpiResponse</b> | The result data for the <b>UpdateKpi</b> WSDL operation. |

### 3.1.4.75.2.1 UpdateKpi

The **UpdateKpi** element specifies the input data for the **UpdateKpi WSDL operation**.

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

**kpi**: A **Kpi** complex type object (section [2.2.4.128](#)) instance that specifies the new state of the **KPI** that is being updated.

### 3.1.4.75.2.2 UpdateKpiResponse

The **UpdateKpiResponse** element specifies the result data for the **UpdateKpi WSDL operation**.

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

**UpdateKpiResult**: A **Kpi** complex type object (section [2.2.4.128](#)) instance that specifies the updated **KPI**.

### 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 UpdateReportView

The **UpdateReportView** operation is used to update the existing **report view** as specified by the **ReportView** complex type object (section [2.2.4.160](#)) in the **UpdateReportView** input element (section [3.1.4.76.2.1](#)).

The following is the **WSDL** port type specification of the **UpdateReportView WSDL operation**.

```
<wsdl:operation name="UpdateReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateReportViewSoapIn"/>
  <wsdl:output message="tns:UpdateReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateReportViewSoapIn** request message (section [3.1.4.76.1.1](#)), and the **server (2)** responds with an **UpdateReportViewSoapOut** response message (section [3.1.4.76.1.2](#)) as follows:

- The protocol client MUST send a valid **ReportView** object instance that specifies the new state of the report view.
- The server (2) MUST validate the report view following the schema of the **ReportView**.
- The server (2) MUST verify that the report view exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the report view.
  - **ModifiedBy** SHOULD be updated by the server (2) with the **login name** of the **current user**.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the report view was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the **current version** of the report view object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - The other properties of the report view SHOULD be equal to the **Indicator** complex type object (section [2.2.4.125](#)) submitted to the server (2).

The server (2) MUST return a new **ReportView** object instance that represents the updated report view.

#### Exceptions:

| Error code                       | Description  |
|----------------------------------|--|
| <b>FCOUpdateFailed</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListAccess</b> | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>InvalidItemType</b>           | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListType</b>   | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |

| Error code                           | Description   |
|--------------------------------------|---|
| <b>InvalidReportView</b>             | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElement</b>                | See Common List of Error Codes (section 2.2.2.1.3). |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.76.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                        | Description  |
|--------------------------------|--|
| <b>UpdateReportViewSoapIn</b>  | The request WSDL message for the <b>UpdateReportView WSDL operation</b> .  |
| <b>UpdateReportViewSoapOut</b> | The response WSDL message for the <b>UpdateReportView WSDL operation</b> . |

#### 3.1.4.76.1.1 UpdateReportViewSoapIn

The request **WSDL message** for the **UpdateReportView WSDL operation**.

The **SOAP action** value is:

`http://www.microsoft.com/performancepoint/scorecards/UpdateReportView`

The **SOAP body** contains the **UpdateReportView** element.

#### 3.1.4.76.1.2 UpdateReportViewSoapOut

The response **WSDL message** for the **UpdateReportView WSDL operation**.

The **SOAP body** contains the **UpdateReportViewResponse** element.

### 3.1.4.76.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                         | Description  |
|---------------------------------|--|
| <b>UpdateReportView</b>         | The input data for the <b>UpdateReportView WSDL operation</b> .  |
| <b>UpdateReportViewResponse</b> | The result data for the <b>UpdateReportView WSDL operation</b> . |

### 3.1.4.76.2.1 UpdateReportView

The **UpdateReportView** element specifies the input data for the **UpdateReportView WSDL operation**.

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

**reportView:** A **ReportView** complex type object (section [2.2.4.160](#)) instance that specifies the new state of the **report view** that is being updated.

### 3.1.4.76.2.2 UpdateReportViewResponse

The **UpdateReportViewResponse** element specifies the result data for the **UpdateReportView WSDL operation**.

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

**UpdateReportViewResult:** A **ReportView** complex type object (section [2.2.4.160](#)) instance that specifies the updated **report view**.

### 3.1.4.76.3 Complex Types

None.

### 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 UpdateScorecard

The **UpdateScorecard** operation is used to update the existing **scorecard** as specified by the **Scorecard** complex type object (section [2.2.4.162](#)) in the **UpdateScorecard** input element (section [3.1.4.77.2.1](#)).

The following is the **WSDL** port type specification of the **UpdateScorecard WSDL operation**.

```
<wsdl:operation name="UpdateScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateScorecardSoapIn"/>
  <wsdl:output message="tns:UpdateScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateScorecardSoapIn** request message (section [3.1.4.77.1.1](#)), and the **server (2)** responds with an **UpdateScorecardSoapOut** response message (section [3.1.4.77.1.2](#)) as follows:

- The scorecard to be updated MUST be a valid **Scorecard**.
- The **Location** of the scorecard (see **FirstClassElement** section 2.2.4.99) MUST exist.
- The **current user** MUST have read and write permissions to the **Location (FirstClassElement)** of the scorecard.
- The **Location** of the scorecard MUST support storing objects of type **Scorecard**.
- The stored copy on the server (2) MUST be updated with the scorecard provided by the protocol client in the **UpdateScorecardSoapIn** request message.

#### Exceptions:

| Error code                           | Description  |
|--------------------------------------|--|
| <b>FCOUpdateFailed</b>               | See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ). |
| <b>FCOUpdateFailedListAccess</b>     | See Common List of Error Codes (section 2.2.2.1.3).                  |
| <b>InvalidItemType</b>               | See Common List of Error Codes (section 2.2.2.1.3).                  |
| <b>FCOUpdateFailedListType</b>       | See Common List of Error Codes (section 2.2.2.1.3).                  |
| <b>InvalidObject</b>                 | See Common List of Error Codes (section 2.2.2.1.3).                  |
| <b>InvalidCategoryName</b>           | See Common List of Error Codes (section 2.2.2.1.3).                  |
| <b>InvalidFirstClassElementField</b> | See Common List of Error Codes (section 2.2.2.1.3).                  |
| <b>InvalidElement</b>                | See Common List of Error Codes (section 2.2.2.1.3).                  |
| <b>InvalidElementField</b>           | See Common List of Error Codes (section 2.2.2.1.3).                  |

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.77.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                       | Description   |
|-------------------------------|---|
| <b>UpdateScorecardSoapIn</b>  | The request WSDL message for the <b>UpdateScorecard WSDL operation</b> .  |
| <b>UpdateScorecardSoapOut</b> | The response WSDL message for the <b>UpdateScorecard WSDL operation</b> . |

#### 3.1.4.77.1.1 UpdateScorecardSoapIn

The request **WSDL message** for the **UpdateScorecard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateScorecard
```

The **SOAP body** contains the **UpdateScorecard** element.

#### 3.1.4.77.1.2 UpdateScorecardSoapOut

The response **WSDL message** for the **UpdateScorecard WSDL operation**.

The **SOAP body** contains the **UpdateScorecardResponse** element.

#### 3.1.4.77.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                        | Description   |
|--------------------------------|---|
| <b>UpdateScorecard</b>         | The input data for the <b>UpdateScorecard WSDL operation</b> .  |
| <b>UpdateScorecardResponse</b> | The result data for the <b>UpdateScorecard WSDL operation</b> . |

#### 3.1.4.77.2.1 UpdateScorecard

The **UpdateScorecard** element specifies the input data for the **UpdateScorecard WSDL operation**.

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

**scorecard:** The **scorecard** to be updated, which MUST be a valid **Scorecard** complex type (section [2.2.4.162](#)). The **UpdateScorecard** operation (section [3.1.4.77](#)) is used to update the existing scorecard as specified by **Scorecard**.

#### 3.1.4.77.2.2 UpdateScorecardResponse

The **UpdateScorecardResponse** element specifies the result data for the **UpdateScorecard WSDL operation**.

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

**UpdateScorecardResult:** The original **scorecard** object submitted to the **server (2)**, modified as follows:

- **ModifiedBy** SHOULD be updated by the server (2) with the **login name** of the **current user**.
- **LastModified** SHOULD be updated by the server (2) with the date and time of when the scorecard was last updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
- **Version** SHOULD be updated by the server (2) with the **current version** of the scorecard object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
- The other properties of the scorecard SHOULD be equal to the original scorecard submitted to the server (2).

### 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 ValidateKpi

The **ValidateKpi** operation checks whether a **KPI** stored on the **server (2)** is valid.

The following is the **WSDL** port type specification of the **ValidateKpi WSDL operation**.

```
<wsdl:operation name="ValidateKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ValidateKpiSoapIn"/>
  <wsdl:output message="tns:ValidateKpiSoapOut"/>
</wsdl:operation>
```

</wsdl:operation>

The protocol client sends a **ValidateKpiSoapIn** request message (section [3.1.4.78.1.1](#)), and the server (2) responds with a **ValidateKpiSoapOut** response message (section [3.1.4.78.1.2](#)), as follows:

- If the KPI contains any **Actuals** (see section [2.2.4.128](#)), each MUST be a valid **KpiMeasure** complex type (section [2.2.4.129](#)) as follows:
  - If the **DataSourceLocation** field of **KpiMeasure** is not empty, it MUST refer to an existing **data source (1)** element (see section [2.2.4.85](#)), and the connection to the data source MUST be successful.
  - If the data source at **DataSourceLocation** is of type ADOMD.NET (see section [2.2.4.85](#)), each **DefaultDimensionSetting** (section [2.2.4.87](#)) MUST be valid as follows:
    - If the **DefaultDimensionSetting** contains any **Members** elements, a **Member** complex type (section [2.2.4.134](#)) for each MUST exist in the data source.
- If the KPI contains any **Targets** elements, each MUST be a valid **Target** complex type (section [2.2.4.170](#)) as follows:
  - If the property **RelatedActualId** is not empty, it MUST refer to an existing **Actual**, which MUST be valid according to the **Actuals** (section [2.2.4.128](#)).
  - The **Target** itself MUST be a valid **KpiMeasure** complex type (section [2.2.4.129](#)).
  - If the property **IndicatorLocation** is not empty, it MUST refer to an existing **Indicator**.
  - If the property **StatedScore** is not empty, it MUST be a valid **KpiMeasure** complex type (section [2.2.4.129](#)).

### 3.1.4.78.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                   | Description   |
|---------------------------|---|
| <b>ValidateKpiSoapIn</b>  | The request WSDL message for the <b>ValidateKpi WSDL operation</b> .  |
| <b>ValidateKpiSoapOut</b> | The response WSDL message for the <b>ValidateKpi WSDL operation</b> . |

#### 3.1.4.78.1.1 ValidateKpiSoapIn

The request **WSDL message** for the **ValidateKpi WSDL operation**.

The **SOAP action** value is:

<http://www.microsoft.com/performancepoint/scorecards/ValidateKpi>

The **SOAP body** contains the **ValidateKpi** element.

#### 3.1.4.78.1.2 ValidateKpiSoapOut

The response **WSDL message** for the **ValidateKpi WSDL operation**.

The **SOAP body** contains the **ValidateKpiResponse** element.

### 3.1.4.78.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                    | Description   |
|----------------------------|---|
| <b>ValidateKpi</b>         | The input data for the <b>ValidateKpi WSDL operation</b> .  |
| <b>ValidateKpiResponse</b> | The result data for the <b>ValidateKpi WSDL operation</b> . |

#### 3.1.4.78.2.1 ValidateKpi

The **ValidateKpi** element specifies the input data for the **ValidateKpi WSDL operation**.

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

**location:** Location of the **KPI** to be validated (see **RepositoryLocation** section 2.2.4.161).

#### 3.1.4.78.2.2 ValidateKpiResponse

The **ValidateKpiResponse** element specifies the result data for the **ValidateKpi WSDL operation**.

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

**ValidateKpiResult:** An array of strings. If the **KPI** is valid, this array **MUST** be empty. Otherwise, this array **SHOULD** contain one localized error message per validation failure.

#### 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 ValidateScorecard

The **ValidateScorecard** operation checks if a **scorecard** stored on the **server (2)** is valid.

The following is the **WSDL** port type specification of the **ValidateScorecard WSDL operation**.

```
<wsdl:operation name="ValidateScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ValidateScorecardSoapIn"/>
  <wsdl:output message="tns:ValidateScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **ValidateScorecardSoapIn** request message (section [3.1.4.79.1.1](#)), and the server (2) responds with a **ValidateScorecardSoapOut** response message (section [3.1.4.79.1.2](#)) as follows:

- If the scorecard contains one or more **KPIs**, each KPI MUST be valid according to the specification in the **ValidateKPI** operation (section [3.1.4.78](#)).
- If the scorecard contains any **ConfiguredView** complex types (section [2.2.4.77](#)), each MUST be valid as follows:
  - If the **DataSourceLocation** field is not empty, it MUST refer to an existing data source element (section [2.2.4.85](#)) and the connection to the data source MUST be successful.
  - The column and row headers defined in the **GridViewDefinition** (section [2.2.4.122](#)) and **GridHeaderItem** (section [2.2.4.116](#)) complex types MUST be valid according to the following:
    - Each column or row header that is of complex type **Member** (section [2.2.4.134](#)) MUST refer to a valid member in the data source.
    - Each column or row header that is of complex type **NamedSet** (section [2.2.4.147](#)) MUST be a well-formed **named set MDX**.

#### 3.1.4.79.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                         | Description   |
|---------------------------------|---|
| <b>ValidateScorecardSoapIn</b>  | The request WSDL message for the <b>ValidateScorecard WSDL operation</b> .  |
| <b>ValidateScorecardSoapOut</b> | The response WSDL message for the <b>ValidateScorecard WSDL operation</b> . |

#### 3.1.4.79.1.1 ValidateScorecardSoapIn

The request **WSDL message** for the **ValidateScorecard WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateScorecard
```

The **SOAP body** contains the **ValidateScorecard** element.

### 3.1.4.79.1.2 ValidateScorecardSoapOut

The response **WSDL message** for the **ValidateScorecard WSDL operation**.

The **SOAP body** contains the **ValidateScorecardResponse** element.

### 3.1.4.79.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                          | Description   |
|----------------------------------|---|
| <b>ValidateScorecard</b>         | The input data for the <b>ValidateScorecard WSDL operation</b> .  |
| <b>ValidateScorecardResponse</b> | The result data for the <b>ValidateScorecard WSDL operation</b> . |

#### 3.1.4.79.2.1 ValidateScorecard

The **ValidateScorecard** element specifies the input data for the **ValidateScorecard WSDL operation**.

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

**location:** Location of the **scorecard** to be validated (see **RepositoryLocation** section 2.2.4.161).

#### 3.1.4.79.2.2 ValidateScorecardResponse

The **ValidateScorecardResponse** element specifies the result data for the **ValidateScorecard WSDL operation**.

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

**ValidateScorecardResult:** An array of strings. If the **scorecard** is valid, this array MUST be empty. Otherwise, this array SHOULD contain one localized error message per validation failure.

### 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 ValidateSiteCollection

The **ValidateSiteCollection** operation is used to check if the **context site** has the **server (2)** feature installed.

The following is the **WSDL** port type specification of the **ValidateSiteCollection WSDL operation**.

```
<wsdl:operation name="ValidateSiteCollection" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ValidateSiteCollectionSoapIn"/>
  <wsdl:output message="tns:ValidateSiteCollectionSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **ValidateSiteCollectionSoapIn** request message (section [3.1.4.80.1.1](#)), and the server (2) responds with a **ValidateSiteCollectionSoapOut** response message (section [3.1.4.80.1.2](#)) as follows:

- If the user-defined context site is the top-level **site (2)** of a **site collection** that has the server (2) feature installed, the **ValidateSiteCollectionResult** attribute MUST be "SiteCollection".
- If the user-defined context site is a **subsite** of a site collection that has the server (2) feature installed, **ValidateSiteCollectionResult** MUST be "Site".
- If the user-defined context site is null, **ValidateSiteCollectionResult** MUST be "NonexistentSiteCollection".
- If the user-defined context site is not a valid site (2) or a site collection and the **siteCollectionUrl** attribute derived from the user-defined context site is not empty, **ValidateSiteCollectionResult** MUST be "Nonexistentsite".
- If the user-defined context site is not a valid site (2) or a site collection and **siteCollectionUrl** derived from the user-defined context site is empty, **ValidateSiteCollectionResult** MUST be "NonexistentSiteCollection".
- If the site collection of the user-defined context site does not have the server (2) feature installed, **ValidateSiteCollectionResult** MUST be "PPSNotActivatedOnSiteCollection".
- **ValidateSiteCollectionResult** MUST NOT have any other values from the **URLValidationResult** enumeration (section [3.1.4.80.4.1](#)) other than those enumerated in the preceding items.

### 3.1.4.80.1 Messages

The following table summarizes the set of **WSDL message** definitions that are specific to this operation.

| Message                              | Description  |
|--------------------------------------|--|
| <b>ValidateSiteCollectionSoapIn</b>  | The request WSDL message for the <b>ValidateSiteCollection WSDL operation</b> .  |
| <b>ValidateSiteCollectionSoapOut</b> | The response WSDL message for the <b>ValidateSiteCollection WSDL operation</b> . |

#### 3.1.4.80.1.1 ValidateSiteCollectionSoapIn

The request **WSDL message** for the **ValidateSiteCollection WSDL operation**.

The **SOAP action** value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection
```

The **SOAP body** contains the **ValidateSiteCollection** element.

#### 3.1.4.80.1.2 ValidateSiteCollectionSoapOut

The response **WSDL message** for the **ValidateSiteCollection WSDL operation**.

The **SOAP body** contains the **ValidateSiteCollectionResponse** element.

### 3.1.4.80.2 Elements

The following table summarizes the **XML schema** element definitions that are specific to this operation.

| Element                               | Description  |
|---------------------------------------|--|
| <b>ValidateSiteCollection</b>         | The input data for the <b>ValidateSiteCollection WSDL operation</b> .  |
| <b>ValidateSiteCollectionResponse</b> | The result data for the <b>ValidateSiteCollection WSDL operation</b> . |

#### 3.1.4.80.2.1 ValidateSiteCollection

The **ValidateSiteCollection** element specifies the input data for the **ValidateSiteCollection WSDL operation**.

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

#### 3.1.4.80.2.2 ValidateSiteCollectionResponse

The **ValidateSiteCollectionResponse** element specifies the result data for the **ValidateSiteCollection WSDL operation**.

```

<xs:element name="ValidateSiteCollectionResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="ValidateSiteCollectionResult"
type="tns:URLValidationResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="siteCollectionUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="siteUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**ValidateSiteCollectionResult:** A value of type **URLValidationResult** indicating the result of the validation process. See the definition of the **URLValidationResult** simple type (section [3.1.4.80.4.1](#)) for more details.

**siteCollectionUrl:** The **site collection URL** of the **context site**.

**siteUrl:** The URL of the context site.

### 3.1.4.80.3 Complex Types

None.

### 3.1.4.80.4 Simple Types

The following table summarizes the **XML schema** simple type definitions that are specific to this operation.

| Simple type                | Description  |
|----------------------------|--|
| <b>URLValidationResult</b> | Specifies the possible results of <b>URL</b> validation. |

#### 3.1.4.80.4.1 URLValidationResult

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **URLValidationResult** is an enumeration used to specify the possible results of **URL** validation.

```

<xs:simpleType name="URLValidationResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SiteCollectionOrSite"/>
    <xs:enumeration value="SiteCollection"/>
    <xs:enumeration value="Site"/>
    <xs:enumeration value="List"/>
    <xs:enumeration value="DocumentLibrary"/>
    <xs:enumeration value="InvalidURL"/>
    <xs:enumeration value="AlreadyExists"/>
    <xs:enumeration value="NonexistentSiteCollection"/>
    <xs:enumeration value="NonexistentSite"/>
    <xs:enumeration value="PPSNotActivatedOnSiteCollection"/>
    <xs:enumeration value="URLZoneNotAllowed"/>
    <xs:enumeration value="NoAccess"/>
    <xs:enumeration value="InvalidSiteVersion"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **URLValidationResult** simple type.

| Value                           | Meaning   |
|---------------------------------|---|
| SiteCollectionOrSite            | The <b>context site</b> is a <b>subsite</b> of a <b>site collection</b> or the top-level <b>site (2)</b> of a site collection that has the <b>server (2)</b> feature installed. |
| SiteCollection                  | The context site is the top-level site (2) of a site collection and the site collection has the server (2) feature installed.   |
| Site                            | The context site is a subsite of a site collection and the site collection has the protocol <b>feature</b> installed.   |
| List                            | The context site is a <b>list (1)</b> of a site collection.   |
| DocumentLibrary                 | The context site is a <b>document library</b> of a site collection.   |
| InvalidURL                      | The URL is not valid.   |
| AlreadyExists                   | The URL already exists.   |
| NonexistentSiteCollection       | The context site is not a valid site collection.  |
| NonexistentSite                 | The context site is not a valid site (2).   |
| PPSNotActivatedOnSiteCollection | The site collection of the context site does not have the server (2) feature activated.   |
| URLZoneNotAllowed               | The URL is not in the following <b>security zones</b> : Local, Intranet, or Trusted.  |
| NoAccess                        | The user has insufficient rights to access the context site.  |
| InvalidSiteVersion              | The context site version is not compatible with the current server (2) feature.   |

### 3.1.4.80.5 Attributes

None.

### 3.1.4.80.6 Groups

None.

### 3.1.4.80.7 Attribute Groups

None.

### 3.1.5 Timer Events

No timer events are required on the **server (2)** beyond those required by the underlying RPC transport.

### 3.1.6 Other Local Events

None.

## 4 Protocol Examples

The following subsections contain examples of this protocol's usage.

### 4.1 Scorecard Update

In this example, a protocol client creates a new KPI, adds that KPI to an existing scorecard, gets the result data set for that scorecard, and deletes the scorecard.

The example assumes that the following objects are known to the **server (2)** with the following identifiers:

| Type       | Name                   | Path                                      | ID     |
|------------|------------------------|---|--------|
| Scorecard  | New <b>Scorecard.</b>  | /PerformancePoint/Lists/Dashboard Content | 8_.000 |
| KPI        | <b>InternetSales.</b>  | /PerformancePoint/Lists/Dashboard Content | 4_.000 |
| DataSource | New <b>DataSource.</b> | /PerformancePoint/Data Sources            | 1_.000 |

#### 4.1.1 CreateKpi

To create a new **KPI**, the protocol client calls **CreateKpi** operation (section 3.1.4.6). This call will create a KPI with an **Analysis Services** actual value using the Internet Sales Amount measure. The target value is a fixed data source with a value of one. The KPI will use a built-in indicator and **normalized banding** type.

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateKpi xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <listUrl>/PerformancePoint/Lists/Dashboard Content</listUrl>
      <kpi Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:13:06"
ContentTypes="PpsKpi" LastModified="2009-05-21T13:13:47" ModifiedBy="Sample User"
CheckedOutTo="">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="InternetSales" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="1" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content" />
        <Actuals>
          <KpiMeasure Guid="6b25b5bc-ffed-4f36-823c-d919b9f4716f" AggregateBy="Default"
DisableScorecardFilters="false" CustomData="" MeasureType="Fixed" ModelCurrent="1"
Pattern="IncreasingIsBetter" CurrentFormula="" IsCustomCurrentFormula="false" OdbcQuery=""
OverrideHoverText="" TimeFilterFormula="" ValueSource="Default">
            <Properties>
```

```

    <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Actual" />
    <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
    <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
    </Properties>
    <Comments />
    <OwnerKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content" />
    <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_000"
ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7ald-4602-
9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
    <DefaultDimensionSettings>
    <DefaultDimensionSetting DisplayName="{[Measures].[Measures]}" UniqueName="[Measures]"
IsMeasureDimension="true" DefaultMemberName="" IsVisible="true" ShowAsSlider="false">
    <MeasureGroupNames />
    <Type>Unknown</Type>
    <Hierarchies />
    <Levels>
    <Level DisplayName="MeasureLevel" UniqueName="MeasureLevel"
DimensionUniqueName="[Measures]" IsAllLevel="false" LevelNumber="0" />
    </Levels>
    <Members Caption="Internet Sales Amount" UniqueName="[Measures].[Internet Sales
Amount]" LevelName="[Measures].[MeasuresLevel]" DimensionName="Measures.Measures"
LevelDepth="0" ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Measures]" MemberType="Regular" />
    </DefaultDimensionSetting>
    </DefaultDimensionSettings>
    <OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
    </KpiMeasure>
    </Actuals>
    <Targets>
    <Target Guid="fla4falf-2474-4746-99e6-660e8dafele8" AggregateBy="Default"
DisableScorecardFilters="false" CustomData="" MeasureType="Fixed" ModelCurrent="1"
Pattern="IncreasingIsBetter" IsCustomCurrentFormula="false" OverrideHoverText=""
ValueSource="Default" IsRollupScore="false">
    <Properties>
    <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Target" />
    <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
    <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
    </Properties>
    <Comments />
    <OwnerKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content" />
    <DataSourceLocation ItemUrl="/%%fixedvalues%%" />
    <DefaultDimensionSettings />
    <OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
    <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_000" />
    <Banding Type="Normalized" ActualWorst="0" SpreadMinimum="0" SpreadMaximum="1.2">
    <CustomBoundary>
    <decimal>0.50</decimal>
    <decimal>1</decimal>
    </CustomBoundary>
    </Banding>
    <RelatedActualId>6b25b5bc-ffed-4f36-823c-d919b9f4716f</RelatedActualId>
    </Target>
    </Targets>
    </kpi>

```

```

    </CreateKpi>
  </soap:Body>
</soap:Envelope>

```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateKpiResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <CreateKpiResult Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:14:28"
ContentTypes="PpsKpi" LastModified="2009-05-21T13:14:28" ModifiedBy="Sample User"
CheckedOutTo="">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="InternetSales" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="1" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/4 .000" ItemType="Kpi"
ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
a268-4cfl-a9fc-76d4b2ddabe0" />
        <Actuals>
          <KpiMeasure Guid="6b25b5bc-ffed-4f36-823c-d919b9f4716f" AggregateBy="Default"
DisableScorecardFilters="false" CustomData="" MeasureType="Fixed" ModelCurrent="1"
Pattern="IncreasingIsBetter" CurrentFormula="" IsCustomCurrentFormula="false" OdbcQuery=""
OverrideHoverText="" TimeFilterFormula="" ValueSource="Default">
            <Properties>
              <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Actual" />
              <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
              <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
            </Properties>
            <Comments />
            <OwnerKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cfl-a9fc-76d4b2ddabe0" />
            <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1 .000"
ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
            <DefaultDimensionSettings>
              <DefaultDimensionSetting DisplayName="{ [Measures].[Measures] }" UniqueName="[Measures]"
IsMeasureDimension="true" DefaultMemberName="" IsVisible="true" ShowAsSlider="false">
                <MeasureGroupNames />
                <Type>Unknown</Type>
                <Hierarchies />
                <Levels>
                  <Level DisplayName="MeasureLevel" UniqueName="MeasureLevel"
DimensionUniqueName="[Measures]" IsAllLevel="false" LevelNumber="0" />
                </Levels>
              </DefaultDimensionSetting>
            </DefaultDimensionSettings>
          </KpiMeasure>
        </Actuals>
      </CreateKpiResult>
    </CreateKpiResponse>
  </soap:Body>
</soap:Envelope>

```

```

    <Members Caption="Internet Sales Amount" UniqueName="[Measures].[Internet Sales
Amount]" LevelName="[Measures].[MeasuresLevel]" DimensionName="Measures.Measures"
LevelDepth="0" ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Measures]" MemberType="Regular" />
  </DefaultDimensionSetting>
</DefaultDimensionSettings>
<OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
</KpiMeasure>
</Actuals>
<Targets>
  <Target Guid="fla4falf-2474-4746-99e6-660e8dafele8" AggregateBy="Default"
DisableScorecardFilters="false" CustomData="" MeasureType="Fixed" ModelCurrent="1"
Pattern="IncreasingIsBetter" IsCustomCurrentFormula="false" OverrideHoverText=""
ValueSource="Default" IsRollupScore="false">
  <Properties>
    <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Target" />
    <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
    <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
  </Properties>
  <Comments />
  <OwnerKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7ald-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
  <DataSourceLocation ItemUrl="/%fixedvalues%" />
  <DefaultDimensionSettings />
  <OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
  <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0 .000" />
  <Banding Type="Normalized" ActualWorst="0" SpreadMinimum="0" SpreadMaximum="1.2">
    <CustomBoundary>
      <decimal>0.50</decimal>
      <decimal>1</decimal>
    </CustomBoundary>
  </Banding>
  <RelatedActualId>6b25b5bc-ffed-4f36-823c-d919b9f4716f</RelatedActualId>
</Target>
</Targets>
</CreateKpiResult>
</CreateKpiResponse>
</soap:Body>
</soap:Envelope>

```

## 4.1.2 GetScorecard

The protocol client then retrieves the scorecard to be updated.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetScorecard xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <location ItemUrl="/PerformancePoint/Lists/Dashboard Content/8 .000" />
    </GetScorecard>
  </soap:Body>

```

</soap:Envelope>

The **server (2)** responds with the following (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetScorecardResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <GetScorecardResult Folder="" CreatedBy="REDMOND\sbishel" CreatedDate="2009-05-
21T16:42:00" ContentType="PpsScorecard" LastModified="2009-05-21T17:27:39"
ModifiedBy="REDMOND\sbishel" CheckedOutTo="" TemplateType="General"
RendererClassName="Microsoft.PerformancePoint.Scorecards.ServerRendering.ScorecardCtrl,
Microsoft.PerformancePoint.Scorecards.ServerRendering, Version=14.0.0.0, Culture=neutral,
PublicKeyToken=94de0004b6e3fcc5">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="New Scorecard" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="2" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/8_.000" ItemType="Scorecard"
ItemGuid="cb692449-f20e-4809-9ee3-e012c78f026e" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
a268-4cf1-a9fc-76d4b2ddabe0" />
        <ConfiguredViews>
          <ConfiguredView Guid="7675ef55-d456-469e-9381-8c1eddd94c1d" AllowStatusFilter="true"
AllowFilter="true" AllowSort="true" AllowAnnotations="true" EmptyRowsFilterMode="None"
AllowShowDetails="true" ShowInfoToolTips="false" EnableTextwrap="false"
MaintainMemberLevelDepth="true" AllowDynamicRowMemberExpansion="true"
AllowDynamicColumnMemberExpansion="true" AllowRowDrill="true" AllowColumnDrill="true"
AlwaysShowAnnotationCellFlags="false" ExpandToFitWidth="false" HideScorecard="false"
ShowStatusFiltersByDefault="false">
            <Properties>
              <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Default View" />
              <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
              <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
            </Properties>
            <Comments />
            <ToolbarOptions ShowInlineText="true" ShowToolbar="false" ShowPageFilters="true"
ShowRefresh="true" ShowStatusFilter="true" ShowToolTips="true" ShowCollapse="true"
ShowMode="true" ShowPrint="true" ShowExpand="true" ShowCellSelection="false"
AnnotationOnByDefault="true" ShowPageFiltersByDefault="false"
ShowStatusFilterByDefault="false" ShowToolbarItemsLabel="false" ShowDefaultRollup="true"
ShowWorstChildRollup="true" ShowIndicatorCount="true" />
            <DataSourceLocation ItemUrl="/%%fixedvalues%%" />
            <GridViewDefinition EmptyCell="" InvalidCell="Error" ShowGridLines="true"
ShowHiddenHeaders="false" ShowMetricHeaders="true" ShowPlusMinus="true">
              <CornerCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
                <BackColor A="0" R="235" G="243" B="255" />
              </CornerCellFormatInfo>
            </GridViewDefinition>
          </ConfiguredView>
        </ConfiguredViews>
      </GetScorecardResult>
    </GetScorecardResponse>
  </soap:Body>
</soap:Envelope>
```

```

    <RootRowHeader Id="0" Guid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f"
    DefinitionGuid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f" DisplayText="" HeaderType="None"
    GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="1" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
    Weight="1" AggregationType="None">
        <Children>
            <GridHeaderItem Id="1" Guid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3"
            DefinitionGuid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3" DisplayText="InternetSales"
            DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard Content/4_.000"
            HeaderType="Kpi" GroupId="-4" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
            IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
            IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
            MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
            IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
            NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
            IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
            Weight="1" AggregationType="None">
                <Children />
                <OverrideIndicatorLocation ItemUrl="" />
                <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
                ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
                SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
                9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cfl-a9fc-76d4b2ddabe0" />
                <BpmProperties />
                <TrendIndicatorLocation ItemUrl="" />
            </GridHeaderItem>
        </Children>
        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TrendIndicatorLocation ItemUrl="" />
    </RootRowHeader>
    <RootColumnHeader Id="0" Guid="ab5c8048-cae2-4054-88bb-917449fda92e"
    DefinitionGuid="ab5c8048-cae2-4054-88bb-917449fda92e" DisplayText="" HeaderType="None"
    GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
    Weight="1" AggregationType="None">
        <Children>
            <GridHeaderItem Id="1" Guid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5"
            DefinitionGuid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5" DisplayText="Actual"
            DimensionName="Scorecard_Measures__" DimensionValue="Actual" HeaderType="KpiActual"
            GroupId="-2" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
            IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
            IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
            MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
            IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
            NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
            IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
            Weight="1" KpiTargetName="Actual" AggregationType="None">
                <Children />
                <OverrideIndicatorLocation ItemUrl="" />
                <LinkedKpiLocation ItemUrl="" />
                <BpmProperties />
                <TargetSettings ShowValue="true" ShowActualAsTarget="false"
                IgnoreScoreFilter="false">
                    <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
                    DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
                    <FilterEmptyRows>false</FilterEmptyRows>
                    <Position>NotDisplayed</Position>
                </TargetSettings>
            </GridHeaderItem>
        </Children>
    </RootColumnHeader>

```

```

        <PositionActual>NotDisplayed</PositionActual>
        <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
            <Position>Center</Position>
        </IndicatorSettings>
    </TargetSettings>
    <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
    <GridHeaderItem Id="2" Guid="a6d178eb-68d9-430a-a3ba-0b4cbef77511"
DefinitionGuid="a6d178eb-68d9-430a-a3ba-0b4cbef77511" DisplayText="Target"
DimensionName="Scorecard_Measures__" DimensionValue="Target" HeaderType="KpiTarget"
GroupId="-3" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Target" AggregationType="None">
        <Children />
        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
            <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right"/>
            <FilterEmptyRows>false</FilterEmptyRows>
            <Position>Left</Position>
            <PositionActual>NotDisplayed</PositionActual>
            <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
            <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
                <Position>Center</Position>
            </IndicatorSettings>
        </TargetSettings>
        <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
</Children>
    <OverrideIndicatorLocation ItemUrl="" />
    <LinkedKpiLocation ItemUrl="" />
    <BpmProperties />
    <TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
<DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
    <DefaultRollupIndicatorLocation ItemUrl="" />
    <CellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>
</ConfiguredView>
</ConfiguredViews>
<EndPoints>
    <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
date-time" AcceptsMultipleFilterLinks="true" />
</EndPoints>
<BeginPoints>
    <ParameterDefinition>
        <ParameterUniqueName>2833def6-63f3-43d5-9bfd-ebd371113b27</ParameterUniqueName>

```

```

    <DisplayValues>
      <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
          <xs:complexType>
            <xs:choice minOccurs="0" maxOccurs="unbounded">
              <xs:element name="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                    <xs:element name="KpiId" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                    <xs:element name="Name" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                    <xs:element name="Description" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                    <xs:element name="Person x0020 Responsible" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:choice>
          </xs:complexType>
        </xs:schema>
        <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
      </DisplayValues>
      <CustomDefinition>BeginPoint_Kpi</CustomDefinition>
      <ParameterProviderId>ParameterScorecardKpiProvider</ParameterProviderId>
      <DisplayName>KPI</DisplayName>
      <EmitterType>BothAConditionalVisibilityAndParameterEmitter</EmitterType>
      <KeyColumn>Key</KeyColumn>
      <ParentKeyColumn>ParentKey</ParentKeyColumn>
      <DisplayColumn>DisplayValue</DisplayColumn>
      <IsDefaultColumn>IsDefault</IsDefaultColumn>
      <DefaultPostFormula />
    </ParameterDefinition>
    <ParameterDefinition>
      <ParameterUniqueName>dd5820fe-d454-4a30-8980-1e37a5bc2341</ParameterUniqueName>
      <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
          <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
            <xs:complexType>
              <xs:choice minOccurs="0" maxOccurs="unbounded">
                <xs:element name="ParameterData" msdata:Locale="en-US">
                  <xs:complexType>
                    <xs:sequence>
                      <xs:element name="Key" type="xs:string" minOccurs="0" />
                      <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                      <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                      <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                      <xs:element name="CellDisplay" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                    </xs:sequence>
                  </xs:complexType>
                </xs:element>
              </xs:choice>
            </xs:complexType>
          </xs:schema>
        </DisplayValues>
      </ParameterDefinition>
    </ParameterDefinition>
  </diffgram>

```

```

        </xs:element>
    </xs:schema>
    <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
    </DisplayValues>
    <CustomDefinition>BeginPoint ScorecardCell</CustomDefinition>
    <ParameterProviderId>ParameterScorecardCellProvider</ParameterProviderId>
    <DisplayName>Cell</DisplayName>
    <EmitterType>ParameterEmitter</EmitterType>
    <KeyColumn>Key</KeyColumn>
    <ParentKeyColumn>ParentKey</ParentKeyColumn>
    <DisplayColumn>DisplayValue</DisplayColumn>
    <IsDefaultColumn>IsDefault</IsDefaultColumn>
    <DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
    <ParameterUniqueName>c6441909-fc12-4f5f-aaa-8c5d6729e7de</ParameterUniqueName>
    <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
            <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                    <xs:choice minOccurs="0" maxOccurs="unbounded">
                        <xs:element name="ParameterData" msdata:Locale="en-US">
                            <xs:complexType>
                                <xs:sequence>
                                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                                    <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                </xs:sequence>
                            </xs:complexType>
                        </xs:element>
                    </xs:choice>
                </xs:complexType>
            </xs:element>
        </xs:schema>
        <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
    </DisplayValues>
    <CustomDefinition>BeginPoint ScorecardRowMember</CustomDefinition>
    <ParameterProviderId>ParameterScorecardRowMemberProvider</ParameterProviderId>
    <DisplayName>Row Member</DisplayName>
    <EmitterType>ParameterEmitter</EmitterType>
    <KeyColumn>Key</KeyColumn>
    <ParentKeyColumn>ParentKey</ParentKeyColumn>
    <DisplayColumn>DisplayValue</DisplayColumn>
    <IsDefaultColumn>IsDefault</IsDefaultColumn>
    <DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
    <ParameterUniqueName>957d3ae6-c5db-4d06-a432-0f5df8d07ce7</ParameterUniqueName>
    <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
            <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                    <xs:choice minOccurs="0" maxOccurs="unbounded">
                        <xs:element name="ParameterData" msdata:Locale="en-US">
                            <xs:complexType>
                                <xs:sequence>
                                    <xs:element name="Key" type="xs:string" minOccurs="0" />

```

```

        <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
        <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
    </xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint ScorecardColumnMember</CustomDefinition>
<ParameterProviderId>ParameterScorecardColumnMemberProvider</ParameterProviderId>
<DisplayName>Column Member</DisplayName>
<EmitterType>ParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
</BeginPoints>
</GetScorecardResult>
</GetScorecardResponse>
</soap:Body>
</soap:Envelope>

```

### 4.1.3 UpdateScorecard

The protocol client then calls **UpdateScorecard**. The **GridHeaderItem** section with ID set to 2 has been added to the scorecard returned in the **GetScorecard** example.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <UpdateScorecard xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <scorecard Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:10:54"
ContentTypes="PpsScorecard" LastModified="2009-05-21T13:12:24" ModifiedBy="Sample User"
CheckedOutTo="" TemplateType="General"
RendererClassName="Microsoft.PerformancePoint.Scorecards.ServerRendering.ScorecardCtrl,
Microsoft.PerformancePoint.Scorecards.ServerRendering, Version=14.0.0.0, Culture=neutral,
PublicKeyToken=94de004b6e3fcc5">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="MyScorecard" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="2" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/2_.000" ItemType="Scorecard"
ItemGuid="22dd6dc3-247c-43b1-b246-6ab222e9001e" SpSiteCollectionGuid="7d7875a5-583b-419c-

```

```

ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
a268-4cf1-a9fc-76d4b2ddabe0" />
  <ConfiguredViews>
    <ConfiguredView Guid="9bb8d042-eff9-415c-baa4-3d0c5507e441" AllowStatusFilter="true"
AllowFilter="true" AllowSort="true" AllowAnnotations="true" EmptyRowsFilterMode="None"
AllowShowDetails="true" ShowInfoToolTips="false" EnableTextwrap="false"
MaintainMemberLevelDepth="true" AllowDynamicRowMemberExpansion="true"
AllowDynamicColumnMemberExpansion="true" AllowRowDrill="true" AllowColumnDrill="true"
AlwaysShowAnnotationCellFlags="false" ExpandToFitWidth="false" HideScorecard="false"
ShowStatusFiltersByDefault="false">
      <Properties>
        <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Default View" />
        <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
        <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
      </Properties>
    </ConfiguredView>
  </ConfiguredViews>
  <Comments />
  <ToolbarOptions ShowInlineText="true" ShowToolbar="false" ShowPageFilters="true"
ShowRefresh="true" ShowStatusFilter="true" ShowToolTips="true" ShowCollapse="true"
ShowMode="true" ShowPrint="true" ShowExpand="true" ShowCellSelection="false"
AnnotationOnByDefault="true" ShowPageFiltersByDefault="false"
ShowStatusFilterByDefault="false" ShowToolbarItemsLabel="false" ShowDefaultRollup="true"
ShowWorstChildRollup="true" ShowIndicatorCount="true" />
  <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000"
ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
  <GridViewDefinition EmptyCell="" InvalidCell="Error" ShowGridLines="true"
ShowHiddenHeaders="false" ShowMetricHeaders="true" ShowPlusMinus="true">
    <CornerCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
      <BackColor A="0" R="235" G="243" B="255" />
    </CornerCellFormatInfo>
    <RootRowHeader Id="0" Guid="fd56bee3-dba4-400b-99e2-f1e14f5956a3"
DefinitionGuid="fd56bee3-dba4-400b-99e2-f1e14f5956a3" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
      <Children>
        <GridHeaderItem Id="1" Guid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d"
DefinitionGuid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d" DisplayText=""
DimensionName="Scorecard" DimensionValue="/PerformancePoint/Lists/Dashboard Content/1_.000"
HeaderType="Kpi" GroupId="-1" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
          <Children />
          <OverrideIndicatorLocation ItemUrl="" />
          <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/1_.000"
ItemType="Kpi" ItemGuid="87b809c4-bda0-4670-9c5d-3fbcac4102ab"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
          <BpmProperties />
          <TrendIndicatorLocation ItemUrl="" />
        </GridHeaderItem>
      </Children>
    </RootRowHeader>
  </GridViewDefinition>

```

```

    <GridHeaderItem Id="2" Guid="db9f17e1-a0a3-41d6-a492-56240189204d"
DefinitionGuid="db9f17e1-a0a3-41d6-a492-56240189204d" DisplayText="InternetSales"
DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard Content/4_.000"
HeaderType="Kpi" GroupId="-5" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
    <Children />
    <OverrideIndicatorLocation ItemUrl="" />
    <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
    <BpmProperties />
    <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootRowHeader>
<RootColumnHeader Id="0" Guid="09055f3f-77da-4fb0-9482-d434fa95f81c"
DefinitionGuid="09055f3f-77da-4fb0-9482-d434fa95f81c" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
    <Children>
    <GridHeaderItem Id="1" Guid="13c063f8-e3ba-459d-a7f9-526fdc3b29de"
DefinitionGuid="13c063f8-e3ba-459d-a7f9-526fdc3b29de" DisplayText="Actual"
DimensionName="Scorecard Measures" DimensionValue="Actual" HeaderType="KpiActual"
GroupId="-3" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Actual" AggregationType="None">
    <Children />
    <OverrideIndicatorLocation ItemUrl="" />
    <LinkedKpiLocation ItemUrl="" />
    <BpmProperties />
    <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
    <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
    <FilterEmptyRows>false</FilterEmptyRows>
    <Position>NotDisplayed</Position>
    <PositionActual>NotDisplayed</PositionActual>
    <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
    <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
    <Position>Center</Position>
    </IndicatorSettings>
    </TargetSettings>
    <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>

```

```

    <GridHeaderItem Id="2" Guid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f"
    DefinitionGuid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f" DisplayText="Target"
    DimensionName="Scorecard_Measures__" DimensionValue="Target" HeaderType="KpiTarget"
    GroupId="-4" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
    Weight="1" KpiTargetName="Target" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />
      <BpmProperties />
      <TargetSettings ShowValue="true" ShowActualAsTarget="false"
    IgnoreScoreFilter="false">
        <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
    DisplayType="ShowPercent" ShowValue="false" Position="Right" />
        <FilterEmptyRows>false</FilterEmptyRows>
        <Position>Left</Position>
        <PositionActual>NotDisplayed</PositionActual>
        <ScoreSettings ShowValue="false" ScoreType="Normalized"
    RollupType="AverageWeighted" Position="NotDisplayed" />
        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
    ShowBackColor="false">
            <Position>Center</Position>
        </IndicatorSettings>
    </TargetSettings>
        <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
    </Children>
    <OverrideIndicatorLocation ItemUrl="" />
    <LinkedKpiLocation ItemUrl="" />
    <BpmProperties />
    <TrendIndicatorLocation ItemUrl="" />
    </RootColumnHeader>
    <DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
    <DefaultRollupIndicatorLocation ItemUrl="" />
    <CellBorderColor A="255" R="208" G="216" B="229" />
    </GridViewDefinition>
    </ConfiguredView>
    </ConfiguredViews>
    <EndPoints>
      <EndPoint Category="Axis" UniqueName="EndPoint Page" DisplayName="Page"
    AcceptsMultipleFilterLinks="true" />
      <EndPoint Category="Axis" UniqueName="EndPoint Row" DisplayName="Row"
    AcceptsMultipleFilterLinks="false" />
      <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
    AcceptsMultipleFilterLinks="false" />
      <EndPoint Category="Axis" UniqueName="EndPoint TIFormula" DisplayName="TI formula"
    AcceptsMultipleFilterLinks="true" />
      <EndPoint Category="Axis" UniqueName="EndPoint CurrentDate-Time" DisplayName="Current
    date-time" AcceptsMultipleFilterLinks="true" />
    </EndPoints>
    <BeginPoints>
      <ParameterDefinition>
        <ParameterUniqueName>0f6ca5f9-e8d9-4fd9-bf4e-d6aa03f2d745</ParameterUniqueName>
        <DisplayValues>
          <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
    xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
    com:xml-msprop">
            <xs:element name="NewDataSet" msdata:IsDataSet="true"
    msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                  <xs:choice minOccurs="0" maxOccurs="unbounded">
                    <xs:element name="ParameterData" msdata:Locale="en-US">
                      <xs:complexType>

```

```

    <xs:sequence>
      <xs:element name="Key" type="xs:string" minOccurs="0" />
      <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
      <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
      <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
      <xs:element name="KpiId" msprop:NotShowColumnForCondVisibility="True"
msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
      <xs:element name="Name" msprop:NotShowColumnForCondVisibility="True"
msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
      <xs:element name="Description" msprop:NotShowColumnForCondVisibility="True"
msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
      <xs:element name="Person_x0020_Responsible"
msprop:NotShowColumnForCondVisibility="True" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_Kpi</CustomDefinition>
<ParameterProviderId>ParameterScorecardKpiProvider</ParameterProviderId>
<DisplayName>KPI</DisplayName>
<EmitterType>BothAConditionalVisibilityAndParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>c9b6e4c4-4f13-4d17-99b9-1b7f77fafd34</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="ParameterData" msdata:Locale="en-US">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="Key" type="xs:string" minOccurs="0" />
                  <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                  <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                  <xs:element name="CellDisplay" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:element>
    </xs:schema>
    <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
    </DisplayValues>
    <CustomDefinition>BeginPoint_ScorecardCell</CustomDefinition>
    <ParameterProviderId>ParameterScorecardCellProvider</ParameterProviderId>
    <DisplayName>Cell</DisplayName>
    <EmitterType>ParameterEmitter</EmitterType>

```

```

    <KeyColumn>Key</KeyColumn>
    <ParentKeyColumn>ParentKey</ParentKeyColumn>
    <DisplayColumn>DisplayValue</DisplayColumn>
    <IsDefaultColumn>IsDefault</IsDefaultColumn>
    <DefaultPostFormula />
  </ParameterDefinition>
  <ParameterDefinition>
    <ParameterUniqueName>cb138e38-09b0-42e1-8219-b26d3ffba337</ParameterUniqueName>
    <DisplayValues>
      <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
          <xs:complexType>
            <xs:choice minOccurs="0" maxOccurs="unbounded">
              <xs:element name="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                    <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:choice>
          </xs:complexType>
        </xs:element>
      </xs:schema>
      <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
    </DisplayValues>
    <CustomDefinition>BeginPoint_ScorecardRowMember</CustomDefinition>
    <ParameterProviderId>ParameterScorecardRowMemberProvider</ParameterProviderId>
    <DisplayName>Row Member</DisplayName>
    <EmitterType>ParameterEmitter</EmitterType>
    <KeyColumn>Key</KeyColumn>
    <ParentKeyColumn>ParentKey</ParentKeyColumn>
    <DisplayColumn>DisplayValue</DisplayColumn>
    <IsDefaultColumn>IsDefault</IsDefaultColumn>
    <DefaultPostFormula />
  </ParameterDefinition>
  <ParameterDefinition>
    <ParameterUniqueName>fbf44bbb-d222-431b-930a-ac41c9a58127</ParameterUniqueName>
    <DisplayValues>
      <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
          <xs:complexType>
            <xs:choice minOccurs="0" maxOccurs="unbounded">
              <xs:element name="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                    <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:choice>
          </xs:complexType>
        </xs:element>
      </xs:schema>
    </DisplayValues>
  </ParameterDefinition>

```

```

        </xs:choice>
    </xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_ScorecardColumnMember</CustomDefinition>
<ParameterProviderId>ParameterScorecardColumnMemberProvider</ParameterProviderId>
<DisplayName>Column Member</DisplayName>
<EmitterType>ParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
</BeginPoints>
</scorecard>
</UpdateScorecard>
</soap:Body>
</soap:Envelope>

```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <UpdateScorecardResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <UpdateScorecardResult Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:10:54"
ContentTypes="PpsScorecard" LastModified="2009-05-21T15:39:11" ModifiedBy="Sample User"
CheckedOutTo="" TemplateType="General"
RendererClassName="Microsoft.PerformancePoint.Scorecards.ServerRendering.ScorecardCtrl,
Microsoft.PerformancePoint.Scorecards.ServerRendering, Version=14.0.0.0, Culture=neutral,
PublicKeyToken=94de0004b6e3fcc5">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="MyScorecard" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="3" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/2_.000" ItemType="Scorecard"
ItemGuid="22dd6dc3-247c-43b1-b246-6ab222e9001e" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
a268-4cf1-a9fc-76d4b2ddabe0" />
        <ConfiguredViews>
          <ConfiguredView Guid="9bb8d042-ef9-415c-baa4-3d0c5507e441" AllowStatusFilter="true"
AllowFilter="true" AllowSort="true" AllowAnnotations="true" EmptyRowsFilterMode="None"
AllowShowDetails="true" ShowInfoToolTips="false" EnableTextwrap="false"
MaintainMemberLevelDepth="true" AllowDynamicRowMemberExpansion="true"
AllowDynamicColumnMemberExpansion="true" AllowRowDrill="true" AllowColumnDrill="true"
AlwaysShowAnnotationCellFlags="false" ExpandToFitWidth="false" HideScorecard="false"
ShowStatusFiltersByDefault="false">
            <Properties>
              <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Default View" />

```

```

    <BpmProperty xsi:type="BpmPropertyLongText"
    UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
    Description="Description Description" Required="false" Visible="true" Text="" />
    <BpmProperty xsi:type="BpmPropertyUser"
    UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
    Description="Person Responsible Description" Required="false" Visible="true" Login="" />
  </Properties>
  <Comments />
  <ToolbarOptions ShowInlineText="true" ShowToolbar="false" ShowPageFilters="true"
  ShowRefresh="true" ShowStatusFilter="true" ShowToolTips="true" ShowCollapse="true"
  ShowMode="true" ShowPrint="true" ShowExpand="true" ShowCellSelection="false"
  AnnotationOnByDefault="true" ShowPageFiltersByDefault="false"
  ShowStatusFilterByDefault="false" ShowToolbarItemsLabel="false" ShowDefaultRollup="true"
  ShowWorstChildRollup="true" ShowIndicatorCount="true" />
  <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000"
  ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
  SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
  9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
  <GridViewDefinition EmptyCell="" InvalidCell="Error" ShowGridLines="true"
  ShowHiddenHeaders="false" ShowMetricHeaders="true" ShowPlusMinus="true">
    <CornerCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
    HorizontalAlignment="Center">
      <BackColor A="0" R="235" G="243" B="255" />
    </CornerCellFormatInfo>
    <RootRowHeader Id="0" Guid="fd56bee3-dba4-400b-99e2-f1e14f5956a3"
    DefinitionGuid="fd56bee3-dba4-400b-99e2-f1e14f5956a3" DisplayText="" HeaderType="None"
    GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
    Weight="1" AggregationType="None">
      <Children>
        <GridHeaderItem Id="1" Guid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d"
        DefinitionGuid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d" DisplayText=""
        DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard Content/1_.000"
        HeaderType="Kpi" GroupId="-1" Depth="0" LevelDepth="0" DescendantSpan="0" LeafSpan="0"
        IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
        IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
        MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
        IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
        NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
        IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
        Weight="1" AggregationType="None">
          <Children />
          <OverrideIndicatorLocation ItemUrl="" />
          <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/1_.000"
          ItemType="Kpi" ItemGuid="87b809c4-bda0-4670-9c5d-3fbcac4102ab"
          SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
          9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
          <BpmProperties />
          <TrendIndicatorLocation ItemUrl="" />
        </GridHeaderItem>
        <GridHeaderItem Id="2" Guid="db9f17e1-a0a3-41d6-a492-56240189204d"
        DefinitionGuid="db9f17e1-a0a3-41d6-a492-56240189204d" DisplayText="InternetSales"
        DimensionName="Scorecard " DimensionValue="/PerformancePoint/Lists/Dashboard Content/4 .000"
        HeaderType="Kpi" GroupId="-5" Depth="0" LevelDepth="0" DescendantSpan="0" LeafSpan="0"
        IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
        IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
        MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
        IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
        NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
        IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
        Weight="1" AggregationType="None">
          <Children />
          <OverrideIndicatorLocation ItemUrl="" />

```

```

    <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
    ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
    SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
    9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
    <BpmProperties />
    <TrendIndicatorLocation ItemUrl="" />
  </GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootRowHeader>
<RootColumnHeader Id="0" Guid="09055f3f-77da-4fb0-9482-d434fa95f81c"
DefinitionGuid="09055f3f-77da-4fb0-9482-d434fa95f81c" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children>
    <GridHeaderItem Id="1" Guid="13c063f8-e3ba-459d-a7f9-526fdc3b29de"
    DefinitionGuid="13c063f8-e3ba-459d-a7f9-526fdc3b29de" DisplayText="Actual"
    DimensionName="Scorecard_Measures__" DimensionValue="Actual" HeaderType="KpiActual"
    GroupId="-3" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
    Weight="1" KpiTargetName="Actual" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />
      <BpmProperties />
      <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
        <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
        <FilterEmptyRows>false</FilterEmptyRows>
        <Position>NotDisplayed</Position>
        <PositionActual>NotDisplayed</PositionActual>
        <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
          <Position>Center</Position>
        </IndicatorSettings>
      </TargetSettings>
      <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
    <GridHeaderItem Id="2" Guid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f"
    DefinitionGuid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f" DisplayText="Target"
    DimensionName="Scorecard Measures " DimensionValue="Target" HeaderType="KpiTarget"
    GroupId="-4" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
    Weight="1" KpiTargetName="Target" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />

```

```

        <BpmProperties />
        <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
            <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right" />
            <FilterEmptyRows>false</FilterEmptyRows>
            <Position>Left</Position>
            <PositionActual>NotDisplayed</PositionActual>
            <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
            <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
                <Position>Center</Position>
            </IndicatorSettings>
        </TargetSettings>
        <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
<DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
<DefaultRollupIndicatorLocation ItemUrl="" />
<CellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>
</ConfiguredView>
</ConfiguredViews>
<EndPoints>
    <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
date-time" AcceptsMultipleFilterLinks="true" />
</EndPoints>
<BeginPoints>
    <ParameterDefinition>
        <ParameterUniqueName>0f6ca5f9-e8d9-4fd9-bf4e-d6aa03f2d745</ParameterUniqueName>
        <DisplayValues>
            <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
                <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                    <xs:complexType>
                        <xs:choice minOccurs="0" maxOccurs="unbounded">
                            <xs:element name="ParameterData" msdata:Locale="en-US">
                                <xs:complexType>
                                    <xs:sequence>
                                        <xs:element name="Key" type="xs:string" minOccurs="0" />
                                        <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                                        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                                        <xs:element name="KpiId" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                        <xs:element name="Name" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                        <xs:element name="Description" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                        <xs:element name="Person_x0020_Responsible" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />

```

```

        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint Kpi</CustomDefinition>
<ParameterProviderId>ParameterScorecardKpiProvider</ParameterProviderId>
<DisplayName>KPI</DisplayName>
<EmitterType>BothAConditionalVisibilityAndParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>c9b6e4c4-4f13-4d17-99b9-1b7f77fafd34</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="ParameterData" msdata:Locale="en-US">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="Key" type="xs:string" minOccurs="0" />
                  <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                  <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                  <xs:element name="CellDisplay" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:element>
    </xs:schema>
    <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
  </DisplayValues>
  <CustomDefinition>BeginPoint_ScorecardCell</CustomDefinition>
  <ParameterProviderId>ParameterScorecardCellProvider</ParameterProviderId>
  <DisplayName>Cell</DisplayName>
  <EmitterType>ParameterEmitter</EmitterType>
  <KeyColumn>Key</KeyColumn>
  <ParentKeyColumn>ParentKey</ParentKeyColumn>
  <DisplayColumn>DisplayValue</DisplayColumn>
  <IsDefaultColumn>IsDefault</IsDefaultColumn>
  <DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>cb138e38-09b0-42e1-8219-b26d3ffba337</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>

```

```

    <xs:choice minOccurs="0" maxOccurs="unbounded">
      <xs:element name="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="Key" type="xs:string" minOccurs="0" />
            <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
            <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
            <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
            <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:choice>
  </xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_ScorecardRowMember</CustomDefinition>
<ParameterProviderId>ParameterScorecardRowMemberProvider</ParameterProviderId>
<DisplayName>Row Member</DisplayName>
<EmitterType>ParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>fbf44bbb-d222-431b-930a-ac41c9a58127</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="ParameterData" msdata:Locale="en-US">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="Key" type="xs:string" minOccurs="0" />
                  <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                  <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                  <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:schema>
      <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_ScorecardColumnMember</CustomDefinition>
<ParameterProviderId>ParameterScorecardColumnMemberProvider</ParameterProviderId>
<DisplayName>Column Member</DisplayName>
<EmitterType>ParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>

```

```

    <DefaultPostFormula />
  </ParameterDefinition>
</BeginPoints>
</UpdateScorecardResult>
</UpdateScorecardResponse>
</soap:Body>
</soap:Envelope>

```

#### 4.1.4 GenerateView

The protocol client then calls **GenerateView** to get the scorecard result data set.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GenerateView xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <scorecardLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/8_.000" />
      <propertyBags>
        <Keys />
        <Values />
      </propertyBags>
    </GenerateView>
  </soap:Body>
</soap:Envelope>

```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GenerateViewResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <GenerateViewResult ScorecardViewId="7675ef55-d456-469e-9381-8c1eddd94c1d"
Cached="false" DefaultRollupIndicatorId="00000000-0000-0000-0000-000000000000"
EmptyCell="" InvalidCell="Error" TIFormula="" TICurrentDateTime="">
      <Cells>
        <Table>
          <Keys>
            <string>/PerformancePoint/Lists/Dashboard
Content/4_.000:/PerformancePoint/Lists/Dashboard Content/4_.0001_Actual:Actual1_</string>
            <string>/PerformancePoint/Lists/Dashboard
Content/4_.000:/PerformancePoint/Lists/Dashboard Content/4_.0001_Target:Target2_</string>
            <string>Actual:Actual1 </string>
            <string>Target:Target2_</string>
          </Keys>
          <Values>
            <GridCell Value="29358677.2207" ActualValue="29358677.2207" Score="0" Weight="1"
BestChildScore="0" WorstChildScore="0" IsValueInError="false" HasAnnotation="false"
IsRollupScore="false" ValueSource="SourceData" IsValidScore="true">
              <Properties>
                <Keys />
                <Values />
              </Properties>
              <DisplayElements>
                <GridDisplayElement xsi:type="GridDisplayElementActual" Status="0"
Value="29358677.2207" OverrideValue="29358677.2207">
                  <Text>$29,358,677.22</Text>
                  <TooltipText />
                </GridDisplayElement>

```

```

        </DisplayElements>
        <IndicatorLocation ItemUrl="" />
        <InBand>-1</InBand>
    </GridCell>
    <GridCell Value="1" ActualValue="29358677.2207" Score="100" Weight="1"
    BestChildScore="100" WorstChildScore="100" IsValueInError="false" HasAnnotation="false"
    IsRollupScore="false" ValueSource="SourceData" IsValidScore="true">
        <Properties>
            <Keys />
            <Values />
        </Properties>
        <DisplayElements>
            <GridDisplayElement xsi:type="GridDisplayElementTarget" Status="0" Value="1"
    OverrideValue="1">
                <Text>1</Text>
                <TooltipText />
            </GridDisplayElement>
            <GridDisplayElement xsi:type="GridDisplayElementIndicator" Status="0"
    IndicatorBand="3">
                <Text>On Target</Text>
                <TooltipText>On Target</TooltipText>
                <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_.000" />
            </GridDisplayElement>
            <GridDisplayElement xsi:type="GridDisplayElementVariance" Status="0"
    Value="29358676.2207" OverrideValue="2935867622">
                <Text>2,935,867,622%</Text>
                <TooltipText />
            </GridDisplayElement>
        </DisplayElements>
        <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_.000" />
        <InBand>3</InBand>
    </GridCell>
    <GridCell Value="0" ActualValue="0" Score="0" Weight="1" BestChildScore="0"
    WorstChildScore="0" IsValueInError="false" HasAnnotation="false" IsRollupScore="false"
    ValueSource="Default" IsValidScore="true">
        <Properties>
            <Keys />
            <Values />
        </Properties>
        <DisplayElements />
        <IndicatorLocation ItemUrl="" />
        <InBand>-1</InBand>
    </GridCell>
    <GridCell Value="0" ActualValue="0" Score="0" Weight="1" BestChildScore="0"
    WorstChildScore="0" IsValueInError="false" HasAnnotation="false" IsRollupScore="false"
    ValueSource="Default" IsValidScore="true">
        <Properties>
            <Keys />
            <Values />
        </Properties>
        <DisplayElements />
        <IndicatorLocation ItemUrl="" />
        <InBand>-1</InBand>
    </GridCell>
</Values>
</Table>
</Cells>
<RootRowHeader Id="0" Guid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f"
    DefinitionGuid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f" DisplayText="" HeaderType="None"
    GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="1" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
    Weight="1" AggregationType="None">
    <Children>

```

```

    <GridHeaderItem Id="1" Guid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3"
    DefinitionGuid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3" DisplayText="InternetSales"
    DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard
    Content/4_000" HeaderType="Kpi" GroupId="-4" Depth="1" LevelDepth="0" DescendantSpan="0"
    LeafSpan="1" IsCollapsed="false" IsDynamicCellExpansionEnabled="false"
    IsDrillEnabled="false" IsDrillDownDisabled="false" IsDrillUpDisabled="false"
    IsDynamicallyExpandedHeader="false" MaintainMemberLevelDepth="false" IsCellHidden="false"
    IsPathHidden="false" IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false"
    IsNamedSetEmpty="false" NamedSetType="None" UseLinkedElementDisplayText="true"
    ShowHyperlinkInNewWindow="false" IsHierarchyHeader="false" IsColumnHeader="false"
    AppendFilterInfoToHyperlink="false" Weight="1" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_000"
    ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
    SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-
    4602-9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
      <BpmProperties />
      <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
  </Children>
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="" />
  <BpmProperties />
  <TrendIndicatorLocation ItemUrl="" />
</RootRowHeader>
<RootColumnHeader Id="0" Guid="ab5c8048-cae2-4054-88bb-917449fda92e"
DefinitionGuid="ab5c8048-cae2-4054-88bb-917449fda92e" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children>
    <GridHeaderItem Id="1" Guid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5"
    DefinitionGuid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5" DisplayText="Actual"
    DimensionName="Scorecard Measures " DimensionValue="Actual" HeaderType="KpiActual"
    GroupId="-2" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1"
    IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
    IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
    Weight="1" KpiTargetName="Actual" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />
      <BpmProperties />
      <TargetSettings ShowValue="true" ShowActualAsTarget="false"
    IgnoreScoreFilter="false">
        <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
    DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
        <FilterEmptyRows>false</FilterEmptyRows>
        <Position>NotDisplayed</Position>
        <PositionActual>NotDisplayed</PositionActual>
        <ScoreSettings ShowValue="false" ScoreType="Normalized"
    RollupType="AverageWeighted" Position="NotDisplayed" />
        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
    ShowBackColor="false">
            <Position>Center</Position>
        </IndicatorSettings>
      </TargetSettings>
      <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
  </Children>

```

```

    <GridHeaderItem Id="2" Guid="a6d178eb-68d9-430a-a3ba-0b4cbef77511"
DefinitionGuid="a6d178eb-68d9-430a-a3ba-0b4cbef77511" DisplayText="Target"
DimensionName="Scorecard_Measures__" DimensionValue="Target" HeaderType="KpiTarget"
GroupId="-3" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Target" AggregationType="None">
    <Children />
    <OverrideIndicatorLocation ItemUrl="" />
    <LinkedKpiLocation ItemUrl="" />
    <BpmProperties />
    <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
    <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right" />
    <FilterEmptyRows>false</FilterEmptyRows>
    <Position>Left</Position>
    <PositionActual>NotDisplayed</PositionActual>
    <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
    <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
    <Position>Center</Position>
    </IndicatorSettings>
    </TargetSettings>
    <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
<ScorecardLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/8_.000"
ItemType="Scorecard" ItemGuid="cb692449-f20e-4809-9ee3-e012c78f026e"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-
4602-9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
<DefaultRollupIndicatorLocation ItemUrl="" />
<PreQueryTransforms>
<GridViewTransformReference Id="ExpandNamedSets">
<Parameters>
<Keys />
<Values />
</Parameters>
</GridViewTransformReference>
<GridViewTransformReference Id="MemberTransforms">
<Parameters>
<Keys />
<Values />
</Parameters>
</GridViewTransformReference>
<GridViewTransformReference Id="UpdateDisplayText">
<Parameters>
<Keys />
<Values />
</Parameters>
</GridViewTransformReference>
</PreQueryTransforms>
<PostQueryTransforms>
<GridViewTransformReference Id="AnnotationTransform">
<Parameters>
<Keys />
<Values />
</Parameters>
</GridViewTransformReference>

```

```

</PostQueryTransforms>
<PreRenderTransforms>
  <GridViewTransformReference Id="ComputeAggregations">
    <Parameters>
      <Keys />
      <Values />
    </Parameters>
  </GridViewTransformReference>
  <GridViewTransformReference Id="ComputeRollups">
    <Parameters>
      <Keys />
      <Values />
    </Parameters>
  </GridViewTransformReference>
  <GridViewTransformReference Id="FilterEmptyRows">
    <Parameters>
      <Keys />
      <Values />
    </Parameters>
  </GridViewTransformReference>
</PreRenderTransforms>
<PerUserTransforms />
<PageFilters />
</GenerateViewResult>
</GenerateViewResponse>
</soap:Body>
</soap:Envelope>

```

#### 4.1.5 DeleteScorecard

The protocol client then calls **DeleteScorecard** to delete the scorecard.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <DeleteScorecard xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <location ItemUrl="/PerformancePoint/Lists/Dashboard Content/2_.000" ItemType="Scorecard"
        ItemGuid="22dd6dc3-247c-43b1-b246-6ab222e9001e" SpSiteCollectionGuid="7d7875a5-583b-419c-
        ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7ald-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
        a268-4cf1-a9fc-76d4b2ddabe0" />
    </DeleteScorecard>
  </soap:Body>
</soap:Envelope>

```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <DeleteScorecardResponse xmlns="http://www.microsoft.com/performancepoint/scorecards" />
  </soap:Body>
</soap:Envelope>

```

## 4.2 Create and Use a DataSource

This scenario involves the creation of a **DataSource** complex type (section [2.2.4.85](#)). The protocol client creates a **DataSource**, tests connectivity to that **DataSource**, and retrieves **dimension** data from the **DataSource**.

It is assumed that an analysis **server (2)** (cubes3) exists with a database (Adventure Works DW) and a **cube** (Adventure Works).

### 4.2.1 CreateDataSource

The protocol client calls the **CreateDataSource** operation (section [3.1.4.3](#)) to create a new **DataSource** complex type (section [2.2.4.85](#)).

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateDataSource xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <listUrl>/PerformancePoint/Data Sources</listUrl>
      <dataSource Folder="" CreatedBy="" CreatedDate="2009-05-21T12:59:13"
ContentName="PpsDataSource" LastModified="0001-01-01T00:00:00" ModifiedBy="" CheckedOutTo=""
SourceName="ADOMD.NET" ServerName="cubes3" DatabaseName="Adventure Works DW"
CubeName="Adventure Works" CubeDisplayName="Adventure Works" FormattingDimensionName=""
FormattingDimensionDisplayName="" FormattingDimensionType="Other" ConnectionString=""
Roles="" UseConnectionString="false" ConnectionContext="ConnectAsSharedUser"
PassUserNameAsAdomdCustomData="false" ReadOnly="false" MinutesToCache="10"
ServerMajorVersion="0" SubTypeId="ADOMD.NET">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="New Data Source" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="0" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Data Sources" />
        <Variables />
        <CustomTimeIntelligenceSettings>&lt;?xml version="1.0" encoding="utf-16"?&gt;
&lt;TimeIntelligenceMdxSettings xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"&gt;
          &lt;Enabled&gt;true&lt;/Enabled&gt;
          &lt;ReferenceLevel&gt;None&lt;/ReferenceLevel&gt;
          &lt;ReferenceDateTime&gt;0001-01-01T00:00:00&lt;/ReferenceDateTime&gt;
          &lt;LevelBindings /&gt;
        &lt;/TimeIntelligenceMdxSettings&gt;</CustomTimeIntelligenceSettings>
        <DataTableMapping DateAggregationType="Year" CalendarStartMonth="0">
          <ColumnMappings />
        </DataTableMapping>
      </dataSource>
    </CreateDataSource>
  </soap:Body>
</soap:Envelope>
```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateDataSourceResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <CreateDataSourceResult Folder="" CreatedBy="REDMOND\sbishel" CreatedDate="2009-05-21T12:59:34" ContentType="PpsDataSource" LastModified="2009-05-21T12:59:42"
ModifiedBy="REDMOND\sbishel" CheckedOutTo="" SourceName="ADOMD.NET" ServerName=""
DatabaseName="" CubeName="" CubeDisplayName="" FormattingDimensionName=""
FormattingDimensionDisplayName="" FormattingDimensionType="Other" ConnectionString=""
Roles="" UseConnectionString="false" ConnectionContext="ConnectAsSharedUser"
PassUserNameAsAdomdCustomData="false" ReadOnly="false" MinutesToCache="10"
ServerMajorVersion="0" SubTypeId="ADOMD.NET">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc Element Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="New Data Source" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc Element Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc Element Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="1" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Data Sources/1_000" ItemType="DataSource"
ItemGuid="37f08ea5-2f7c-4eda-9085-f1858f065447" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7ald-4602-9a4c-69695440dca4" SpListGuid="d5f0d9e4-
7473-4845-820a-920dedeb0593" />
        <Variables />
        <CustomTimeIntelligenceSettings>&lt;?xml version="1.0" encoding="utf-16"?&gt;
&lt;TimeIntelligenceMdxSettings xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"&gt;
  &lt;Enabled&gt;true&lt;/Enabled&gt;
  &lt;ReferenceLevel&gt;None&lt;/ReferenceLevel&gt;
  &lt;ReferenceDateTime&gt;0001-01-01T00:00:00&lt;/ReferenceDateTime&gt;
  &lt;LevelBindings /&gt;
&lt;/TimeIntelligenceMdxSettings&gt;</CustomTimeIntelligenceSettings>
        <DataTableMapping DateAggregationType="Year" CalendarStartMonth="0">
          <ColumnMappings />
        </DataTableMapping>
      </CreateDataSourceResult>
    </CreateDataSourceResponse>
  </soap:Body>
</soap:Envelope>

```

## 4.2.2 TestDataSource

The protocol client calls **TestDataSource** to test connectivity to the data source.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <TestConnection xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSource Folder="" CreatedBy="REDMOND\sbishel" CreatedDate="2009-05-21T12:59:13"
ContentType="PpsDataSource" LastModified="2009-05-21T13:12:09" ModifiedBy="REDMOND\sbishel"
CheckedOutTo="" SourceName="ADOMD.NET" ServerName="cubes3" DatabaseName="Adventure Works DW"
CubeName="Adventure Works" CubeDisplayName="Adventure Works" FormattingDimensionName=""
FormattingDimensionDisplayName="" FormattingDimensionType="Other" ConnectionString=""
Roles="" UseConnectionString="false" ConnectionContext="ConnectAsSharedUser"

```

```

PassUserNameAsAdomdCustomData="false" ReadOnly="false" MinutesToCache="10"
ServerMajorVersion="9" SubTypeId="ADOMD.NET">
  <Properties>
    <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="AdventureWorks" />
    <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
    <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
  </Properties>
  <Comments />
  <Version Major="3" Minor="0" />
  <Location ItemUrl="/PerformancePoint/Data Sources/1 .000" ItemType="DataSource"
ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="d5f0d9e4-
7473-4845-820a-920dedeb0593" />
  <Variables />
  <CustomTimeIntelligenceSettings>&lt;?xml version="1.0" encoding="utf-16"?&gt;
&lt;TimeIntelligenceMdxSettings xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"&gt;
  &lt;Enabled&gt;true&lt;/Enabled&gt;
  &lt;ReferenceLevel&gt;None&lt;/ReferenceLevel&gt;
  &lt;ReferenceDateTime&gt;0001-01-01T00:00:00&lt;/ReferenceDateTime&gt;
  &lt;LevelBindings /&gt;
&lt;/TimeIntelligenceMdxSettings&gt;</CustomTimeIntelligenceSettings>
  <DataTableMapping DateAggregationType="Year" CalendarStartMonth="0">
    <ColumnMappings />
  </DataTableMapping>
</dataSource>
</TestConnection>
</soap:Body>
</soap:Envelope>

```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <TestConnectionResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <TestConnectionResult>true</TestConnectionResult>
    </TestConnectionResponse>
  </soap:Body>
</soap:Envelope>

```

### 4.2.3 GetDimensions

The protocol client now calls **GetDimensions** to retrieve the available **dimensions** from the data source.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetDimensions xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1 .000" />
    </GetDimensions>
  </soap:Body>
</soap:Envelope>

```

```
</soap:Body>
</soap:Envelope>
```

The **server (2)** responds with the following (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetDimensionsFromDataSourceResponse
xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <GetDimensionsFromDataSourceResult>
        <Dimension DisplayName="Account.Account" UniqueName="[Account].[Account]" Description=""
IsMeasureDimension="false" DefaultMemberName="[Account].[Account].[All Accounts]">
          <MeasureGroupNames />
          <Type>Unknown</Type>
          <Hierarchies />
          <Levels>
            <Level DisplayName="(All)" UniqueName="[Account].[Account].[All]" Description=""
DimensionUniqueName="[Account].[Account]" IsAllLevel="true" LevelNumber="0" />
            <Level DisplayName="Account" UniqueName="[Account].[Account].[Account]" Description=""
DimensionUniqueName="[Account].[Account]" IsAllLevel="false" LevelNumber="1" />
          </Levels>
        </Dimension>
        <Dimension DisplayName="Account.Account Number" UniqueName="[Account].[Account Number]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Account].[Account Number].[All
Accounts]">
          <MeasureGroupNames />
          <Type>Unknown</Type>
          <Hierarchies />
          <Levels>
            <Level DisplayName="(All)" UniqueName="[Account].[Account Number].[All]"
Description="" DimensionUniqueName="[Account].[Account Number]" IsAllLevel="true"
LevelNumber="0" />
            <Level DisplayName="Account Number" UniqueName="[Account].[Account Number].[Account
Number]" Description="" DimensionUniqueName="[Account].[Account Number]" IsAllLevel="false"
LevelNumber="1" />
          </Levels>
        </Dimension>
        <Dimension DisplayName="Account.Account Type" UniqueName="[Account].[Account Type]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Account].[Account Type].[All
Accounts]">
          <MeasureGroupNames />
          <Type>Unknown</Type>
          <Hierarchies />
          <Levels>
            <Level DisplayName="(All)" UniqueName="[Account].[Account Type].[All]" Description=""
DimensionUniqueName="[Account].[Account Type]" IsAllLevel="true" LevelNumber="0" />
            <Level DisplayName="Account Type" UniqueName="[Account].[Account Type].[Account Type]"
Description="" DimensionUniqueName="[Account].[Account Type]" IsAllLevel="false"
LevelNumber="1" />
          </Levels>
        </Dimension>
        <Dimension DisplayName="Account.Accounts" UniqueName="[Account].[Accounts]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Account].[Accounts].&[47]">
          <MeasureGroupNames />
          <Type>Unknown</Type>
          <Hierarchies />
          <Levels>
            <Level DisplayName="Account Level 01" UniqueName="[Account].[Accounts].[Account Level
01]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="0" />
            <Level DisplayName="Account Level 02" UniqueName="[Account].[Accounts].[Account Level
02]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="1" />
          </Levels>
        </Dimension>
      </GetDimensionsFromDataSourceResult>
    </GetDimensionsFromDataSourceResponse>
  </soap:Body>
</soap:Envelope>
```

```

    <Level DisplayName="Account Level 03" UniqueName="[Account].[Accounts].[Account Level
03]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="2" />
    <Level DisplayName="Account Level 04" UniqueName="[Account].[Accounts].[Account Level
04]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="3" />
    <Level DisplayName="Account Level 05" UniqueName="[Account].[Accounts].[Account Level
05]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="4" />
    <Level DisplayName="Account Level 06" UniqueName="[Account].[Accounts].[Account Level
06]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="5" />
  </Levels>
</Dimension>
<Dimension DisplayName="Geography.Country" UniqueName="[Geography].[Country]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[Country].[All
Geographies]">
  <MeasureGroupNames />
  <Type>Unknown</Type>
  <Hierarchies />
  <Levels>
    <Level DisplayName="(All)" UniqueName="[Geography].[Country].[All]" Description=""
DimensionUniqueName="[Geography].[Country]" IsAllLevel="true" LevelNumber="0" />
    <Level DisplayName="Country" UniqueName="[Geography].[Country].[Country]"
Description="" DimensionUniqueName="[Geography].[Country]" IsAllLevel="false" LevelNumber="1"
/>
  </Levels>
</Dimension>
<Dimension DisplayName="Geography.Geography" UniqueName="[Geography].[Geography]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[Geography].[All
Geographies]">
  <MeasureGroupNames />
  <Type>Unknown</Type>
  <Hierarchies />
  <Levels>
    <Level DisplayName="(All)" UniqueName="[Geography].[Geography].[All]" Description=""
DimensionUniqueName="[Geography].[Geography]" IsAllLevel="true" LevelNumber="0" />
    <Level DisplayName="Country" UniqueName="[Geography].[Geography].[Country]"
Description="" DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false"
LevelNumber="1" />
    <Level DisplayName="State-Province" UniqueName="[Geography].[Geography].[State-
Province]" Description="" DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false"
LevelNumber="2" />
    <Level DisplayName="City" UniqueName="[Geography].[Geography].[City]" Description=""
DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false" LevelNumber="3" />
    <Level DisplayName="Postal Code" UniqueName="[Geography].[Geography].[Postal Code]"
Description="" DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false"
LevelNumber="4" />
  </Levels>
</Dimension>
<Dimension DisplayName="Geography.Postal Code" UniqueName="[Geography].[Postal Code]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[Postal Code].[All
Geographies]">
  <MeasureGroupNames />
  <Type>Unknown</Type>
  <Hierarchies />
  <Levels>
    <Level DisplayName="(All)" UniqueName="[Geography].[Postal Code].[All]"
Description="" DimensionUniqueName="[Geography].[Postal Code]" IsAllLevel="true"
LevelNumber="0" />
    <Level DisplayName="Postal Code" UniqueName="[Geography].[Postal Code].[Postal Code]"
Description="" DimensionUniqueName="[Geography].[Postal Code]" IsAllLevel="false"
LevelNumber="1" />
  </Levels>
</Dimension>
<Dimension DisplayName="Geography.State-Province" UniqueName="[Geography].[State-
Province]" Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[State-
Province].[All Geographies]">
  <MeasureGroupNames />

```

```

    <Type>Unknown</Type>
    <Hierarchies />
    <Levels>
      <Level DisplayName="(All)" UniqueName="[Geography].[State-Province].[All]"
Description="" DimensionUniqueName="[Geography].[State-Province]" IsAllLevel="true"
LevelNumber="0" />
      <Level DisplayName="State-Province" UniqueName="[Geography].[State-Province].[State-
Province]" Description="" DimensionUniqueName="[Geography].[State-Province]"
IsAllLevel="false" LevelNumber="1" />
    </Levels>
  </Dimension>
</GetDimensionsFromDataSourceResult>
</GetDimensionsFromDataSourceResponse>
</soap:Body>
</soap:Envelope>

```

#### 4.2.4 QueryDimensionRootMembersFromDataSource

The protocol client calls **QueryDimensionRootMembers** to retrieve the root members from the "Country" level of the "Geography" **dimension**.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryDimensionRootMembers
xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_000" />
      <dimensionName>[Geography].[Country]</dimensionName>
    </QueryDimensionRootMembers>
  </soap:Body>
</soap:Envelope>

```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryDimensionRootMembersFromDataSourceResponse
xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <QueryDimensionRootMembersFromDataSourceResult>
        <Member Caption="All Geographies" UniqueName="[Geography].[Country].[All Geographies]"
LevelName="[Geography].[Country].[All]" DimensionName="Geography.Country" LevelDepth="0"
ChildCount="6" IsChildCountReal="false" IsAllLevel="true"
DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
      </QueryDimensionRootMembersFromDataSourceResult>
    </QueryDimensionRootMembersFromDataSourceResponse>
  </soap:Body>
</soap:Envelope>

```

#### 4.2.5 QueryChildMembersFromDataSource

The protocol client calls **QueryChildMembers** to retrieve the **child** members from the "All Geographies" member of the "Country" level of the "Geography" **dimension**.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryChildMembers xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_000" />
      <memberUniqueName>[Geography].[Country].[All Geographies]</memberUniqueName>
    </QueryChildMembers>
  </soap:Body>
</soap:Envelope>

```

The **server (2)** responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryChildMembersFromDataSourceResponse
xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <QueryChildMembersFromDataSourceResult>
        <Member Caption="Australia" UniqueName="[Geography].[Country].&[Australia]"
LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="Canada" UniqueName="[Geography].[Country].&[Canada]"
LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="France" UniqueName="[Geography].[Country].&[France]"
LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="Germany" UniqueName="[Geography].[Country].&[Germany]"
LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="United Kingdom" UniqueName="[Geography].[Country].&[United Kingdom]"
LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="United States" UniqueName="[Geography].[Country].&[United States]"
LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
      </QueryChildMembersFromDataSourceResult>
    </QueryChildMembersFromDataSourceResponse>
  </soap:Body>
</soap:Envelope>

```

## 5 Security

### 5.1 Security Considerations for Implementers

**Secure Sockets Layer (SSL)** is required to securely implement this protocol. The protocol exposes **data sources (1)** to potential tampering or data disclosure without SSL.

The security permissions for all [FirstClassElement](#) objects are based on the **list (1)** containing the object.

The security permissions for a [TempReportView](#) or [Annotation](#) are inherited from the parent FirstClassElement objects.

### 5.2 Index of Security Parameters

None.

Preliminary

## 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:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
xmlns:s1="http://microsoft.com/wsdl/types/"
xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema xmlns:qdata="http://performancepoint.microsoft.com/OLAPQueryData"
xmlns:query="http://schemas.microsoft.com/performancepoint/2007/03/query"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards">
      <xs:import namespace="http://microsoft.com/wsdl/types/" />
      <xs:import namespace="http://www.w3.org/2001/XMLSchema" />
      <xs:element name="CreateDataSource">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:complexType name="DataSource">
        <xs:complexContent mixed="false">
          <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
              <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
              <xs:element minOccurs="0" maxOccurs="1" name="CustomTimeIntelligenceSettings"
type="xs:string"/>
              <xs:element minOccurs="0" maxOccurs="1" name="DataTableMapping"
type="tns:DataTableMapping"/>
            </xs:sequence>
            <xs:attribute name="SourceName" type="xs:string"/>
            <xs:attribute name="ServerName" type="xs:string"/>
            <xs:attribute name="DatabaseName" type="xs:string"/>
            <xs:attribute name="CubeName" type="xs:string"/>
            <xs:attribute name="CubeDisplayName" type="xs:string"/>
            <xs:attribute name="FormattingDimensionName" type="xs:string"/>
            <xs:attribute name="FormattingDimensionDisplayName" type="xs:string"/>
            <xs:attribute name="FormattingDimensionType" type="tns:DimensionTypeEnum"
use="required"/>
            <xs:attribute name="ConnectionString" type="xs:string"/>
            <xs:attribute name="Roles" type="xs:string"/>
            <xs:attribute name="UseConnectionString" type="xs:boolean" use="required"/>
            <xs:attribute name="ConnectionContext" type="tns:ConnectionContext"
use="required"/>
            <xs:attribute name="PassUserNameAsAdomdCustomData" type="xs:boolean"
use="required"/>
            <xs:attribute name="ReadOnly" type="xs:boolean" use="required"/>
            <xs:attribute name="MinutesToCache" type="xs:int" use="required"/>
            <xs:attribute name="ServerMajorVersion" type="xs:int" use="required"/>
            <xs:attribute name="SubTypeId" type="xs:string"/>
            <xs:attribute name="TargetApplicationId" type="xs:string"/>
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="FirstClassElement" abstract="true">
        <xs:complexContent mixed="false">
          <xs:extension base="tns:Element">
            <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="Version"
type="tns:ElementVersion"/>

        <xs:element minOccurs="0" maxOccurs="1" name="Location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
    <xs:attribute name="Folder" type="xs:string"/>
    <xs:attribute name="CreatedBy" type="xs:string"/>
    <xs:attribute name="CreatedDate" type="xs:dateTime" use="required"/>
    <xs:attribute name="ContentType" type="tns:FCOContentType" use="required"/>
    <xs:attribute name="LastModified" type="xs:dateTime" use="required"/>
    <xs:attribute name="ModifiedBy" type="xs:string"/>
    <xs:attribute name="CheckedOutTo" type="xs:string"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="Element" abstract="true">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Properties"
type="tns:ArrayOfBpmProperty"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Comments" type="tns:ArrayOfComment"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfBpmProperty">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="BpmProperty" nillable="true"
type="tns:BpmProperty"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="BpmProperty" abstract="true">
    <xs:attribute name="UniqueName" type="xs:string"/>
    <xs:attribute name="DisplayName" type="xs:string"/>
    <xs:attribute name="Description" type="xs:string"/>
    <xs:attribute name="Required" type="xs:boolean" use="required"/>
    <xs:attribute name="Visible" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="BpmPropertyUser">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmProperty">
            <xs:attribute name="Login" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyLinkBase">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmProperty">
            <xs:attribute name="Hyperlink" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyHyperlink">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmPropertyLinkBase"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyHyperlink2">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmPropertyLinkBase"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyDate">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmProperty">
            <xs:attribute name="Date" type="xs:dateTime" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyLongText">
    <xs:complexContent mixed="false">

```

```

        <xs:extension base="tns:BpmProperty">
            <xs:attribute name="Text" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyText">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmProperty">
            <xs:attribute name="Text" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyDecimal">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmProperty">
            <xs:attribute name="Decimal" type="xs:decimal" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyList">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmProperty">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="ListItems"
type="tns:ArrayOfBpmPropertyListItem"/>
            </xs:sequence>
            <xs:attribute name="SelectedIndex" type="xs:int" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfBpmPropertyListItem">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="BpmPropertyListItem"
nillable="true" type="tns:BpmPropertyListItem"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="BpmPropertyListItem">
    <xs:attribute name="Name" type="xs:string"/>
    <xs:attribute name="Value" type="xs:string"/>
</xs:complexType>
<xs:complexType name="BpmPropertyBool">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmProperty">
            <xs:attribute name="Value" type="xs:boolean" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfComment">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Comment" nillable="true"
type="tns:Comment"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Comment">
    <xs:attribute name="Guid" type="s1:guid" use="required"/>
    <xs:attribute name="CreatedBy" type="xs:string"/>
    <xs:attribute name="CreatedDate" type="xs:dateTime" use="required"/>
    <xs:attribute name="Message" type="xs:string"/>
</xs:complexType>
<xs:complexType name="ElementVersion">
    <xs:attribute name="Major" type="xs:int" use="required"/>
    <xs:attribute name="Minor" type="xs:int" use="required"/>
</xs:complexType>
<xs:simpleType name="FCOContentType">
    <xs:list>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="None"/>
                <xs:enumeration value="PpsDashboard"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
</xs:simpleType>

```

```

        <xs:enumeration value="PpsScorecard"/>
        <xs:enumeration value="PpsKpi"/>
        <xs:enumeration value="PpsReportView"/>
        <xs:enumeration value="PpsIndicator"/>
        <xs:enumeration value="PpsDataSource"/>
        <xs:enumeration value="PpsFilter"/>
    </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>
<xs:complexType name="DataTableMapping">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ColumnMappings"
type="tns:ArrayOfDataColumnMapping"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MasterTimeColumn"
type="tns:DataColumnMapping"/>
    </xs:sequence>
    <xs:attribute name="DateAggregationType" type="tns:DateAggregationTypes"
use="required"/>
    <xs:attribute name="CalendarStartMonth" type="xs:int" use="required"/>
</xs:complexType>
<xs:complexType name="ArrayOfDataColumnMapping">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="DataColumnMapping"
nillable="true" type="tns:DataColumnMapping"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="DataColumnMapping">
    <xs:attribute name="UniqueName" type="xs:string"/>
    <xs:attribute name="KeyColumnName" type="xs:string"/>
    <xs:attribute name="SourceColumnName" type="xs:string"/>
    <xs:attribute name="FriendlyColumnName" type="xs:string"/>
    <xs:attribute name="ColumnType" type="tns:MappedColumnTypes" use="required"/>
    <xs:attribute name="FactAggregation" type="tns:FactAggregations" use="required"/>
    <xs:attribute name="ColumnDataType" type="tns:MappedColumnDataTypes" use="required"/>
</xs:complexType>
<xs:simpleType name="MappedColumnTypes">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Ignore"/>
        <xs:enumeration value="Fact"/>
        <xs:enumeration value="Dimension"/>
        <xs:enumeration value="TimeDimension"/>
        <xs:enumeration value="Key"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FactAggregations">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Average"/>
        <xs:enumeration value="Count"/>
        <xs:enumeration value="Max"/>
        <xs:enumeration value="Min"/>
        <xs:enumeration value="None"/>
        <xs:enumeration value="StDev"/>
        <xs:enumeration value="Sum"/>
        <xs:enumeration value="Variance"/>
        <xs:enumeration value="FirstOccurance"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MappedColumnDataTypes">
    <xs:restriction base="xs:string">
        <xs:enumeration value="NotSupported"/>
        <xs:enumeration value="Number"/>
        <xs:enumeration value="String"/>
        <xs:enumeration value="DateTime"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DateAggregationTypes">
    <xs:list>
        <xs:simpleType>

```

```

        <xs:restriction base="xs:string">
          <xs:enumeration value="None"/>
          <xs:enumeration value="Second"/>
          <xs:enumeration value="Minute"/>
          <xs:enumeration value="Hour"/>
          <xs:enumeration value="Day"/>
          <xs:enumeration value="Week"/>
          <xs:enumeration value="Month"/>
          <xs:enumeration value="Quarter"/>
          <xs:enumeration value="Year"/>
          <xs:enumeration value="Semester"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>
<xs:simpleType name="DimensionTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Accounts"/>
    <xs:enumeration value="BillOfMaterials"/>
    <xs:enumeration value="Channel"/>
    <xs:enumeration value="Currency"/>
    <xs:enumeration value="Customers"/>
    <xs:enumeration value="Geography"/>
    <xs:enumeration value="Measure"/>
    <xs:enumeration value="Organization"/>
    <xs:enumeration value="Other"/>
    <xs:enumeration value="Products"/>
    <xs:enumeration value="Promotion"/>
    <xs:enumeration value="Quantitative"/>
    <xs:enumeration value="Rates"/>
    <xs:enumeration value="Scenario"/>
    <xs:enumeration value="Time"/>
    <xs:enumeration value="Unknown"/>
    <xs:enumeration value="Utility"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ConnectionContext">
  <xs:restriction base="xs:string">
    <xs:enumeration value="ConnectAsUser"/>
    <xs:enumeration value="ConnectAsSharedUser"/>
    <xs:enumeration value="SecureStoreCredentials"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="CreateDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateDataSourceResult"
type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="UpdateDataSource">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="UpdateDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateDataSourceResult"
type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetDataSource">
  <xs:complexType>
    <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="GetDataSourceResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetDataSourceResult"
type="tns:DataSource"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteDataSource">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteDataSourceResponse">
    <xs:complexType/>
</xs:element>
<xs:element name="CreateKpi">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="kpi" type="tns:Kpi"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="Kpi">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="Actuals"
type="tns:ArrayOfKpiMeasure"/>
                <xs:element minOccurs="0" maxOccurs="1" name="Targets"
type="tns:ArrayOfTarget"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfKpiMeasure">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="KpiMeasure" nillable="true"
type="tns:KpiMeasure"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="KpiMeasure">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SecondClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="OwnerKpiLocation"
type="tns:RepositoryLocation"/>
                <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
                <xs:element minOccurs="0" maxOccurs="1" name="DefaultDimensionSettings"
type="tns:ArrayOfDefaultDimensionSetting"/>
                <xs:element minOccurs="0" maxOccurs="1" name="OverrideFormatProperties"
type="tns:KpiNumberFormatProperties"/>
                <xs:element minOccurs="0" maxOccurs="1" name="CalcFormulaInfo"
type="tns:CalculatedFormulaInfo"/>
            </xs:sequence>
            <xs:attribute name="AggregateBy" type="tns:AggregateTypeEnum" use="required"/>
            <xs:attribute name="DisableScorecardFilters" type="xs:boolean" use="required"/>
            <xs:attribute name="ModelCurrent" type="xs:decimal" use="required"/>
            <xs:attribute name="Pattern" type="tns:KpiPattern" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <xs:attribute name="CurrentFormula" type="xs:string"/>
        <xs:attribute name="IsCustomCurrentFormula" type="xs:boolean" use="required"/>
        <xs:attribute name="OdbcQuery" type="xs:string"/>
        <xs:attribute name="OverrideHoverText" type="xs:string"/>
        <xs:attribute name="TimeFilterFormula" type="xs:string"/>
        <xs:attribute name="ValueSource" type="tns:ValueSources" use="required"/>
    </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="SecondClassElement" abstract="true">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:Element">
            <xs:attribute name="Guid" type="s1:guid" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfDefaultDimensionSetting">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="DefaultDimensionSetting"
nillable="true" type="tns:DefaultDimensionSetting"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="DefaultDimensionSetting">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:Dimension">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="unbounded" name="Members"
type="tns:Member"/>
            </xs:sequence>
            <xs:attribute name="IsVisible" type="xs:boolean" use="required"/>
            <xs:attribute name="ShowAsSlider" type="xs:boolean" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="Dimension">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:NameInfo">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="MeasureGroupNames"
type="tns:ArrayOfString"/>
                <xs:element minOccurs="1" maxOccurs="1" name="Type"
type="tns:DimensionTypeEnum"/>
                <xs:element minOccurs="0" maxOccurs="1" name="Hierarchies"
type="tns:ArrayOfHierarchy"/>
                <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
            </xs:sequence>
            <xs:attribute name="IsMeasureDimension" type="xs:boolean" use="required"/>
            <xs:attribute name="DefaultMemberName" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="NameInfo">
    <xs:attribute name="DisplayName" type="xs:string"/>
    <xs:attribute name="UniqueName" type="xs:string"/>
    <xs:attribute name="Description" type="xs:string"/>
</xs:complexType>
<xs:complexType name="Level">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:NameInfo">
            <xs:attribute name="DimensionUniqueName" type="xs:string"/>
            <xs:attribute name="HierarchyUniqueName" type="xs:string"/>
            <xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
            <xs:attribute name="LevelNumber" type="xs:int" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="Hierarchy">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:NameInfo">

```

```

        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
        </xs:sequence>
        <xs:attribute name="DefaultMemberName" type="xs:string"/>
        <xs:attribute name="DimensionUniqueName" type="xs:string"/>
        <xs:attribute name="DisplayFolder" type="xs:string"/>
        <xs:attribute name="HierarchyOrigin" type="tns:HierarchyOrigin" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfLevel">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Level" nillable="true"
type="tns:Level"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="HierarchyOrigin">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="AttributeHierarchy"/>
      <xs:enumeration value="ParentChildHierarchy"/>
      <xs:enumeration value="UserHierarchy"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ArrayOfString">
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      <xs:element minOccurs="0" maxOccurs="unbounded" name="string" nillable="true"
type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfHierarchy">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Hierarchy" nillable="true"
type="tns:Hierarchy"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Member">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="MemberOperation"
type="tns:MemberOperation"/>
    </xs:sequence>
    <xs:attribute name="Caption" type="xs:string"/>
    <xs:attribute name="UniqueName" type="xs:string"/>
    <xs:attribute name="HierarchyPath" type="xs:string"/>
    <xs:attribute name="LevelName" type="xs:string"/>
    <xs:attribute name="DimensionName" type="xs:string"/>
    <xs:attribute name="LevelDepth" type="xs:int" use="required"/>
    <xs:attribute name="ChildCount" type="xs:long" use="required"/>
    <xs:attribute name="IsChildCountReal" type="xs:boolean" use="required"/>
    <xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
    <xs:attribute name="DimensionUniqueName" type="xs:string"/>
    <xs:attribute name="MemberType" type="tns:MemberType" use="required"/>
  </xs:complexType>
  <xs:complexType name="MemberOperation" abstract="true"/>
  <xs:complexType name="MemberOperationLeafDescendants">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="MemberOperationDescendants">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:MemberOperation">
        <xs:attribute name="LevelUniqueName" type="xs:string"/>
        <xs:attribute name="LevelDisplayName" type="xs:string"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="MemberOperationHide">
    <xs:complexContent mixed="false">

```

```

        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MemberOperationDrillUp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MemberOperationChildren">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MemberOperationAllDescendants">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:simpleType name="MemberType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Regular"/>
        <xs:enumeration value="Operation"/>
        <xs:enumeration value="Default"/>
        <xs:enumeration value="Formula"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="KpiNumberFormatProperties">
    <xs:attribute name="Multiplier" type="xs:decimal" use="required"/>
    <xs:attribute name="FormatType" type="tns:FormatType" use="required"/>
    <xs:attribute name="CurrencySymbol" type="xs:string"/>
    <xs:attribute name="DecimalPlaces" type="xs:int" use="required"/>
    <xs:attribute name="NegativeSymbol" type="tns:FormatNegativeSymbol" use="required"/>
    <xs:attribute name="ShowZeroAs" type="xs:string"/>
    <xs:attribute name="UseThousandsSeparator" type="xs:boolean" use="required"/>
    <xs:attribute name="AdditionalTextLeft" type="xs:string"/>
    <xs:attribute name="AdditionalTextRight" type="xs:string"/>
</xs:complexType>
<xs:simpleType name="FormatType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Default"/>
        <xs:enumeration value="Number"/>
        <xs:enumeration value="Currency"/>
        <xs:enumeration value="Percentage"/>
        <xs:enumeration value="Unknown"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FormatNegativeSymbol">
    <xs:restriction base="xs:string">
        <xs:enumeration value="NegativeSign"/>
        <xs:enumeration value="Parenthesis"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="CalculatedFormulaInfo">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="AliasInfoCollection"
type="tns:ArrayOfAliasInfo"/>
    </xs:sequence>
    <xs:attribute name="Formula" type="xs:string"/>
</xs:complexType>
<xs:complexType name="ArrayOfAliasInfo">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="AliasInfo" nillable="true"
type="tns:AliasInfo"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="AliasInfo">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="AliasCalculationInfo"
type="tns:KpiMeasure"/>

```

```

    </xs:sequence>
    <xs:attribute name="AliasName" type="xs:string"/>
  </xs:complexType>
  <xs:simpleType name="AggregateTypeEnum">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Default"/>
      <xs:enumeration value="Sum"/>
      <xs:enumeration value="Minimum"/>
      <xs:enumeration value="Maximum"/>
      <xs:enumeration value="Count"/>
      <xs:enumeration value="Average"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="KpiPattern">
    <xs:restriction base="xs:string">
      <xs:enumeration value="IncreasingIsBetter"/>
      <xs:enumeration value="DecreasingIsBetter"/>
      <xs:enumeration value="CloserToTargetIsBetter"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ValueSources">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Default"/>
      <xs:enumeration value="NoValue"/>
      <xs:enumeration value="SourceData"/>
      <xs:enumeration value="Text"/>
      <xs:enumeration value="AverageRollup"/>
      <xs:enumeration value="MinRollup"/>
      <xs:enumeration value="MaxRollup"/>
      <xs:enumeration value="TotalRollup"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="Target">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:KpiMeasure">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
          <xs:element minOccurs="0" maxOccurs="1" name="StatedScore"
type="tns:KpiMeasure"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
          <xs:element minOccurs="1" maxOccurs="1" name="RelatedActualId" type="s1:guid"/>
        </xs:sequence>
        <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="Banding">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CustomBoundary"
type="tns:ArrayOfDecimal"/>
    </xs:sequence>
    <xs:attribute name="Type" type="tns:BandType" use="required"/>
    <xs:attribute name="BandValue" type="xs:string"/>
    <xs:attribute name="ActualWorst" type="xs:decimal" use="required"/>
    <xs:attribute name="SpreadMinimum" type="xs:decimal" use="required"/>
    <xs:attribute name="SpreadMaximum" type="xs:decimal" use="required"/>
  </xs:complexType>
  <xs:complexType name="ArrayOfDecimal">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="decimal" type="xs:decimal"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="BandType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Normalized"/>
      <xs:enumeration value="Actual"/>
      <xs:enumeration value="StatedScore"/>
    </xs:restriction>

```

```

</xs:simpleType>
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  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Target" nillable="true"
type="tns:Target"/>
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</xs:complexType>
<xs:element name="CreateKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="UpdateKpi">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="kpi" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="UpdateKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetKpisFromScorecard">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetKpisFromScorecardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpisFromScorecardResult"
type="tns:ArrayOfKpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="ArrayOfKpi">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Kpi" nillable="true"
type="tns:Kpi"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="GetKpi">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteKpi">
  <xs:complexType>
    <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DeleteKpiResponse">
    <xs:complexType/>
</xs:element>
<xs:element name="CreateScorecard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="Scorecard">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="ConfiguredViews"
type="tns:ArrayOfConfiguredView"/>
                <xs:element minOccurs="0" maxOccurs="1" name="EndPoints"
type="tns:ArrayOfEndPoint"/>
                <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
            </xs:sequence>
            <xs:attribute name="RendererClassName" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfConfiguredView">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ConfiguredView"
nillable="true" type="tns:ConfiguredView"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ConfiguredView">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SecondClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="unbounded" name="StatusFilters"
type="tns:StatusFilter"/>
                <xs:element minOccurs="0" maxOccurs="1" name="ToolbarOptions"
type="tns:ToolbarOptions"/>
                <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
                <xs:element minOccurs="0" maxOccurs="1" name="GridViewDefinition"
type="tns:GridViewDefinition"/>
            </xs:sequence>
            <xs:attribute name="AllowStatusFilter" type="xs:boolean" use="required"/>
            <xs:attribute name="AllowFilter" type="xs:boolean" use="required"/>
            <xs:attribute name="AllowSort" type="xs:boolean" use="required"/>
            <xs:attribute name="AllowAnnotations" type="xs:boolean" use="required"/>
            <xs:attribute name="EmptyRowsFilterMode" type="tns:ScorecardEmptyRowsFilterMode"
use="required"/>
            <xs:attribute name="AllowShowDetails" type="xs:boolean" use="required"/>
            <xs:attribute name="EnableTextwrap" type="xs:boolean" use="required"/>
            <xs:attribute name="AllowDynamicRowMemberExpansion" type="xs:boolean"
use="required"/>
            <xs:attribute name="AllowDynamicColumnMemberExpansion" type="xs:boolean"
use="required"/>
            <xs:attribute name="AllowRowDrill" type="xs:boolean" use="required"/>
            <xs:attribute name="AllowColumnDrill" type="xs:boolean" use="required"/>
            <xs:attribute name="AlwaysShowAnnotationCellFlags" type="xs:boolean"
use="required"/>
            <xs:attribute name="ExpandToFitWidth" type="xs:boolean" use="required"/>
            <xs:attribute name="HideScorecard" type="xs:boolean" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <xs:attribute name="ShowStatusFiltersByDefault" type="xs:boolean"
use="required"/>
    </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusFilter">
    <xs:attribute name="IndicatorLocationGuid" type="s1:guid" use="required"/>
    <xs:attribute name="BandIndex" type="xs:int" use="required"/>
</xs:complexType>
<xs:complexType name="ToolbarOptions">
    <xs:attribute name="ShowInlineText" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowStatusFilter" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowToolTips" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowCollapse" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowMode" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowExpand" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowToolbarItemsLabel" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowDefaultRollup" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowWorstChildRollup" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowIndicatorCount" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="GridViewDefinition">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CornerCellFormatInfo"
type="tns:GridFormatInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader"
type="tns:GridHeaderItem"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DefaultRollupIndicatorId"
type="s1:guid"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="PreQueryTransforms"
type="tns:GridViewTransformReference"/>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="PostQueryTransforms"
type="tns:GridViewTransformReference"/>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="PreRenderTransforms"
type="tns:GridViewTransformReference"/>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="PerUserTransforms"
type="tns:GridViewTransformReference"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CellBorderColor"
type="tns:GridColor"/>
    </xs:sequence>
    <xs:attribute name="EmptyCell" type="xs:string"/>
    <xs:attribute name="InvalidCell" type="xs:string"/>
    <xs:attribute name="ShowGridLines" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowHiddenHeaders" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowMetricHeaders" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowPlusMinus" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="GridFormatInfo">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="FontInfo" type="tns:GridFontInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ForeColor" type="tns:GridColor"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="tns:GridColor"/>
    </xs:sequence>
    <xs:attribute name="TextWrap" type="tns:Trinary" use="required"/>
    <xs:attribute name="VerticalAlignment" type="tns:VerticalAlignments" use="required"/>
    <xs:attribute name="HorizontalAlignment" type="tns:HorizontalAlignments"
use="required"/>
</xs:complexType>
<xs:complexType name="GridFontInfo">
    <xs:attribute name="FamilyName" type="xs:string"/>
    <xs:attribute name="SizeInPoints" type="xs:float" use="required"/>
    <xs:attribute name="Bold" type="tns:Trinary" use="required"/>
    <xs:attribute name="Italic" type="tns:Trinary" use="required"/>
    <xs:attribute name="Underline" type="tns:Trinary" use="required"/>

```

```

    <xs:attribute name="Strikeout" type="tns:Trinary" use="required"/>
  </xs:complexType>
  <xs:simpleType name="Trinary">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Undefined"/>
      <xs:enumeration value="False"/>
      <xs:enumeration value="True"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="GridColor">
    <xs:attribute name="A" type="xs:unsignedByte" use="required"/>
    <xs:attribute name="R" type="xs:unsignedByte" use="required"/>
    <xs:attribute name="G" type="xs:unsignedByte" use="required"/>
    <xs:attribute name="B" type="xs:unsignedByte" use="required"/>
  </xs:complexType>
  <xs:simpleType name="VerticalAlignments">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Undefined"/>
      <xs:enumeration value="Top"/>
      <xs:enumeration value="Middle"/>
      <xs:enumeration value="Bottom"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="HorizontalAlignments">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Undefined"/>
      <xs:enumeration value="Left"/>
      <xs:enumeration value="Center"/>
      <xs:enumeration value="Right"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="GridHeaderItem">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="HeaderFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="CellFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Children"
type="tns:ArrayOfGridHeaderItem"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SerializeTag"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DimensionMember" type="tns:Member"/>
      <xs:element minOccurs="0" maxOccurs="1" name="OverrideIndicatorLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
      <xs:element minOccurs="0" maxOccurs="1" name="LinkedKpiLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="BpmProperties"
type="tns:ArrayOfBpmProperty"/>
      <xs:element minOccurs="0" maxOccurs="1" name="TargetSettings"
type="tns:GridTargetSettings"/>
      <xs:element minOccurs="0" maxOccurs="1" name="TrendIndicatorLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
    <xs:attribute name="Id" type="xs:int" use="required"/>
    <xs:attribute name="Guid" type="sl:guid" use="required"/>
    <xs:attribute name="DefinitionGuid" type="sl:guid" use="required"/>
    <xs:attribute name="DisplayText" type="xs:string"/>
    <xs:attribute name="DimensionName" type="xs:string"/>
    <xs:attribute name="DimensionValue" type="xs:string"/>
    <xs:attribute name="HeaderType" type="tns:ScorecardNodeTypes" use="required"/>
    <xs:attribute name="GroupId" type="xs:int" use="required"/>
    <xs:attribute name="Depth" type="xs:int" use="required"/>
    <xs:attribute name="DescendantSpan" type="xs:int" use="required"/>
    <xs:attribute name="LeafSpan" type="xs:int" use="required"/>
    <xs:attribute name="IsCollapsed" type="xs:boolean" use="required"/>
    <xs:attribute name="IsDynamicCellExpansionEnabled" type="xs:boolean" use="required"/>
    <xs:attribute name="IsDrillEnabled" type="xs:boolean" use="required"/>
    <xs:attribute name="IsDrillDownDisabled" type="xs:boolean" use="required"/>
    <xs:attribute name="IsDrillUpDisabled" type="xs:boolean" use="required"/>
  </xs:complexType>

```

```

<xs:attribute name="IsDynamicallyExpandedHeader" type="xs:boolean" use="required"/>
<xs:attribute name="IsCellHidden" type="xs:boolean" use="required"/>
<xs:attribute name="IsPathHidden" type="xs:boolean" use="required"/>
<xs:attribute name="IsHiddenBasedOnFilterStatus" type="xs:boolean" use="required"/>
<xs:attribute name="NamedSetExpression" type="xs:string"/>
<xs:attribute name="CustomSetFormula" type="xs:string"/>
<xs:attribute name="IsNamedSetInError" type="xs:boolean" use="required"/>
<xs:attribute name="IsNamedSetEmpty" type="xs:boolean" use="required"/>
<xs:attribute name="NamedSetType" type="tns:ScorecardNamedSetType" use="required"/>
<xs:attribute name="UseLinkedElementDisplayText" type="xs:boolean" use="required"/>
<xs:attribute name="Hyperlink" type="xs:string"/>
<xs:attribute name="ShowHyperlinkInNewWindow" type="xs:boolean" use="required"/>
<xs:attribute name="IsHierarchyHeader" type="xs:boolean" use="required"/>
<xs:attribute name="IsColumnHeader" type="xs:boolean" use="required"/>
<xs:attribute name="AppendFilterInfoToHyperlink" type="xs:boolean" use="required"/>
<xs:attribute name="Weight" type="xs:decimal" use="required"/>
<xs:attribute name="KpiTargetName" type="xs:string"/>
<xs:attribute name="AggregationType" type="tns:HeaderAggregationTypes"
use="required"/>
</xs:complexType>
<xs:complexType name="ArrayOfGridHeaderItem">
<xs:sequence>
<xs:element minOccurs="0" maxOccurs="unbounded" name="GridHeaderItem"
nillable="true" type="tns:GridHeaderItem"/>
</xs:sequence>
</xs:complexType>
<xs:complexType name="GridTargetSettings">
<xs:sequence>
<xs:element minOccurs="0" maxOccurs="1" name="VarianceSettings"
type="tns:GridVarianceSettings"/>
<xs:element minOccurs="1" maxOccurs="1" name="FilterEmptyRows" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="Position"
type="tns:DataValuePosition"/>
<xs:element minOccurs="1" maxOccurs="1" name="PositionActual"
type="tns:DataValuePosition"/>
<xs:element minOccurs="0" maxOccurs="1" name="ScoreSettings"
type="tns:GridScoreSettings"/>
<xs:element minOccurs="0" maxOccurs="1" name="IndicatorSettings"
type="tns:GridIndicatorSettings"/>
</xs:sequence>
<xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
<xs:attribute name="ShowActualAsTarget" type="xs:boolean" use="required"/>
<xs:attribute name="IgnoreScoreFilter" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="GridVarianceSettings">
<xs:attribute name="NumDecimalPlaces" type="xs:int" use="required"/>
<xs:attribute name="VarianceType" type="tns:VarianceType" use="required"/>
<xs:attribute name="DisplayType" type="tns:VarianceDisplayType" use="required"/>
<xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
<xs:attribute name="Position" type="tns:DataValuePosition" use="required"/>
</xs:complexType>
<xs:simpleType name="VarianceType">
<xs:restriction base="xs:string">
<xs:enumeration value="VarianceToTarget"/>
<xs:enumeration value="VarianceToBestTarget"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="VarianceDisplayType">
<xs:restriction base="xs:string">
<xs:enumeration value="ShowPercent"/>
<xs:enumeration value="ShowValue"/>
<xs:enumeration value="ShowInvertedPercent"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="DataValuePosition">
<xs:restriction base="xs:string">
<xs:enumeration value="Left"/>
<xs:enumeration value="Right"/>
<xs:enumeration value="NotDisplayed"/>

```

```

    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="GridScoreSettings">
    <xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
    <xs:attribute name="ScoreType" type="tns:ScoreTypes" use="required"/>
    <xs:attribute name="RollupType" type="tns:RollupTypes" use="required"/>
    <xs:attribute name="Position" type="tns:DataValuePosition" use="required"/>
  </xs:complexType>
  <xs:simpleType name="ScoreTypes">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Normalized"/>
      <xs:enumeration value="Raw"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="RollupTypes">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="AverageWeighted"/>
      <xs:enumeration value="WorstChild"/>
      <xs:enumeration value="IndicatorCount"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="GridIndicatorSettings">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Position"
type="tns:IndicatorPosition"/>
    </xs:sequence>
    <xs:attribute name="ShowImage" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowText" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowForeColor" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowBackColor" type="xs:boolean" use="required"/>
  </xs:complexType>
  <xs:simpleType name="IndicatorPosition">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Left"/>
      <xs:enumeration value="Right"/>
      <xs:enumeration value="Center"/>
      <xs:enumeration value="NotDisplayed"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="ScorecardNodeTypes">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="None"/>
          <xs:enumeration value="Member"/>
          <xs:enumeration value="Kpi"/>
          <xs:enumeration value="KpiActual"/>
          <xs:enumeration value="KpiTarget"/>
          <xs:enumeration value="ScorecardDetails"/>
          <xs:enumeration value="DocumentLinks"/>
          <xs:enumeration value="NamedSet"/>
          <xs:enumeration value="Aggregate"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>
  <xs:simpleType name="ScorecardNamedSetType">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="None"/>
          <xs:enumeration value="NamedSet"/>
          <xs:enumeration value="CustomFormula"/>
          <xs:enumeration value="TimeFormula"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>

```

```

<xs:simpleType name="HeaderAggregationTypes">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="Average"/>
    <xs:enumeration value="Min"/>
    <xs:enumeration value="Max"/>
    <xs:enumeration value="Trend"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="GridViewTransformReference">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:PropertyBag"/>
  </xs:sequence>
  <xs:attribute name="Id" type="xs:string"/>
</xs:complexType>
<xs:complexType name="PropertyBag">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfChoice1"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfChoice1">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element minOccurs="1" maxOccurs="1" name="char" type="s1:char"/>
    <xs:element minOccurs="1" maxOccurs="1" name="int" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="double" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="string" nillable="true"
type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="dateTime" type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMemberTransform"
nillable="true" type="tns:ArrayOfMemberTransform"/>
    <xs:element minOccurs="1" maxOccurs="1" name="guid" type="s1:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfString" nillable="true"
type="tns:ArrayOfString"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMember" nillable="true"
type="tns:ArrayOfMember"/>
    <xs:element minOccurs="1" maxOccurs="1" name="decimal" type="xs:decimal"/>
  </xs:choice>
</xs:complexType>
<xs:complexType name="ArrayOfMemberTransform">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="MemberTransform"
nillable="true" type="tns:MemberTransform"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="MemberTransform">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="GroupId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellPath" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type"
type="tns:MemberTransformType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Operation"
type="tns:MemberTransformOperation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="MemberTransformType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Row"/>
    <xs:enumeration value="Column"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MemberTransformOperation">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Replace"/>
    <xs:enumeration value="DrillUp"/>
    <xs:enumeration value="DrillDown"/>
    <xs:enumeration value="Expand"/>
  </xs:restriction>
</xs:simpleType>

```

```

    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ArrayOfMember">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Member" nillable="true"
type="tns:Member"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="ScorecardEmptyRowsFilterMode">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="AllValuesAreEmpty"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ArrayOfEndPoint">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="EndPoint" nillable="true"
type="tns:EndPoint"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="EndPoint">
    <xs:attribute name="Category" type="tns:EndPointCategory" use="required"/>
    <xs:attribute name="UniqueName" type="xs:string"/>
    <xs:attribute name="DisplayName" type="xs:string"/>
    <xs:attribute name="AcceptsMultipleFilterLinks" type="xs:boolean" use="required"/>
  </xs:complexType>
  <xs:simpleType name="EndPointCategory">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="Axis"/>
      <xs:enumeration value="ColumnHierarchy"/>
      <xs:enumeration value="RowHierarchy"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ArrayOfParameterDefinition">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="ParameterDefinition"
nillable="true" type="tns:ParameterDefinition"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ParameterDefinition">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ParameterUniqueName"
type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DisplayValues">
        <xs:complexType>
          <xs:sequence>
            <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
            <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element minOccurs="0" maxOccurs="1" name="CustomDefinition" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ParameterProviderId"
type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="EmitterType"
type="tns:BeginPointEmitterType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="KeyColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ParentKeyColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DisplayColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="IsDefaultColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DefaultPostFormula"
type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="BeginPointEmitterType">

```

```

    <xs:restriction base="xs:string">
      <xs:enumeration value="BothAConditionalVisibilityAndParameterEmitter"/>
      <xs:enumeration value="ConditionalVisibilityEmitter"/>
      <xs:enumeration value="ParameterEmitter"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="CreateScorecardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CreateScorecardResult"
type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="UpdateScorecard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="UpdateScorecardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="UpdateScorecardResult"
type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetScorecard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetScorecardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetScorecardResult"
type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="DeleteScorecard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="DeleteScorecardResponse">
    <xs:complexType/>
  </xs:element>
  <xs:element name="CreateFilter">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="Filter">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:FirstClassElement">
        <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="EndPoints"
type="tns:ArrayOfEndPoint"/>
    </xs:sequence>
    <xs:attribute name="SubTypeId" type="xs:string"/>
    <xs:attribute name="ReadOnly" type="xs:boolean" use="required"/>
    <xs:attribute name="SelectionMode" type="tns:FilterSelectionMode"
use="required"/>
    <xs:attribute name="Visualization" type="xs:string"/>
    <xs:attribute name="RendererClassName" type="xs:string"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="FilterSelectionMode">
    <xs:restriction base="xs:string">
        <xs:enumeration value="SingleSelect"/>
        <xs:enumeration value="MultiSelect"/>
    </xs:restriction>
</xs:simpleType>
<xs:element name="CreateFilterResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CreateFilterResult"
type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateFilterResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateFilterResult"
type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetFilterResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetFilterResult"
type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
        </xs:sequence>
    </xs:complexType>

```

```

</xs:element>
<xs:element name="DeleteFilterResponse">
  <xs:complexType/>
</xs:element>
<xs:element name="CreateIndicator">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="Indicator">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="NoDataIndicatorBand"
type="tns:IndicatorBand"/>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorBands"
type="tns:ArrayOfIndicatorBand"/>
      </xs:sequence>
      <xs:attribute name="IndicatorType" type="tns:IndicatorType" use="required"/>
      <xs:attribute name="IsBuiltIn" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="IndicatorBand">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ImageData" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Color" type="xs:string"/>
  <xs:attribute name="BackColor" type="xs:string"/>
  <xs:attribute name="ToolTip" type="xs:string"/>
</xs:complexType>
<xs:complexType name="ArrayOfIndicatorBand">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="IndicatorBand"
nillable="true" type="tns:IndicatorBand"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="IndicatorType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Standard"/>
    <xs:enumeration value="Centered"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="CreateIndicatorResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateIndicatorResult"
type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="UpdateIndicator">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="UpdateIndicatorResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateIndicatorResult"
type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

<xs:element name="GetIndicator">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetIndicatorResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetIndicatorResult"
type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteIndicator">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteIndicatorResponse">
  <xs:complexType/>
</xs:element>
<xs:element name="CreateReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="ReportView">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="EndPoints"
type="tns:ArrayOfEndPoint"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
      </xs:sequence>
      <xs:attribute name="TypeName" type="xs:string"/>
      <xs:attribute name="RenderClientSide" type="xs:boolean" use="required"/>
      <xs:attribute name="ConfiguredViewId" type="xs:guid" use="required"/>
      <xs:attribute name="SubTypeId" type="xs:string"/>
      <xs:attribute name="RendererClassName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="CreateReportViewResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="UpdateReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>

```

```

</xs:element>
<xs:element name="UpdateReportViewResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetReportViewResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteReportViewResponse">
  <xs:complexType/>
</xs:element>
<xs:element name="GetAnalyticReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetAnalyticReportViewResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAnalyticReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetLatestAnalyticReportVersion">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="analyticReportViewId"
type="sl:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetLatestAnalyticReportVersionResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1"
name="GetLatestAnalyticReportVersionResult" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SaveTemporaryAnalyticReport">

```

```

    <xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="SaveTemporaryAnalyticReportResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="SaveTemporaryAnalyticReportResult"
type="sl:guid"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetQueryResultMembers">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="formattingDimensionName"
type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetQueryResultMembersResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetQueryResultMembersResult"
type="tns:ArrayOfMember"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetAnnotation">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="tupleCollection"
type="tns:ArrayOfTuple"/>
        <xs:element minOccurs="0" maxOccurs="1" name="cellPath" type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="ArrayOfTuple">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Tuple" nillable="true"
type="tns:Tuple"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Tuple">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DimensionMembers"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Annotation">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Comments"
type="tns:ArrayOfAnnotationComment"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Properties"
type="tns:ArrayOfBpmProperty"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Owner" type="xs:string"/>
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type="tns:ArrayOfNameInfo"/>
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  <xs:attribute name="IsDeletionByAuthorEnabled" type="xs:boolean" use="required"/>
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            <xs:element minOccurs="1" maxOccurs="1" name="ValidateSiteCollectionResult"
type="tns:URLValidationResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="siteCollectionUrl"
type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="siteUrl" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:simpleType name="URLValidationResult">
    <xs:restriction base="xs:string">
        <xs:enumeration value="SiteCollectionOrSite"/>
        <xs:enumeration value="SiteCollection"/>
        <xs:enumeration value="Site"/>
        <xs:enumeration value="List"/>
        <xs:enumeration value="DocumentLibrary"/>
        <xs:enumeration value="InvalidURL"/>
        <xs:enumeration value="AlreadyExists"/>
        <xs:enumeration value="NonexistentSiteCollection"/>
        <xs:enumeration value="NonexistentSite"/>
        <xs:enumeration value="PPSNotActivatedOnSiteCollection"/>
        <xs:enumeration value="URLZoneNotAllowed"/>
        <xs:enumeration value="NoAccess"/>
        <xs:enumeration value="InvalidSiteVersion"/>
    </xs:restriction>
</xs:simpleType>
<xs:element name="GetCurrentCultureLcid">
    <xs:complexType/>
</xs:element>
<xs:element name="GetCurrentCultureLcidResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="1" maxOccurs="1" name="GetCurrentCultureLcidResult"
type="xs:int"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetCurrentUserInfo">
    <xs:complexType/>
</xs:element>
<xs:element name="GetCurrentUserInfoResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="userName" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="userDisplayName" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GenerateView">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pageFilters"
type="tns:ArrayOfMember"/>
            <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
        </xs:sequence>
    </xs:complexType>

```

```

</xs:element>
<xs:complexType name="DictionaryWrapperOfStringPropertyBag">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values"
type="tns:ArrayOfPropertyBag"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfPropertyBag">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PropertyBag" nillable="true"
type="tns:PropertyBag"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="GridViewData">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Cells" type="tns:GridCellSet"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PostQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreRenderTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PerUserTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PageFilters"
type="tns:ArrayOfMember"/>
  </xs:sequence>
  <xs:attribute name="ScorecardViewId" type="s1:guid" use="required"/>
  <xs:attribute name="Cached" type="xs:boolean" use="required"/>
  <xs:attribute name="CacheExpiration" type="xs:dateTime" use="required"/>
  <xs:attribute name="DefaultRollupIndicatorId" type="s1:guid" use="required"/>
  <xs:attribute name="EmptyCell" type="xs:string"/>
  <xs:attribute name="InvalidCell" type="xs:string"/>
  <xs:attribute name="TIFormula" type="xs:string"/>
  <xs:attribute name="TICurrentDateTime" type="xs:string"/>
</xs:complexType>
<xs:complexType name="GridCellSet">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Table"
type="tns:DictionaryWrapperOfStringGridCell"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="DictionaryWrapperOfStringGridCell">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfGridCell"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfGridCell">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="GridCell" nillable="true"
type="tns:GridCell"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="GridCell">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Properties" type="tns:PropertyBag"/>
  </xs:sequence>
</xs:complexType>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="DisplayElements"
type="tns:ArrayOfGridDisplayElement"/>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="InBand" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CellAnnotation"
type="tns:Annotation"/>
    </xs:sequence>
    <xs:attribute name="Value" type="xs:decimal" use="required"/>
    <xs:attribute name="ActualValue" type="xs:decimal" use="required"/>
    <xs:attribute name="Score" type="xs:decimal" use="required"/>
    <xs:attribute name="Weight" type="xs:decimal" use="required"/>
    <xs:attribute name="BestChildScore" type="xs:decimal" use="required"/>
    <xs:attribute name="WorstChildScore" type="xs:decimal" use="required"/>
    <xs:attribute name="IsValueInError" type="xs:boolean" use="required"/>
    <xs:attribute name="HasAnnotation" type="xs:boolean" use="required"/>
    <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
    <xs:attribute name="ValueSource" type="tns:ValueSources" use="required"/>
    <xs:attribute name="IsValidScore" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="ArrayOfGridDisplayElement">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="GridDisplayElement"
nillable="true" type="tns:GridDisplayElement"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="GridDisplayElement" abstract="true">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Text" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="TooltipText" type="xs:string"/>
    </xs:sequence>
    <xs:attribute name="Status" type="tns:GridCellElementStatus" use="required"/>
</xs:complexType>
<xs:simpleType name="GridCellElementStatus">
    <xs:restriction base="xs:string">
        <xs:enumeration value="0"/>
        <xs:enumeration value="1"/>
        <xs:enumeration value="2"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="GridDisplayElementHyperLink">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElement">
            <xs:attribute name="LinkUrl" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementIndicator">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
            </xs:sequence>
            <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementText">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElement"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementIndicatorText">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementText">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        </xs:sequence>
        <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
    </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementNumber" abstract="true">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElement">
            <xs:attribute name="Value" type="xs:decimal" use="required"/>
            <xs:attribute name="OverrideValue" type="xs:decimal" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementActual">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementTarget">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementVariance">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementScore">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementAggregation">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfGridViewTransformReference">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="GridViewTransformReference"
nillable="true" type="tns:GridViewTransformReference"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="GenerateViewResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GenerateViewResult"
type="tns:GridViewData"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GenerateViewDirect">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
            <xs:element minOccurs="0" maxOccurs="1" name="kpis" type="tns:ArrayOfKpi"/>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSources"
type="tns:ArrayOfDataSource"/>
            <xs:element minOccurs="0" maxOccurs="1" name="indicators"
type="tns:ArrayOfIndicator"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pageFilters"
type="tns:ArrayOfMember"/>
            <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="ArrayOfDataSource">

```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="DataSource" nillable="true"
type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfIndicator">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Indicator" nillable="true"
type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="GenerateViewDirectResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GenerateViewDirectResult"
type="tns:GridViewData"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetAsKpis">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
        <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetAsKpisResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetAsKpisResult"
type="tns:ArrayOfKpi"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="CreateDashboard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="dashboard" type="tns:Dashboard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="Dashboard">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:FirstClassElement">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="Pages"
type="tns:ArrayOfDashboardElement"/>
        </xs:sequence>
        <xs:attribute name="TemplateType" type="xs:string"/>
        <xs:attribute name="DeploymentPath" type="xs:string"/>
        <xs:attribute name="SitePath" type="xs:string"/>
        <xs:attribute name="MasterPagePath" type="xs:string"/>
        <xs:attribute name="MasterPageDisplayName" type="xs:string"/>
        <xs:attribute name="PageList" type="xs:string"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfDashboardElement">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="DashboardElement"
nillable="true" type="tns:DashboardElement"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="DashboardElement" abstract="true">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:SecondClassElement">
        <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="Height"
type="tns:DashboardElementSize"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Width"
type="tns:DashboardElementSize"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="DashboardElementSize">
    <xs:attribute name="Measurement" type="xs:int" use="required"/>
    <xs:attribute name="Units" type="tns:SizeType" use="required"/>
</xs:complexType>
<xs:simpleType name="SizeType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="AutoSize"/>
        <xs:enumeration value="Absolute"/>
        <xs:enumeration value="Percent"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="DashboardItem">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:DashboardElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="InboundParameters"
type="tns:ArrayOfParameterMapping"/>
                <xs:element minOccurs="0" maxOccurs="1" name="UnderlyingElementLocation"
type="tns:RepositoryLocation"/>
            </xs:sequence>
            <xs:attribute name="UnderlyingElementTypeName" type="xs:string"/>
            <xs:attribute name="AutoSizeWidth" type="xs:boolean" use="required"/>
            <xs:attribute name="AutoSizeHeight" type="xs:boolean" use="required"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfParameterMapping">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ParameterMapping"
nillable="true" type="tns:ParameterMapping"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ParameterMapping">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ConditionalData">
            <xs:complexType>
                <xs:sequence>
                    <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
                    <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax"/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
    <xs:attribute name="EndPointUniqueName" type="xs:string"/>
    <xs:attribute name="Id" type="s1:guid" use="required"/>
    <xs:attribute name="SourceColumnName" type="xs:string"/>
    <xs:attribute name="DashboardItemId" type="s1:guid" use="required"/>
    <xs:attribute name="ParameterUniqueName" type="xs:string"/>
    <xs:attribute name="PostFormula" type="xs:string"/>
    <xs:attribute name="IsConditionalDataEnabled" type="xs:boolean" use="required"/>
    <xs:attribute name="IsDefaultVisibility" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="DashboardElementContainer">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:DashboardElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="DashboardElements"
type="tns:ArrayOfDashboardElement"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <xs:attribute name="Orientation" type="tns:LayoutOrientation" use="required"/>
    </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="LayoutOrientation">
    <xs:restriction base="xs:string">
        <xs:enumeration value="HorizontalLeftJustified"/>
        <xs:enumeration value="HorizontalRightJustified"/>
        <xs:enumeration value="VerticalBottomJustified"/>
        <xs:enumeration value="VerticalTopJustified"/>
        <xs:enumeration value="Stacked"/>
        <xs:enumeration value="Hidden"/>
    </xs:restriction>
</xs:simpleType>
<xs:element name="CreateDashboardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CreateDashboardResult"
type="tns:Dashboard"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateDashboard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="dashboard" type="tns:Dashboard"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateDashboardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateDashboardResult"
type="tns:Dashboard"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetDashboard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetDashboardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetDashboardResult"
type="tns:Dashboard"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteDashboard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteDashboardResponse">
    <xs:complexType/>
</xs:element>
<xs:element name="ImportDashboard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="siteUrl" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="filename" type="xs:string"/>

```

```

    <xs:element minOccurs="0" maxOccurs="1" name="locationMap">
      <xs:complexType mixed="true">
        <xs:sequence>
          <xs:any/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element minOccurs="0" maxOccurs="1" name="datasourceMap">
      <xs:complexType mixed="true">
        <xs:sequence>
          <xs:any/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element minOccurs="0" maxOccurs="1" name="masterPageUrl" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="ImportDashboardResponse">
  <xs:complexType/>
</xs:element>
<xs:element name="ExportDashboard">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="filename" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="siteCollectionUrl"
type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemUrls"
type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ExportDashboardResponse">
  <xs:complexType/>
</xs:element>
<xs:element name="GetParameterDisplayData">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterDefinition"
type="tns:ParameterDefinition"/>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="gridViewData"
type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetParameterDisplayDataResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetParameterDisplayDataResult">
        <xs:complexType>
          <xs:sequence>
            <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
            <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QueryTimeIntelligence">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="1" maxOccurs="1" name="currentTime" type="xs:dateTime"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="QueryTimeIntelligenceResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="QueryTimeIntelligenceResult"
type="tns:ArrayOfMember"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryTimeIntelligenceDirect">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
            <xs:element minOccurs="1" maxOccurs="1" name="currentTime" type="xs:dateTime"/>
            <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryTimeIntelligenceDirectResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="QueryTimeIntelligenceDirectResult"
type="tns:ArrayOfMember"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetRegisteredCustomFCOs">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="1" maxOccurs="1" name="type" type="tns:CustomFCOType"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
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    <xs:list>
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                <xs:enumeration value="None"/>
                <xs:enumeration value="DataSource"/>
                <xs:enumeration value="Filter"/>
                <xs:enumeration value="ReportView"/>
                <xs:enumeration value="All"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
</xs:simpleType>
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        <xs:element minOccurs="0" maxOccurs="1" name="TemplateIconSerialized"
type="xs:string"/>
    </xs:sequence>
    <xs:attribute name="Type" type="tns:CustomFCOType" use="required"/>
    <xs:attribute name="SubType" type="xs:string"/>
    <xs:attribute name="Name" type="xs:string"/>
    <xs:attribute name="Description" type="xs:string"/>
    <xs:attribute name="RendererClass" type="xs:string"/>
    <xs:attribute name="EditorUri" type="xs:string"/>
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<xs:complexType name="ArrayOfCustomFCODefinition">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="CustomFCODefinition"
nillable="true" type="tns:CustomFCODefinition"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="GetRegisteredCustomFCOsResponse">
    <xs:complexType>

```

```

        <xs:sequence>
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type="tns:ArrayOfCustomFCODefinition"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="GetListItems">
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        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:complexType name="ArrayOfFirstClassElement">
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        <xs:element minOccurs="0" maxOccurs="unbounded" name="FirstClassElement"
nillable="true" type="tns:FirstClassElement"/>
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    </xs:complexType>
    <xs:element name="GetListItemsResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="GetListItemsResult"
type="tns:ArrayOfFirstClassElement"/>
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      </xs:complexType>
    </xs:element>
    <xs:element name="GetDependentElements">
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        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="missingItems"
type="tns:ArrayOfRepositoryLocation"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:complexType name="ArrayOfRepositoryLocation">
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        <xs:element minOccurs="0" maxOccurs="unbounded" name="RepositoryLocation"
nillable="true" type="tns:RepositoryLocation"/>
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="DependentElementInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DependentLists"
type="tns:ArrayOfRepositoryList"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DependentElements"
type="tns:ArrayOfFirstClassElement"/>
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="ArrayOfRepositoryList">
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nillable="true" type="tns:RepositoryList"/>
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    </xs:complexType>
    <xs:complexType name="RepositoryList">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Location" type="tns:ListLocation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SupportedTypes"
type="tns:FCOContentType"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Title" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ListId" type="s1:guid"/>
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    <xs:element name="GetDependentElementsResponse">
      <xs:complexType>
        <xs:sequence>
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type="tns:DependentElementInfo"/>

```

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        </xs:sequence>
    </xs:complexType>
</xs:element>
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<xs:element name="ArrayOfCustomFCODefinition" nillable="true"
type="tns:ArrayOfCustomFCODefinition"/>
<xs:element name="ArrayOfFirstClassElement" nillable="true"
type="tns:ArrayOfFirstClassElement"/>
<xs:element name="FirstClassObjectType" type="tns:FirstClassObjectType"/>
<xs:simpleType name="FirstClassObjectType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Kpi"/>
        <xs:enumeration value="Scorecard"/>
        <xs:enumeration value="ReportView"/>
        <xs:enumeration value="Indicator"/>
        <xs:enumeration value="DataSource"/>
        <xs:enumeration value="Dashboard"/>
        <xs:enumeration value="TempReportView"/>
        <xs:enumeration value="Filter"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="RepositoryLocation">
    <xs:attribute name="ItemUrl" type="xs:string" use="required"/>
    <xs:attribute default="None" name="ItemType" type="tns:FirstClassObjectType"
use="optional"/>
    <xs:attribute default="00000000-0000-0000-0000-000000000000" name="ItemGuid"
use="optional">
        <xs:simpleType>
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[0-9a-fA-F]{12}"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute default="00000000-0000-0000-0000-000000000000"
name="SpSiteCollectionGuid" use="optional">
        <xs:simpleType>
            <xs:restriction base="xs:string">
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[0-9a-fA-F]{12}"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteGuid"
use="optional">
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[0-9a-fA-F]{12}"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:attribute>
    <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpListGuid"
use="optional">
        <xs:simpleType>
            <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:attribute>
</xs:complexType>
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type="tns:AnalyticChartReportView"/>
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    <xs:complexContent mixed="false">
        <xs:extension base="tns:AnalyticBaseReportViewData">

```

```

        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="Title" type="tns:Title"/>
            <xs:element minOccurs="0" maxOccurs="1" name="PlotAreaBackColor"
type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="Legend"
type="tns:AnalyticChartLegend"/>
        </xs:sequence>
        <xs:attribute default="Column" name="ChartType" type="tns:AnalyticChartType"/>
        <xs:attribute default="None" name="LineMarkerStyle"
type="tns:AnalyticMarkerStyle"/>
        <xs:attribute default="true" name="ChartColorVisible" type="xs:boolean"/>
        <xs:attribute default="false" name="ChartPointersVisible" type="xs:boolean"/>
        <xs:attribute default="2" name="LineWidth" type="xs:int"/>
    </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="AnalyticBaseReportViewData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="NumericFormats"
type="tns:NumericFormatsHashtable"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BackgroundColor" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="NumericFormatsHashtable">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="NumericFormat"
type="tns:NumericFormat"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="NumericFormat">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="MemberName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FormatType" type="tns:FormatType"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CurrencySymbol" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DecimalPlaces" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NegativeSymbol"
type="tns:FormatNegativeSymbol"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ShowZeroAs" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UseThousandsSeparator"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextLeft"
type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextRight"
type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="XmlFont">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="FontFamily" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="GraphicsUnit"
type="tns:GraphicsUnit"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:float"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Style" type="tns:FontStyle"/>
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</xs:complexType>
<xs:complexType name="Title">
    <xs:sequence>
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        <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string"/>
    </xs:sequence>
    <xs:attribute default="" name="Text" type="xs:string"/>
    <xs:attribute default="Center" name="Alignment" type="tns:AlignmentType"/>
</xs:complexType>
<xs:simpleType name="AlignmentType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Left"/>
        <xs:enumeration value="Right"/>
    </xs:restriction>
</xs:simpleType>

```

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    <xs:enumeration value="Center"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="AnalyticChartLegend">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string"/>
  </xs:sequence>
  <xs:attribute default="true" name="Visible" type="xs:boolean"/>
  <xs:attribute default="false" name="BorderVisible" type="xs:boolean"/>
  <xs:attribute default="Right" name="Location" type="tns:AnalyticLegendLocation"/>
</xs:complexType>
<xs:simpleType name="AnalyticLegendLocation">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="Top"/>
    <xs:enumeration value="Bottom"/>
    <xs:enumeration value="Left"/>
  </xs:restriction>
</xs:simpleType>
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  <xs:restriction base="xs:string">
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    <xs:enumeration value="Column"/>
    <xs:enumeration value="ColumnStacked"/>
    <xs:enumeration value="ColumnStacked100"/>
    <xs:enumeration value="Line"/>
    <xs:enumeration value="Pie"/>
    <xs:enumeration value="Bar"/>
    <xs:enumeration value="BarStacked"/>
    <xs:enumeration value="BarStacked100"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AnalyticMarkerStyle">
  <xs:restriction base="xs:string">
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    <xs:enumeration value="Square"/>
    <xs:enumeration value="Circle"/>
    <xs:enumeration value="Diamond"/>
    <xs:enumeration value="Triangle"/>
    <xs:enumeration value="Cross"/>
    <xs:enumeration value="Star4"/>
    <xs:enumeration value="Star5"/>
    <xs:enumeration value="Star6"/>
    <xs:enumeration value="Star10"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfTimeIntelligenceDataSource">
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nillable="true" type="tns:TimeIntelligenceDataSource"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfTimeIntelligenceFormula">
  <xs:sequence>
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nillable="true" type="tns:TimeIntelligenceFormula"/>
  </xs:sequence>
</xs:complexType>
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  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:AxisType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterEmpty" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PropertyList"
type="tns:StringCollection"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MemberSets"
type="tns:SerializableDictionary"/>
  </xs:sequence>

```

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        <xs:element minOccurs="1" maxOccurs="1" name="SortMode" type="tns:SortType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SortIndex" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SortTuple" type="tns:Tuple"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SortDescending" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SortPreservePeerGroups"
type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
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        <xs:enumeration value="Columns"/>
        <xs:enumeration value="Rows"/>
        <xs:enumeration value="Pages"/>
        <xs:enumeration value="Sections"/>
        <xs:enumeration value="Chapters"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SortType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Off"/>
        <xs:enumeration value="ByIndex"/>
        <xs:enumeration value="ByTuple"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="StringCollection">
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type="xs:string"/>
    </xs:sequence>
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<xs:complexType name="CalculatedMember">
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        <xs:extension base="tns:Member">
            <xs:attribute name="Expression" type="xs:string"/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmException">
    <xs:sequence>
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        <xs:element minOccurs="1" maxOccurs="1" name="EventLogged" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Message" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="OLAPReportView">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="QueryData"
type="qdata:OLAPQueryData"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ReportViewData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ParentReportViewLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShowInformationBar"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="QueryState" type="query:QueryState"/>
    </xs:sequence>
    <xs:attribute name="MeasureGroupName" type="xs:string"/>
    <xs:attribute name="Caption" type="xs:string"/>
    <xs:attribute name="Description" type="xs:string"/>
    <xs:attribute name="FormatDimensionUniqueName" type="xs:string"/>
</xs:complexType>
<xs:complexType name="OLAPQueryData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Parameters"
type="tns:ArrayOfParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MDX" type="xs:string"/>
    </xs:sequence>

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```

</xs:complexType>
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type="tns:Parameter"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Parameter">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultValue" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Name" type="xs:string"/>
</xs:complexType>
<xs:complexType name="QueryState">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Axes" type="tns:ArrayOfAxis"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsEnabled" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UnknownFilterParameter"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowDataSourceFormatting"
type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfAxis">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Axis" type="tns:Axis"/>
  </xs:sequence>
</xs:complexType>
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type="tns:AnalyticGridReportView"/>
<xs:complexType name="AnalyticGridReportView">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AnalyticBaseReportViewData">
      <xs:sequence>
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type="tns:ReportLayout"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShortenRowLabels"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="MaxRowLabelLength"
type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShortenColumnLabels"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="MaxColumnLabelLength"
type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:simpleType name="ReportLayout">
  <xs:restriction base="xs:string">
    <xs:enumeration value="TabularForm"/>
    <xs:enumeration value="CompactForm"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="PasReportViewData" nillable="true" type="tns:PasReportViewData"/>
<xs:complexType name="PasReportViewData">
  <xs:attribute name="ServerUrl" type="xs:string"/>
  <xs:attribute name="PageId" type="s1:guid" use="required"/>
  <xs:attribute name="PagePath" type="xs:string"/>
  <xs:attribute name="ConfigOptions" type="xs:string"/>
</xs:complexType>
<xs:element name="SqlReportViewData" nillable="true" type="tns:SqlReportViewData"/>
<xs:complexType name="SqlReportViewData">
  <xs:attribute name="ReportName" type="xs:string"/>
  <xs:attribute name="ServerAddress" type="xs:string"/>
  <xs:attribute name="ServerUrl" type="xs:string"/>
  <xs:attribute name="ReportPath" type="xs:string"/>

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```

    <xs:attribute name="ReportUrl" type="xs:string"/>
    <xs:attribute name="ReportMode" type="tns:SqlReportViewDataServerMode"
use="required"/>
    <xs:attribute name="ShowToolBar" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowParameters" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowDocMap" type="xs:boolean" use="required"/>
    <xs:attribute name="DocMapId" type="xs:string"/>
    <xs:attribute name="Zoom" type="xs:string"/>
    <xs:attribute name="Section" type="xs:string"/>
    <xs:attribute name="Format" type="xs:string"/>
  </xs:complexType>
  <xs:simpleType name="SqlReportViewDataServerMode">
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      <xs:enumeration value="ReportCenter"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ExcelDataSet">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CompressedDataTable"
type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ExcelFileBlob" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="TableMapping"
type="tns:DataTableMapping"/>
    </xs:sequence>
    <xs:attribute name="UseFirstRowHeaders" type="xs:boolean" use="required"/>
  </xs:complexType>
  <xs:complexType name="ExcelServicesData">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="WorkbookParameters"
type="tns:PropertyBag"/>
    </xs:sequence>
    <xs:attribute name="SharePointSite" type="xs:string"/>
    <xs:attribute name="DocumentLibrary" type="xs:string"/>
    <xs:attribute name="DocumentLibraryRootFolder" type="xs:string"/>
    <xs:attribute name="DocumentLibraryDisplay" type="xs:string"/>
    <xs:attribute name="FolderFileName" type="xs:string"/>
    <xs:attribute name="FileName" type="xs:string"/>
    <xs:attribute name="ItemName" type="xs:string"/>
    <xs:attribute name="ViewOptions" type="tns:ExcelServicesViewOptions" use="required"/>
    <xs:attribute name="ToolBarType" type="tns:ExcelServicesToolBarType" use="required"/>
    <xs:attribute name="ToolBarOptions" type="tns:ExcelServicesToolBarOptions"
use="required"/>
  </xs:complexType>
  <xs:simpleType name="ExcelServicesViewOptions">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="AllowInteractivity"/>
          <xs:enumeration value="AllowParameterModification"/>
          <xs:enumeration value="ShowWorkbookParameters"/>
          <xs:enumeration value="AllowSorting"/>
          <xs:enumeration value="AllowFiltering"/>
          <xs:enumeration value="AllowHyperlinks"/>
          <xs:enumeration value="AllowPivotSpecificOperations"/>
          <xs:enumeration value="AllowPeriodicRefresh"/>
          <xs:enumeration value="CloseWorkbookSessions"/>
          <xs:enumeration value="AllowScratchPadMode"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>
  <xs:simpleType name="ExcelServicesToolBarType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="FullToolBar"/>
      <xs:enumeration value="SummaryToolBar"/>
    </xs:restriction>
  </xs:simpleType>

```

```

<xs:simpleType name="ExcelServicesToolbarOptions">
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    <xs:simpleType>
      <xs:restriction base="xs:string">
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        <xs:enumeration value="AllowRefreshConnections"/>
        <xs:enumeration value="AllowRecalculation"/>
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  </xs:list>
</xs:simpleType>
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  <xs:sequence>
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  </xs:sequence>
</xs:complexType>
<xs:complexType name="MDXParameterDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Expression" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="MemberParameterDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Dimension" type="tns:Dimension"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Members" type="tns:ArrayOfMember"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultMembers"
type="tns:ArrayOfMember"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="NamedSetParameterDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Expression" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="SetOperation" nillable="true" type="tns:SetOperation"/>
<xs:complexType name="SetOperation" abstract="true">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue1" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue2" type="xs:double"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TupleSet" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TupleCaption" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterHierarchy" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterMeasure" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultMeasure" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Level" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelDepth" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberDefinition" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="EliminateMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="EliminateDescendantsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddAllMembersSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>

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</xs:complexType>
<xs:complexType name="AddParentSiblingsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddNamedSetSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddCalcMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Aggregate" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Caption" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDescendantsSubtreeSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDescendantsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelName" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDescendantsLeavesSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDefaultMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddFilterSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddChildrenSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddFilterTopBottomSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:element name="MemberSet" nillable="true" type="tns:MemberSet"/>
<xs:complexType name="MemberSet" abstract="true">
  <xs:attribute name="FilterEmpty" type="xs:boolean" use="required"/>
  <xs:attribute name="HierarchyType" type="tns:HierarchyType" use="required"/>

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    <xs:attribute name="Hierarchize" type="xs:boolean" use="required"/>
    <xs:attribute name="Distinct" type="xs:boolean" use="required"/>
    <xs:attribute name="HierarchyName" type="xs:string"/>
  </xs:complexType>
  <xs:simpleType name="HierarchyType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Standard"/>
      <xs:enumeration value="Measure"/>
      <xs:enumeration value="Time"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ArrayOfSetOperation">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="SetOperation" nillable="true"
type="tns:SetOperation"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="SerializableDictionary" nillable="true"
type="tns:SerializableDictionary"/>
  <xs:complexType name="SerializableDictionary">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Item" type="tns:Item"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="Item">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="Key" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Value" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="MemberList" nillable="true" type="tns:MemberList"/>
  <xs:complexType name="MemberList">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:MemberSet">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="memberList"
type="tns:ArrayOfString"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="MemberSetFormula">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:MemberSet">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="Operations"
type="tns:ArrayOfSetOperation"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:element name="StrategyMapViewData" nillable="true" type="tns:StrategyMapViewData"/>
  <xs:complexType name="StrategyMapViewData">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" default="None" name="ToolbarOptions"
type="tns:StrategyMapToolbarOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="VDX" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Version" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ParentLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ParentType"
type="tns:FirstClassObjectType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="StrategyMapToolbarOptions">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">

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        <xs:enumeration value="None"/>
        <xs:enumeration value="ShowToolBar"/>
        <xs:enumeration value="ShowPage"/>
        <xs:enumeration value="ShowScrollbars"/>
        <xs:enumeration value="ShowPageTabs"/>
    </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>
<xs:complexType name="TimeIntelligenceDataSource">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeIntelligenceDefinition">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Formulas"
type="tns:ArrayOfTimeIntelligenceFormula"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource"
type="tns:TimeIntelligenceDataSource"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSources"
type="tns:ArrayOfTimeIntelligenceDataSource"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeIntelligenceFormula">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Formula" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeIntelligenceMdxSettings">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:TimeIntelligenceSettings">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="ReferenceDimension"
type="tns:Dimension"/>
                <xs:element minOccurs="1" maxOccurs="1" name="ReferenceLevel"
type="tns:DateAggregationTypes"/>
                <xs:element minOccurs="0" maxOccurs="1" name="ReferenceMember"
type="tns:Member"/>
                <xs:element minOccurs="1" maxOccurs="1" name="ReferenceDateTime"
type="xs:dateTime"/>
                <xs:element minOccurs="0" maxOccurs="1" name="LevelBindings"
type="tns:ArrayOfTimeIntelligenceLevelBinding"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="TimeIntelligenceSettings" abstract="true">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Enabled" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfTimeIntelligenceLevelBinding">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeIntelligenceLevelBinding"
nillable="true" type="tns:TimeIntelligenceLevelBinding"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeIntelligenceLevelBinding">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Level"
type="tns:DateAggregationTypes"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeIntelligencePostFormulaDefinition">

```

```

        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource"
type="tns:DataSource"/>
          <xs:element minOccurs="0" maxOccurs="1" name="DataSources"
type="tns:ArrayOfDataSource"/>
        </xs:sequence>
      </xs:complexType>
      <xs:simpleType name="GraphicsUnit">
        <xs:restriction base="xs:string">
          <xs:enumeration value="World"/>
          <xs:enumeration value="Display"/>
          <xs:enumeration value="Pixel"/>
          <xs:enumeration value="Point"/>
          <xs:enumeration value="Inch"/>
          <xs:enumeration value="Document"/>
          <xs:enumeration value="Millimeter"/>
        </xs:restriction>
      </xs:simpleType>
      <xs:simpleType name="FontStyle">
        <xs:list>
          <xs:simpleType>
            <xs:restriction base="xs:string">
              <xs:enumeration value="Regular"/>
              <xs:enumeration value="Bold"/>
              <xs:enumeration value="Italic"/>
              <xs:enumeration value="Underline"/>
              <xs:enumeration value="Strikeout"/>
            </xs:restriction>
          </xs:simpleType>
        </xs:list>
      </xs:simpleType>
    </xs:schema>
    <xs:schema elementFormDefault="qualified"
targetNamespace="http://microsoft.com/wsdl/types/">
      <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:simpleType name="char">
        <xs:restriction base="xs:unsignedShort"/>
      </xs:simpleType>
    </xs:schema>
  </wsdl:types>
  <wsdl:portType name="PPSAuthoringServiceSoap">
    <wsdl:operation name="CreateDataSource">
      <wsdl:input message="tns:CreateDataSourceSoapIn"/>
      <wsdl:output message="tns:CreateDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="UpdateDataSource">
      <wsdl:input message="tns:UpdateDataSourceSoapIn"/>
      <wsdl:output message="tns:UpdateDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetDataSource">
      <wsdl:input message="tns:GetDataSourceSoapIn"/>
      <wsdl:output message="tns:GetDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="DeleteDataSource">
      <wsdl:input message="tns>DeleteDataSourceSoapIn"/>
      <wsdl:output message="tns>DeleteDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="CreateKpi">
      <wsdl:input message="tns:CreateKpiSoapIn"/>
      <wsdl:output message="tns:CreateKpiSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="UpdateKpi">
      <wsdl:input message="tns:UpdateKpiSoapIn"/>
      <wsdl:output message="tns:UpdateKpiSoapOut"/>
    </wsdl:operation>
  </wsdl:portType>

```

```

</wsdl:operation>
<wsdl:operation name="GetKpisFromScorecard">
  <wsdl:input message="tns:GetKpisFromScorecardSoapIn"/>
  <wsdl:output message="tns:GetKpisFromScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetKpi">
  <wsdl:input message="tns:GetKpiSoapIn"/>
  <wsdl:output message="tns:GetKpiSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteKpi">
  <wsdl:input message="tns:DeleteKpiSoapIn"/>
  <wsdl:output message="tns:DeleteKpiSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateScorecard">
  <wsdl:input message="tns:CreateScorecardSoapIn"/>
  <wsdl:output message="tns:CreateScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateScorecard">
  <wsdl:input message="tns:UpdateScorecardSoapIn"/>
  <wsdl:output message="tns:UpdateScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetScorecard">
  <wsdl:input message="tns:GetScorecardSoapIn"/>
  <wsdl:output message="tns:GetScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteScorecard">
  <wsdl:input message="tns:DeleteScorecardSoapIn"/>
  <wsdl:output message="tns:DeleteScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateFilter">
  <wsdl:input message="tns:CreateFilterSoapIn"/>
  <wsdl:output message="tns:CreateFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateFilter">
  <wsdl:input message="tns:UpdateFilterSoapIn"/>
  <wsdl:output message="tns:UpdateFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetFilter">
  <wsdl:input message="tns:GetFilterSoapIn"/>
  <wsdl:output message="tns:GetFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteFilter">
  <wsdl:input message="tns:DeleteFilterSoapIn"/>
  <wsdl:output message="tns:DeleteFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateIndicator">
  <wsdl:input message="tns:CreateIndicatorSoapIn"/>
  <wsdl:output message="tns:CreateIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateIndicator">
  <wsdl:input message="tns:UpdateIndicatorSoapIn"/>
  <wsdl:output message="tns:UpdateIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetIndicator">
  <wsdl:input message="tns:GetIndicatorSoapIn"/>
  <wsdl:output message="tns:GetIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteIndicator">
  <wsdl:input message="tns:DeleteIndicatorSoapIn"/>
  <wsdl:output message="tns:DeleteIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateReportView">
  <wsdl:input message="tns:CreateReportViewSoapIn"/>
  <wsdl:output message="tns:CreateReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateReportView">
  <wsdl:input message="tns:UpdateReportViewSoapIn"/>
  <wsdl:output message="tns:UpdateReportViewSoapOut"/>
</wsdl:operation>

```

```

<wsdl:operation name="GetReportView">
  <wsdl:input message="tns:GetReportViewSoapIn"/>
  <wsdl:output message="tns:GetReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteReportView">
  <wsdl:input message="tns:DeleteReportViewSoapIn"/>
  <wsdl:output message="tns:DeleteReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetAnalyticReportView">
  <wsdl:input message="tns:GetAnalyticReportViewSoapIn"/>
  <wsdl:output message="tns:GetAnalyticReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetLatestAnalyticReportVersion">
  <wsdl:input message="tns:GetLatestAnalyticReportVersionSoapIn"/>
  <wsdl:output message="tns:GetLatestAnalyticReportVersionSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SaveTemporaryAnalyticReport">
  <wsdl:input message="tns:SaveTemporaryAnalyticReportSoapIn"/>
  <wsdl:output message="tns:SaveTemporaryAnalyticReportSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetQueryResultMembers">
  <wsdl:input message="tns:GetQueryResultMembersSoapIn"/>
  <wsdl:output message="tns:GetQueryResultMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetAnnotation">
  <wsdl:input message="tns:GetAnnotationSoapIn"/>
  <wsdl:output message="tns:GetAnnotationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetAnnotationByID">
  <wsdl:input message="tns:GetAnnotationByIDSoapIn"/>
  <wsdl:output message="tns:GetAnnotationByIDSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetAllAnnotationsByScorecardLocation">
  <wsdl:input message="tns:GetAllAnnotationsByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:GetAllAnnotationsByScorecardLocationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateAnnotation">
  <wsdl:input message="tns:CreateAnnotationSoapIn"/>
  <wsdl:output message="tns:CreateAnnotationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateAnnotation">
  <wsdl:input message="tns:UpdateAnnotationSoapIn"/>
  <wsdl:output message="tns:UpdateAnnotationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteAnnotation">
  <wsdl:input message="tns>DeleteAnnotationSoapIn"/>
  <wsdl:output message="tns>DeleteAnnotationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="TrimAnnotationByScorecardLocation">
  <wsdl:input message="tns:TrimAnnotationByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByScorecardLocationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="TrimAnnotationByOwner">
  <wsdl:input message="tns:TrimAnnotationByOwnerSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByOwnerSoapOut"/>
</wsdl:operation>
<wsdl:operation name="TrimAnnotationUntouchedSince">
  <wsdl:input message="tns:TrimAnnotationUntouchedSinceSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationUntouchedSinceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetDatabaseNamesFromDataSource">
  <wsdl:input message="tns:GetDatabaseNamesFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDatabaseNamesFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetMdx">
  <wsdl:input message="tns:GetMdxSoapIn"/>
  <wsdl:output message="tns:GetMdxSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeNameInfos">

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```

    <wsdl:input message="tns:GetCubeNameInfosSoapIn"/>
    <wsdl:output message="tns:GetCubeNameInfosSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetPreviewDataSet">
    <wsdl:input message="tns:GetPreviewDataSetSoapIn"/>
    <wsdl:output message="tns:GetPreviewDataSetSoapOut"/>
</wsdl:operation>
<wsdl:operation name="TestConnection">
    <wsdl:input message="tns:TestConnectionSoapIn"/>
    <wsdl:output message="tns:TestConnectionSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeMetaData">
    <wsdl:input message="tns:GetCubeMetaDataSoapIn"/>
    <wsdl:output message="tns:GetCubeMetaDataSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeMetaDataForDataSource">
    <wsdl:input message="tns:GetCubeMetaDataForDataSourceSoapIn"/>
    <wsdl:output message="tns:GetCubeMetaDataForDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetDimensions">
    <wsdl:input message="tns:GetDimensionsSoapIn"/>
    <wsdl:output message="tns:GetDimensionsSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetDimensionsFromDataSource">
    <wsdl:input message="tns:GetDimensionsFromDataSourceSoapIn"/>
    <wsdl:output message="tns:GetDimensionsFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCube">
    <wsdl:input message="tns:GetCubeSoapIn"/>
    <wsdl:output message="tns:GetCubeSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeFromDataSource">
    <wsdl:input message="tns:GetCubeFromDataSourceSoapIn"/>
    <wsdl:output message="tns:GetCubeFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryDimensionRootMembers">
    <wsdl:input message="tns:QueryDimensionRootMembersSoapIn"/>
    <wsdl:output message="tns:QueryDimensionRootMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryDimensionRootMembersFromDataSource">
    <wsdl:input message="tns:QueryDimensionRootMembersFromDataSourceSoapIn"/>
    <wsdl:output message="tns:QueryDimensionRootMembersFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryTransformMembers">
    <wsdl:input message="tns:QueryTransformMembersSoapIn"/>
    <wsdl:output message="tns:QueryTransformMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryChildMembers">
    <wsdl:input message="tns:QueryChildMembersSoapIn"/>
    <wsdl:output message="tns:QueryChildMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersFromDataSource">
    <wsdl:input message="tns:QueryChildMembersFromDataSourceSoapIn"/>
    <wsdl:output message="tns:QueryChildMembersFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersByRangeFromDataSource">
    <wsdl:input message="tns:QueryChildMembersByRangeFromDataSourceSoapIn"/>
    <wsdl:output message="tns:QueryChildMembersByRangeFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryRelatedMember">
    <wsdl:input message="tns:QueryRelatedMemberSoapIn"/>
    <wsdl:output message="tns:QueryRelatedMemberSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryRelatedMemberFromDataSource">
    <wsdl:input message="tns:QueryRelatedMemberFromDataSourceSoapIn"/>
    <wsdl:output message="tns:QueryRelatedMemberFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryNamedSets">
    <wsdl:input message="tns:QueryNamedSetsSoapIn"/>

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```

    <wsdl:output message="tns:QueryNamedSetsSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="QueryNamedSetsFromDataSource">
    <wsdl:input message="tns:QueryNamedSetsFromDataSourceSoapIn" />
    <wsdl:output message="tns:QueryNamedSetsFromDataSourceSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GetAnnotationSetting">
    <wsdl:input message="tns:GetAnnotationSettingSoapIn" />
    <wsdl:output message="tns:GetAnnotationSettingSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="ValidateKpi">
    <wsdl:input message="tns:ValidateKpiSoapIn" />
    <wsdl:output message="tns:ValidateKpiSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="ValidateScorecard">
    <wsdl:input message="tns:ValidateScorecardSoapIn" />
    <wsdl:output message="tns:ValidateScorecardSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="ValidateSiteCollection">
    <wsdl:input message="tns:ValidateSiteCollectionSoapIn" />
    <wsdl:output message="tns:ValidateSiteCollectionSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GetCurrentCultureLcid">
    <wsdl:input message="tns:GetCurrentCultureLcidSoapIn" />
    <wsdl:output message="tns:GetCurrentCultureLcidSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GetCurrentUserInfo">
    <wsdl:input message="tns:GetCurrentUserInfoSoapIn" />
    <wsdl:output message="tns:GetCurrentUserInfoSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GenerateView">
    <wsdl:input message="tns:GenerateViewSoapIn" />
    <wsdl:output message="tns:GenerateViewSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GenerateViewDirect">
    <wsdl:input message="tns:GenerateViewDirectSoapIn" />
    <wsdl:output message="tns:GenerateViewDirectSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GetAsKpis">
    <wsdl:input message="tns:GetAsKpisSoapIn" />
    <wsdl:output message="tns:GetAsKpisSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="CreateDashboard">
    <wsdl:input message="tns:CreateDashboardSoapIn" />
    <wsdl:output message="tns:CreateDashboardSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="UpdateDashboard">
    <wsdl:input message="tns:UpdateDashboardSoapIn" />
    <wsdl:output message="tns:UpdateDashboardSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GetDashboard">
    <wsdl:input message="tns:GetDashboardSoapIn" />
    <wsdl:output message="tns:GetDashboardSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="DeleteDashboard">
    <wsdl:input message="tns>DeleteDashboardSoapIn" />
    <wsdl:output message="tns>DeleteDashboardSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="ImportDashboard">
    <wsdl:input message="tns:ImportDashboardSoapIn" />
    <wsdl:output message="tns:ImportDashboardSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="ExportDashboard">
    <wsdl:input message="tns:ExportDashboardSoapIn" />
    <wsdl:output message="tns:ExportDashboardSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GetParameterDisplayData">
    <wsdl:input message="tns:GetParameterDisplayDataSoapIn" />
    <wsdl:output message="tns:GetParameterDisplayDataSoapOut" />
  </wsdl:operation>

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</wsdl:operation>
<wsdl:operation name="QueryTimeIntelligence">
  <wsdl:input message="tns:QueryTimeIntelligenceSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryTimeIntelligenceDirect">
  <wsdl:input message="tns:QueryTimeIntelligenceDirectSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceDirectSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetRegisteredCustomFCOs">
  <wsdl:input message="tns:GetRegisteredCustomFCOsSoapIn"/>
  <wsdl:output message="tns:GetRegisteredCustomFCOsSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetListItems">
  <wsdl:input message="tns:GetListItemsSoapIn"/>
  <wsdl:output message="tns:GetListItemsSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetDependentElements">
  <wsdl:input message="tns:GetDependentElementsSoapIn"/>
  <wsdl:output message="tns:GetDependentElementsSoapOut"/>
</wsdl:operation>
</wsdl:portType>
<wsdl:binding name="PPSAuthoringServiceSoap" type="tns:PPSAuthoringServiceSoap">
  <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="CreateDataSource">
    <soap:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDataSource"
      style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="UpdateDataSource">
    <soap:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource"
      style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetDataSource">
    <soap:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDataSource"
      style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="DeleteDataSource">
    <soap:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDataSource"
      style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="CreateKpi">

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    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateKpi"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateKpi">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateKpi"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetKpisFromScorecard">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetKpisFromScorecard"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetKpi">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetKpi" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteKpi">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteKpi"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateScorecard">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateScorecard"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateScorecard">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateScorecard"
style="document"/>
    <wsdl:input>

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        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetScorecard">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetScorecard"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteScorecard">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteScorecard"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateFilter">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateFilter"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateFilter">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateFilter"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetFilter">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetFilter"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteFilter">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteFilter"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>

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        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateIndicator">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateIndicator"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateIndicator">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateIndicator"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetIndicator">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetIndicator"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteIndicator">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteIndicator"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateReportView">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateReportView"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateReportView">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateReportView"
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:operation name="GetReportView">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetReportView"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteReportView">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteReportView"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAnalyticReportView">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetLatestAnalyticReportVersion">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetLatestAnalyticReportVersi
on" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SaveTemporaryAnalyticReport">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetQueryResultMembers">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetQueryResultMembers"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAnnotation">

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    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnnotationByID">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationByID"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAllAnnotationsByScorecardLocation">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAllAnnotationsByScorecard
Location" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateAnnotation">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateAnnotation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateAnnotation">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateAnnotation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteAnnotation">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteAnnotation"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="TrimAnnotationByScorecardLocation">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByScorecardLoc
ation" style="document"/>

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    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="TrimAnnotationByOwner">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByOwner"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="TrimAnnotationUntouchedSince">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationUntouchedSince"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetDatabaseNamesFromDataSource">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDatabaseNamesFromDataSour
ce" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetMdx">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetMdx" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetCubeNameInfos">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetPreviewDataSet">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetPreviewDataSet"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>

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        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="TestConnection">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/TestConnection"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetCubeMetaData">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetCubeMetaDataForDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaDataForDataSource"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetDimensions">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensions"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetDimensionsFromDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetCube">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCube" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetCubeFromDataSource">

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    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeFromDataSource"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryDimensionRootMembers">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryDimensionRootMembersFromDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryTransformMembers">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryChildMembers">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersFromDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersByRangeFromDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFromDataSource" style="document"/>

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    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryRelatedMember">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryRelatedMemberFromDataSource">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSo
urce" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryNamedSets">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryNamedSetsFromDataSource">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSou
rce" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnnotationSetting">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ValidateKpi">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateKpi"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>

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        <wsdl:output>
          <soap:body use="literal"/>
        </wsdl:output>
      </wsdl:operation>
    <wsdl:operation name="ValidateScorecard">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateScorecard"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="ValidateSiteCollection">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCurrentCultureLcid">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCurrentUserInfo">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GenerateView">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateView"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GenerateViewDirect">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  </wsdl:service>

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</wsdl:operation>
<wsdl:operation name="GetAsKpis">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAsKpis"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateDashboard">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDashboard"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateDashboard">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetDashboard">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDashboard"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteDashboard">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDashboard"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ImportDashboard">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ImportDashboard"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ExportDashboard">

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    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ExportDashboard"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetParameterDisplayData">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryTimeIntelligence">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryTimeIntelligenceDirect">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetRegisteredCustomFCOs">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetListItems">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetListItems"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetDependentElements">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDependentElements"
style="document"/>

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    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
</wsdl:binding>
<wsdl:binding name="PPSAuthoringServiceSoap12" type="tns:PPSAuthoringServiceSoap">
  <soap12:binding transport="http://schemas.xmlsoap.org/soap/http"/>
  <wsdl:operation name="CreateDataSource">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDataSource"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="UpdateDataSource">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetDataSource">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDataSource"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="DeleteDataSource">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDataSource"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="CreateKpi">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateKpi"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="UpdateKpi">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateKpi"
style="document"/>

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    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetKpisFromScorecard">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetKpisFromScorecard"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetKpi">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetKpi" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="DeleteKpi">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteKpi"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="CreateScorecard">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateScorecard"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="UpdateScorecard">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateScorecard"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetScorecard">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetScorecard"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>

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        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteScorecard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteScorecard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateFilter">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateFilter"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateFilter">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateFilter"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetFilter">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetFilter"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteFilter">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteFilter"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="CreateIndicator">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateIndicator"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>

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    <wsdl:operation name="UpdateIndicator">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateIndicator"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetIndicator">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetIndicator"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteIndicator">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteIndicator"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateReportView">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateReportView"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateReportView">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateReportView"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetReportView">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetReportView"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteReportView">

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    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteReportView"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnalyticReportView">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetLatestAnalyticReportVersion">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetLatestAnalyticReportVersi
on" style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="SaveTemporaryAnalyticReport">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetQueryResultMembers">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetQueryResultMembers"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnnotation">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotation"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnnotationByID">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationByID"
style="document"/>

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    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetAllAnnotationsByScorecardLocation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAllAnnotationsByScorecard
      Location" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="CreateAnnotation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateAnnotation"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="UpdateAnnotation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateAnnotation"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="DeleteAnnotation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteAnnotation"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="TrimAnnotationByScorecardLocation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByScorecardLoc
      ation" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="TrimAnnotationByOwner">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByOwner"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>

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    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="TrimAnnotationUntouchedSince">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationUntouchedSince"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetDatabaseNamesFromDataSource">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDatabaseNamesFromDataSource"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetMdx">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetMdx" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetCubeNameInfos">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetPreviewDataSet">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetPreviewDataSet"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="TestConnection">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/TestConnection"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>

```

```

    <wsdl:operation name="GetCubeMetaData">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeMetaDataForDataSource">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaDataForDataSource"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDimensions">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensions"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDimensionsFromDataSource">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCube">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCube" style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeFromDataSource">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeFromDataSource"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryDimensionRootMembers">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers"
style="document"/>

```

```

    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryDimensionRootMembersFromDataSource">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryTransformMembers">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryChildMembers">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryChildMembersFromDataSource">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryChildMembersByRangeFromDataSource">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFromDataSource" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryRelatedMember">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>

```

```

    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryRelatedMemberFromDataSource">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSo
      urce" style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryNamedSets">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryNamedSetsFromDataSource">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSource
      " style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetAnnotationSetting">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="ValidateKpi">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateKpi"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="ValidateScorecard">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateScorecard"
      style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:output>

```

```

    </wsdl:operation>
    <wsdl:operation name="ValidateSiteCollection">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCurrentCultureLcid">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCurrentUserInfo">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GenerateView">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateView"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GenerateViewDirect">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAsKpis">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAsKpis"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateDashboard">

```

```

    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ImportDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ImportDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ExportDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ExportDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetParameterDisplayData">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData"
style="document"/>

```

```

    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryTimeIntelligence">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="QueryTimeIntelligenceDirect">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetRegisteredCustomFCOs">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetListItems">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetListItems"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetDependentElements">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDependentElements"
style="document"/>
    <wsdl:input>
      <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
</wsdl:binding>
<wsdl:message name="CreateAnnotationSoapIn">
  <wsdl:part name="parameters" element="tns:CreateAnnotation"/>
</wsdl:message>
<wsdl:message name="CreateAnnotationSoapOut">
  <wsdl:part name="parameters" element="tns:CreateAnnotationResponse"/>
</wsdl:message>

```

```

<wsdl:message name="CreateDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:CreateDashboard"/>
</wsdl:message>
<wsdl:message name="CreateDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:CreateDashboardResponse"/>
</wsdl:message>
<wsdl:message name="CreateDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:CreateDataSource"/>
</wsdl:message>
<wsdl:message name="CreateDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:CreateDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="CreateFilterSoapIn">
  <wsdl:part name="parameters" element="tns:CreateFilter"/>
</wsdl:message>
<wsdl:message name="CreateFilterSoapOut">
  <wsdl:part name="parameters" element="tns:CreateFilterResponse"/>
</wsdl:message>
<wsdl:message name="CreateIndicatorSoapIn">
  <wsdl:part name="parameters" element="tns:CreateIndicator"/>
</wsdl:message>
<wsdl:message name="CreateIndicatorSoapOut">
  <wsdl:part name="parameters" element="tns:CreateIndicatorResponse"/>
</wsdl:message>
<wsdl:message name="CreateKpiSoapIn">
  <wsdl:part name="parameters" element="tns:CreateKpi"/>
</wsdl:message>
<wsdl:message name="CreateKpiSoapOut">
  <wsdl:part name="parameters" element="tns:CreateKpiResponse"/>
</wsdl:message>
<wsdl:message name="CreateReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:CreateReportView"/>
</wsdl:message>
<wsdl:message name="CreateReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:CreateReportViewResponse"/>
</wsdl:message>
<wsdl:message name="CreateScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:CreateScorecard"/>
</wsdl:message>
<wsdl:message name="CreateScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:CreateScorecardResponse"/>
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<wsdl:message name="DeleteAnnotationSoapIn">
  <wsdl:part name="parameters" element="tns>DeleteAnnotation"/>
</wsdl:message>
<wsdl:message name="DeleteAnnotationSoapOut">
  <wsdl:part name="parameters" element="tns>DeleteAnnotationResponse"/>
</wsdl:message>
<wsdl:message name="DeleteDashboardSoapIn">
  <wsdl:part name="parameters" element="tns>DeleteDashboard"/>
</wsdl:message>
<wsdl:message name="DeleteDashboardSoapOut">
  <wsdl:part name="parameters" element="tns>DeleteDashboardResponse"/>
</wsdl:message>
<wsdl:message name="DeleteDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns>DeleteDataSource"/>
</wsdl:message>
<wsdl:message name="DeleteDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns>DeleteDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="DeleteFilterSoapIn">
  <wsdl:part name="parameters" element="tns>DeleteFilter"/>
</wsdl:message>
<wsdl:message name="DeleteFilterSoapOut">
  <wsdl:part name="parameters" element="tns>DeleteFilterResponse"/>
</wsdl:message>
<wsdl:message name="DeleteIndicatorSoapIn">
  <wsdl:part name="parameters" element="tns>DeleteIndicator"/>
</wsdl:message>

```

```

<wsdl:message name="DeleteIndicatorSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteIndicatorResponse"/>
</wsdl:message>
<wsdl:message name="DeleteKpiSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteKpi"/>
</wsdl:message>
<wsdl:message name="DeleteKpiSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteKpiResponse"/>
</wsdl:message>
<wsdl:message name="DeleteReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteReportView"/>
</wsdl:message>
<wsdl:message name="DeleteReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteReportViewResponse"/>
</wsdl:message>
<wsdl:message name="DeleteScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteScorecard"/>
</wsdl:message>
<wsdl:message name="DeleteScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteScorecardResponse"/>
</wsdl:message>
<wsdl:message name="ExportDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:ExportDashboard"/>
</wsdl:message>
<wsdl:message name="ExportDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:ExportDashboardResponse"/>
</wsdl:message>
<wsdl:message name="GenerateViewDirectSoapIn">
  <wsdl:part name="parameters" element="tns:GenerateViewDirect"/>
</wsdl:message>
<wsdl:message name="GenerateViewDirectSoapOut">
  <wsdl:part name="parameters" element="tns:GenerateViewDirectResponse"/>
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  <wsdl:part name="parameters" element="tns:GenerateView"/>
</wsdl:message>
<wsdl:message name="GenerateViewSoapOut">
  <wsdl:part name="parameters" element="tns:GenerateViewResponse"/>
</wsdl:message>
<wsdl:message name="GetAllAnnotationsByScorecardLocationSoapIn">
  <wsdl:part name="parameters" element="tns:GetAllAnnotationsByScorecardLocation"/>
</wsdl:message>
<wsdl:message name="GetAllAnnotationsByScorecardLocationSoapOut">
  <wsdl:part name="parameters" element="tns:GetAllAnnotationsByScorecardLocationResponse"/>
</wsdl:message>
<wsdl:message name="GetAnalyticReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:GetAnalyticReportView"/>
</wsdl:message>
<wsdl:message name="GetAnalyticReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:GetAnalyticReportViewResponse"/>
</wsdl:message>
<wsdl:message name="GetAnnotationByIdSoapIn">
  <wsdl:part name="parameters" element="tns:GetAnnotationById"/>
</wsdl:message>
<wsdl:message name="GetAnnotationByIdSoapOut">
  <wsdl:part name="parameters" element="tns:GetAnnotationByIdResponse"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingHttpGetIn"/>
<wsdl:message name="GetAnnotationSettingHttpGetOut">
  <wsdl:part name="Body" element="tns:AnnotationSetting"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingHttpPostIn"/>
<wsdl:message name="GetAnnotationSettingHttpPostOut">
  <wsdl:part name="Body" element="tns:AnnotationSetting"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingSoapIn">
  <wsdl:part name="parameters" element="tns:GetAnnotationSetting"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingSoapOut">

```

```

    <wsdl:part name="parameters" element="tns:GetAnnotationSettingResponse"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSoapIn">
  <wsdl:part name="parameters" element="tns:GetAnnotation"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSoapOut">
  <wsdl:part name="parameters" element="tns:GetAnnotationResponse"/>
</wsdl:message>
<wsdl:message name="GetAsKpisSoapIn">
  <wsdl:part name="parameters" element="tns:GetAsKpis"/>
</wsdl:message>
<wsdl:message name="GetAsKpisSoapOut">
  <wsdl:part name="parameters" element="tns:GetAsKpisResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:GetCubeFromDataSource"/>
</wsdl:message>
<wsdl:message name="GetCubeFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:GetCubeFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataForDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataForDataSource"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataForDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataForDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataSetSoapIn">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataSet"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataSetSoapOut">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataSetResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeNameInfosSoapIn">
  <wsdl:part name="parameters" element="tns:GetCubeNameInfos"/>
</wsdl:message>
<wsdl:message name="GetCubeNameInfosSoapOut">
  <wsdl:part name="parameters" element="tns:GetCubeNameInfosResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeSoapIn">
  <wsdl:part name="parameters" element="tns:GetCube"/>
</wsdl:message>
<wsdl:message name="GetCubeSoapOut">
  <wsdl:part name="parameters" element="tns:GetCubeResponse"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidHttpGetIn"/>
<wsdl:message name="GetCurrentCultureLcidHttpGetOut">
  <wsdl:part name="Body" element="tns:int"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidHttpPostIn"/>
<wsdl:message name="GetCurrentCultureLcidHttpPostOut">
  <wsdl:part name="Body" element="tns:int"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidSoapIn">
  <wsdl:part name="parameters" element="tns:GetCurrentCultureLcid"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidSoapOut">
  <wsdl:part name="parameters" element="tns:GetCurrentCultureLcidResponse"/>
</wsdl:message>
<wsdl:message name="GetCurrentUserInfoSoapIn">
  <wsdl:part name="parameters" element="tns:GetCurrentUserInfo"/>
</wsdl:message>
<wsdl:message name="GetCurrentUserInfoSoapOut">
  <wsdl:part name="parameters" element="tns:GetCurrentUserInfoResponse"/>
</wsdl:message>
<wsdl:message name="GetDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:GetDashboard"/>
</wsdl:message>
<wsdl:message name="GetDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:GetDashboardResponse"/>

```

```

</wsdl:message>
<wsdl:message name="GetDatabaseNamesFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:GetDatabaseNamesFromDataSource"/>
</wsdl:message>
<wsdl:message name="GetDatabaseNamesFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:GetDatabaseNamesFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:GetDataSource"/>
</wsdl:message>
<wsdl:message name="GetDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:GetDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetDependentElementsSoapIn">
  <wsdl:part name="parameters" element="tns:GetDependentElements"/>
</wsdl:message>
<wsdl:message name="GetDependentElementsSoapOut">
  <wsdl:part name="parameters" element="tns:GetDependentElementsResponse"/>
</wsdl:message>
<wsdl:message name="GetDimensionsFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:GetDimensionsFromDataSource"/>
</wsdl:message>
<wsdl:message name="GetDimensionsFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:GetDimensionsFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetDimensionsSoapIn">
  <wsdl:part name="parameters" element="tns:GetDimensions"/>
</wsdl:message>
<wsdl:message name="GetDimensionsSoapOut">
  <wsdl:part name="parameters" element="tns:GetDimensionsResponse"/>
</wsdl:message>
<wsdl:message name="GetFilterSoapIn">
  <wsdl:part name="parameters" element="tns:GetFilter"/>
</wsdl:message>
<wsdl:message name="GetFilterSoapOut">
  <wsdl:part name="parameters" element="tns:GetFilterResponse"/>
</wsdl:message>
<wsdl:message name="GetIndicatorSoapIn">
  <wsdl:part name="parameters" element="tns:GetIndicator"/>
</wsdl:message>
<wsdl:message name="GetIndicatorSoapOut">
  <wsdl:part name="parameters" element="tns:GetIndicatorResponse"/>
</wsdl:message>
<wsdl:message name="GetKpisFromScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:GetKpisFromScorecard"/>
</wsdl:message>
<wsdl:message name="GetKpisFromScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:GetKpisFromScorecardResponse"/>
</wsdl:message>
<wsdl:message name="GetKpiSoapIn">
  <wsdl:part name="parameters" element="tns:GetKpi"/>
</wsdl:message>
<wsdl:message name="GetKpiSoapOut">
  <wsdl:part name="parameters" element="tns:GetKpiResponse"/>
</wsdl:message>
<wsdl:message name="GetLatestAnalyticReportVersionSoapIn">
  <wsdl:part name="parameters" element="tns:GetLatestAnalyticReportVersion"/>
</wsdl:message>
<wsdl:message name="GetLatestAnalyticReportVersionSoapOut">
  <wsdl:part name="parameters" element="tns:GetLatestAnalyticReportVersionResponse"/>
</wsdl:message>
<wsdl:message name="GetListItemsHttpGetIn">
  <wsdl:part name="listUrl" type="xs:string"/>
</wsdl:message>
<wsdl:message name="GetListItemsHttpGetOut">
  <wsdl:part name="Body" element="tns:ArrayOfFirstClassElement"/>
</wsdl:message>
<wsdl:message name="GetListItemsHttpPostIn">
  <wsdl:part name="listUrl" type="xs:string"/>

```

```

</wsdl:message>
<wsdl:message name="GetListItemsHttpPostOut">
  <wsdl:part name="Body" element="tns:ArrayOfFirstClassElement"/>
</wsdl:message>
<wsdl:message name="GetListItemsSoapIn">
  <wsdl:part name="parameters" element="tns:GetListItems"/>
</wsdl:message>
<wsdl:message name="GetListItemsSoapOut">
  <wsdl:part name="parameters" element="tns:GetListItemsResponse"/>
</wsdl:message>
<wsdl:message name="GetMdxSoapIn">
  <wsdl:part name="parameters" element="tns:GetMdx"/>
</wsdl:message>
<wsdl:message name="GetMdxSoapOut">
  <wsdl:part name="parameters" element="tns:GetMdxResponse"/>
</wsdl:message>
<wsdl:message name="GetParameterDisplayDataSoapIn">
  <wsdl:part name="parameters" element="tns:GetParameterDisplayData"/>
</wsdl:message>
<wsdl:message name="GetParameterDisplayDataSoapOut">
  <wsdl:part name="parameters" element="tns:GetParameterDisplayDataResponse"/>
</wsdl:message>
<wsdl:message name="GetPreviewDataSetSoapIn">
  <wsdl:part name="parameters" element="tns:GetPreviewDataSet"/>
</wsdl:message>
<wsdl:message name="GetPreviewDataSetSoapOut">
  <wsdl:part name="parameters" element="tns:GetPreviewDataSetResponse"/>
</wsdl:message>
<wsdl:message name="GetQueryResultMembersSoapIn">
  <wsdl:part name="parameters" element="tns:GetQueryResultMembers"/>
</wsdl:message>
<wsdl:message name="GetQueryResultMembersSoapOut">
  <wsdl:part name="parameters" element="tns:GetQueryResultMembersResponse"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpGetIn">
  <wsdl:part name="type" type="xs:string"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpGetOut">
  <wsdl:part name="Body" element="tns:ArrayOfCustomFCODefinition"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpPostIn">
  <wsdl:part name="type" type="xs:string"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpPostOut">
  <wsdl:part name="Body" element="tns:ArrayOfCustomFCODefinition"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsSoapIn">
  <wsdl:part name="parameters" element="tns:GetRegisteredCustomFCOs"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsSoapOut">
  <wsdl:part name="parameters" element="tns:GetRegisteredCustomFCOsResponse"/>
</wsdl:message>
<wsdl:message name="GetReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:GetReportView"/>
</wsdl:message>
<wsdl:message name="GetReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:GetReportViewResponse"/>
</wsdl:message>
<wsdl:message name="GetScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:GetScorecard"/>
</wsdl:message>
<wsdl:message name="GetScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:GetScorecardResponse"/>
</wsdl:message>
<wsdl:message name="ImportDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:ImportDashboard"/>
</wsdl:message>
<wsdl:message name="ImportDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:ImportDashboardResponse"/>

```

```

</wsdl:message>
<wsdl:message name="QueryChildMembersByRangeFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryChildMembersByRangeFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersByRangeFromDataSourceSoapOut">
  <wsdl:part name="parameters"
element="tns:QueryChildMembersByRangeFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryChildMembersFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryChildMembersFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersSoapIn">
  <wsdl:part name="parameters" element="tns:QueryChildMembers"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersSoapOut">
  <wsdl:part name="parameters" element="tns:QueryChildMembersResponse"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryDimensionRootMembersFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersFromDataSourceSoapOut">
  <wsdl:part name="parameters"
element="tns:QueryDimensionRootMembersFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersSoapIn">
  <wsdl:part name="parameters" element="tns:QueryDimensionRootMembers"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersSoapOut">
  <wsdl:part name="parameters" element="tns:QueryDimensionRootMembersResponse"/>
</wsdl:message>
<wsdl:message name="QueryNamedSetsFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryNamedSetsFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryNamedSetsFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryNamedSetsFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryNamedSetsSoapIn">
  <wsdl:part name="parameters" element="tns:QueryNamedSets"/>
</wsdl:message>
<wsdl:message name="QueryNamedSetsSoapOut">
  <wsdl:part name="parameters" element="tns:QueryNamedSetsResponse"/>
</wsdl:message>
<wsdl:message name="QueryRelatedMemberFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryRelatedMemberFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryRelatedMemberFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryRelatedMemberFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryRelatedMemberSoapIn">
  <wsdl:part name="parameters" element="tns:QueryRelatedMember"/>
</wsdl:message>
<wsdl:message name="QueryRelatedMemberSoapOut">
  <wsdl:part name="parameters" element="tns:QueryRelatedMemberResponse"/>
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceDirectSoapIn">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceDirect"/>
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceDirectSoapOut">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceDirectResponse"/>
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligence"/>
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceResponse"/>
</wsdl:message>

```

```

<wsdl:message name="QueryTransformMembersSoapIn">
  <wsdl:part name="parameters" element="tns:QueryTransformMembers"/>
</wsdl:message>
<wsdl:message name="QueryTransformMembersSoapOut">
  <wsdl:part name="parameters" element="tns:QueryTransformMembersResponse"/>
</wsdl:message>
<wsdl:message name="SaveTemporaryAnalyticReportSoapIn">
  <wsdl:part name="parameters" element="tns:SaveTemporaryAnalyticReport"/>
</wsdl:message>
<wsdl:message name="SaveTemporaryAnalyticReportSoapOut">
  <wsdl:part name="parameters" element="tns:SaveTemporaryAnalyticReportResponse"/>
</wsdl:message>
<wsdl:message name="TestConnectionSoapIn">
  <wsdl:part name="parameters" element="tns:TestConnection"/>
</wsdl:message>
<wsdl:message name="TestConnectionSoapOut">
  <wsdl:part name="parameters" element="tns:TestConnectionResponse"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerHttpGetIn">
  <wsdl:part name="Owner" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerHttpGetOut"/>
<wsdl:message name="TrimAnnotationByOwnerHttpPostIn">
  <wsdl:part name="Owner" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerHttpPostOut"/>
<wsdl:message name="TrimAnnotationByOwnerSoapIn">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByOwner"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerSoapOut">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByOwnerResponse"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByScorecardLocationSoapIn">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByScorecardLocation"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByScorecardLocationSoapOut">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByScorecardLocationResponse"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpGetIn">
  <wsdl:part name="untouchedSince" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpGetOut"/>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpPostIn">
  <wsdl:part name="untouchedSince" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpPostOut"/>
<wsdl:message name="TrimAnnotationUntouchedSinceSoapIn">
  <wsdl:part name="parameters" element="tns:TrimAnnotationUntouchedSince"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceSoapOut">
  <wsdl:part name="parameters" element="tns:TrimAnnotationUntouchedSinceResponse"/>
</wsdl:message>
<wsdl:message name="UpdateAnnotationSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateAnnotation"/>
</wsdl:message>
<wsdl:message name="UpdateAnnotationSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateAnnotationResponse"/>
</wsdl:message>
<wsdl:message name="UpdateDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateDashboard"/>
</wsdl:message>
<wsdl:message name="UpdateDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateDashboardResponse"/>
</wsdl:message>
<wsdl:message name="UpdateDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateDataSource"/>
</wsdl:message>
<wsdl:message name="UpdateDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateDataSourceResponse"/>

```

```

</wsdl:message>
<wsdl:message name="UpdateFilterSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateFilter"/>
</wsdl:message>
<wsdl:message name="UpdateFilterSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateFilterResponse"/>
</wsdl:message>
<wsdl:message name="UpdateIndicatorSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateIndicator"/>
</wsdl:message>
<wsdl:message name="UpdateIndicatorSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateIndicatorResponse"/>
</wsdl:message>
<wsdl:message name="UpdateKpiSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateKpi"/>
</wsdl:message>
<wsdl:message name="UpdateKpiSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateKpiResponse"/>
</wsdl:message>
<wsdl:message name="UpdateReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateReportView"/>
</wsdl:message>
<wsdl:message name="UpdateReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateReportViewResponse"/>
</wsdl:message>
<wsdl:message name="UpdateScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateScorecard"/>
</wsdl:message>
<wsdl:message name="UpdateScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateScorecardResponse"/>
</wsdl:message>
<wsdl:message name="ValidateKpiSoapIn">
  <wsdl:part name="parameters" element="tns:ValidateKpi"/>
</wsdl:message>
<wsdl:message name="ValidateKpiSoapOut">
  <wsdl:part name="parameters" element="tns:ValidateKpiResponse"/>
</wsdl:message>
<wsdl:message name="ValidateScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:ValidateScorecard"/>
</wsdl:message>
<wsdl:message name="ValidateScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:ValidateScorecardResponse"/>
</wsdl:message>
<wsdl:message name="ValidateSiteCollectionSoapIn">
  <wsdl:part name="parameters" element="tns:ValidateSiteCollection"/>
</wsdl:message>
<wsdl:message name="ValidateSiteCollectionSoapOut">
  <wsdl:part name="parameters" element="tns:ValidateSiteCollectionResponse"/>
</wsdl:message>
</wsdl:definitions>

```



## 7 Appendix B: Full XML Schema

| Schema name  | Prefix     | Section             |
|--|------------|---------------------|
| http://performancepoint.microsoft.com/OLAPQueryData            | qdata      | <a href="#">7.1</a> |
| http://schemas.microsoft.com/performancepoint/2007/03/query    | query      | <a href="#">7.2</a> |
| http://www.microsoft.com/performancepoint/scorecards/Analytics | Unassigned | <a href="#">7.3</a> |

For ease of implementation, the following sections provide the full XML schema for this protocol.

### 7.1 http://performancepoint.microsoft.com/OLAPQueryData Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://performancepoint.microsoft.com/OLAPQueryData"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://www.microsoft.com/performancepoint/scorecards"/>
  <xs:complexType name="OLAPQueryData">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:ArrayOfParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MDX" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

### 7.2 http://schemas.microsoft.com/performancepoint/2007/03/query Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/performancepoint/2007/03/query"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://www.microsoft.com/performancepoint/scorecards"/>
  <xs:complexType name="QueryState">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Axes" type="tns:ArrayOfAxis"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsEnabled" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="UnknownFilterParameter"
type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ShowDataSourceFormatting"
type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

### 7.3 http://www.microsoft.com/performancepoint/scorecards/Analytics Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards/Analytics"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://www.microsoft.com/performancepoint/scorecards"/>
```

```
<xs:complexType name="Tuple">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="memberDictionary"
type="tns:SerializableDictionary"/>
  </xs:sequence>
</xs:complexType>
</xs:schema>
```

Preliminary

## 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 updates to those products.

- PerformancePoint Services in Microsoft SharePoint Server 2010
- Microsoft SharePoint Server 2010
- Microsoft SharePoint Server 2013
- Microsoft SharePoint Server 2016
- Microsoft SharePoint Server 2019 Preview

Exceptions, if any, are noted in this section. If an update version, service pack or Knowledge Base (KB) number appears with a product name, the behavior changed in that update. The new behavior also applies to subsequent updates 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 2.2.2.1.3](#): The content store refers to a SharePoint Server 2010 list.

<2> [Section 2.2.2.1.3](#): Data sources are stored in **document libraries** in SharePoint Server 2010.

<3> [Section 2.2.2.1.3](#): The content store refers to a SharePoint Server 2010 list.

<4> [Section 2.2.2.1.3](#): The content store refers to a SharePoint Server 2010 list.

<5> [Section 2.2.2.1.3](#): The content store refers to a SharePoint Server 2010 list.

<6> [Section 2.2.2.1.3](#): The content store refers to a SharePoint Server 2010 list.

<7> [Section 2.2.2.1.3](#): The content store refers to a SharePoint Server 2010 list.

<8> [Section 2.2.4](#): This type is available only in SharePoint Server 2013.

<9> [Section 2.2.4](#): This type is available only in SharePoint Server 2013.

<10> [Section 2.2.4](#): This type is available only in SharePoint Server 2013.

<11> [Section 2.2.4.48](#): This type is available only in SharePoint Server 2013.

<12> [Section 2.2.4.75](#): This type is available only in SharePoint Server 2013.

<13> [Section 2.2.4.83](#): The values for **UnderlyingElementTypeName** for the built-in element types in PerformancePoint Services 2010 are:

| Type              | Value  |
|-------------------|--|
| <b>Scorecard</b>  | Microsoft.PerformancePoint.Scorecards.Scorecard,<br>Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral,<br>PublicKeyToken=71e9bce111e9429c  |
| <b>ReportView</b> | Microsoft.PerformancePoint.Scorecards.ReportView,<br>Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral,<br>PublicKeyToken=71e9bce111e9429c |

| Type      | Value  |
|-----------|--|
| 1. Filter | Microsoft.PerformancePoint.Scorecards.Filter,<br>Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral,<br>PublicKeyToken=71e9bce111e9429c |

<14> [Section 2.2.4.85](#): The list data source refers to a SharePoint Server 2010 list.

<15> [Section 2.2.4.99](#): For SharePoint Server 2010, the content store is a SharePoint list.

<16> [Section 2.2.4.123](#): The registered **transforms** can be found in the web.config file under the CustomViewTransforms section. The content for the PropertyBag of each transform is determined by what is chosen to be passed in through the parameter.

<17> [Section 2.2.4.167](#): In PerformancePoint Services 2010, the identifier is generated by obtaining the **UTF-8** formatted bytes of the indicator's relative **URL**, computing an **MD5** hash of those bytes and formatting the 16 byte hash to a **GUID** value format.

<18> [Section 2.2.4.180](#): This type is available only in SharePoint Server 2013.

<19> [Section 2.2.5.6](#): Beta2 or RTM refers to PerformancePoint Services 2010 Beta2 or PerformancePoint Services in Microsoft SharePoint Server 2010.

<20> [Section 2.2.5.6](#): Beta1 refers to PerformancePoint Services 2010 Beta1.

<21> [Section 2.2.5.6](#): Microsoft Office PerformancePoint Server 2007

<22> [Section 3.1.2](#): In PerformancePoint Services 2010, the default query timeout is 300 seconds.

<23> [Section 3.1.4](#): This operation is available only in SharePoint Server 2013.

<24> [Section 3.1.4](#): This operation is available only in SharePoint Server 2013.

<25> [Section 3.1.4.16](#): The content store refers to a SharePoint Server 2010 list.

<26> [Section 3.1.4.17](#): This operation is available only in SharePoint Server 2013.

<27> [Section 3.1.4.21](#): PerformancePoint Services 2010 returns a GetAnalyticReportViewResponse (see section 3.1.4.44.2.2) containing a null value instead of a **report view** for failures unrelated to security restrictions.

<28> [Section 3.1.4.33](#): PerformancePoint Services 2010 returns an empty **GetDashboardResponse** (see section 3.1.4.33.2.2) for failures unrelated to security restrictions.

<29> [Section 3.1.4.35](#): PerformancePoint Services 2010 returns a **GetDataSourceResponse** (section 3.1.4.35.2.2) containing a null value instead of a **data source (1)** for failures unrelated to security restrictions.

<30> [Section 3.1.4.36](#): PerformancePoint Services 2010 returns a **GetDependentElementResponse** (see section 3.1.4.35.2.2) containing an **DependentElementInfo** that contains a **FirstClassElement** collection (see section 2.2.4.34) with null elements for failures unrelated to security restrictions.

<31> [Section 3.1.4.39](#): PerformancePoint Services 2010 returns an empty **GetFilterResponse** element (section 3.1.4.39.2.2) for failures unrelated to security restrictions.

<32> [Section 3.1.4.40](#): PerformancePoint Services 2010 returns a **GetIndicatorResponse** element (section 3.1.4.40.2.2) containing a null value instead of an **Indicator** complex type (section 2.2.4.125) for failures unrelated to security restrictions.

<33> [Section 3.1.4.41](#): PerformancePoint Services 2010 returns a **GetKpiResponse** (see section 3.1.4.44.2.2) containing a null value instead of a **Kpi** for failures unrelated to security restrictions.

<34> [Section 3.1.4.44](#): PerformancePoint Services 2010 returns a **GetListItemsResponse** (see section 3.1.4.44.2.2) containing an **ArrayOfFirstClassElements** (see section 2.2.4.34) with null elements for failures unrelated to security restrictions.

<35> [Section 3.1.4.45](#): PerformancePoint Services 2010 returns a **GetMdxResponse** with an empty **GetMdxResult** for failures unrelated to security restrictions.

<36> [Section 3.1.4.46](#): In PerformancePoint Services 2010, **GetParameterDisplayData** receives the **GridViewData** (section [2.2.4.121](#)) as an untyped object referenced by the **customData** parameter on the **GetParameterDisplayDataIn** message (section [3.1.4.46.1.1](#)).

<37> [Section 3.1.4.47.2.1](#): PerformancePoint Services 2010 supports preview data sets for the following data source types: **ExcelWorkbook**, **ExcelServicesWorkbook**, **SqlTabularDataSource**, and **SPListDataSource**.

<38> [Section 3.1.4.50](#): PerformancePoint Services 2010 returns a **GetReportViewResponse** (see section 3.1.4.44.2.2) containing a null value instead of a report view for failures unrelated to security restrictions.

<39> [Section 3.1.4.51](#): PerformancePoint Services 2010 returns an empty **GetScorecardResponse** (see section 3.1.4.51.2.2) for failures unrelated to security restrictions.

<40> [Section 3.1.4.52](#): This operation is available only in SharePoint Server 2013.

<41> [Section 3.1.4.58](#): PerformancePoint Services 2010 returns a **QueryNamedSetsResponse** (section [3.1.4.58.2.2](#)) containing a **null** value instead of **named sets** for failures unrelated to security restrictions.

<42> [Section 3.1.4.59](#): PerformancePoint Services 2010 returns a **QueryNamedSetsFromDataSourceResponse** (see section [3.1.4.59.1.2](#)) containing an empty collection of named sets if null is passed in for the data source (1).

<43> [Section 3.1.4.60](#): PerformancePoint Services 2010 returns a **QueryRelatedMemberResponse** (see section 3.1.4.44.2.2) containing null for failures unrelated to security restrictions.

<44> [Section 3.1.4.61](#): PerformancePoint Services 2010 returns a **QueryRelatedMemberFromDataSourceResponse** element (section [3.1.4.61.2.2](#)) containing null, if null is passed in for the data source (1).

<45> [Section 3.1.4.62](#): PerformancePoint Services 2010 returns a **QueryTimeIntelligenceResponse** (see section 3.1.4.44.2.2) containing an Unknown error if an invalid **RepositoryLocation** (see section 2.2.4.161) is passed in.

## 9 Change Tracking

This section identifies changes that were made to this document since the last release. Changes are classified as Major, Minor, or None.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements.
- A document revision that captures changes to protocol functionality.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **None** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the relevant technical content is identical to the last released version.

The changes made to this document are listed in the following table. For more information, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com).

| Section  | Description                         | Revision class |
|--|-------------------------------------|----------------|
| <a href="#">8</a> Appendix C: Product Behavior | Updated list of supported products. | Major          |

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