

[MS-PPSAS]: PerformancePoint Services Authoring Service Protocol Specification

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Revision Summary

| Date | Revision History | Revision Class | Comments |
|------------|------------------|----------------|--|
| 07/13/2009 | 0.1 | Major | Initial Availability |
| 08/28/2009 | 0.2 | Editorial | Revised and edited the technical content |
| 11/06/2009 | 0.3 | Editorial | Revised and edited the technical content |
| 02/19/2010 | 1.0 | Major | Updated and revised the technical content |
| 03/31/2010 | 1.01 | Editorial | Revised and edited the technical content |
| 04/30/2010 | 1.02 | Editorial | Revised and edited the technical content |
| 06/07/2010 | 1.03 | Editorial | Revised and edited the technical content |
| 06/29/2010 | 1.04 | Editorial | Changed language and formatting in the technical content. |
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| 09/27/2010 | 1.05 | No change | No changes to the meaning, language, or formatting of the technical content. |
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Preliminary

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Preliminary

1 Introduction

This document specifies the PerformancePoint Authoring Services Protocol, which 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 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in RFC 2119. Sections 1.5 and 1.9 are also normative but cannot contain those terms. All other sections and examples in this specification are informative.

1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

GUID
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
object
Secure Sockets Layer (SSL)
server
UTF-8

The following terms are defined in [\[MS-OFCGLOS\]](#):

Analysis Services
attribute hierarchy
AutoFilter
banding
base64 encoding
cell
child
context site
cube
current user
current version
dashboard
data point
data source
descendant
dimension
display folder
document library
drilldown
feature
filter
formula
hierarchy
hyperlink
item
key performance indicator (KPI)
level
list
list item
login name

major version
master page
MD5
measure
measure group
member
multidimensional expression (MDX)
OLAP
OLAP calculated member
PivotChart
PivotTable
pixel
Portable Network Graphics (PNG)
published item
query
report
report view
rollup
score
scorecard
server-relative URL
Simple Object Access Protocol (SOAP)
site
site collection
slice
SOAP action
SOAP body
SOAP fault
SOAP fault detail
subsite
target
target application
ToolTip
transform
trusted location
tuple
UI culture
Unified Modeling Language (UML)
Uniform Resource Locator (URL)
Web Part
Web Services Description Language (WSDL)
whitespace
workbook
WSDL message
WSDL operation
XML document
XML namespace
XML namespace prefix
XML schema

The following terms are specific to this document:

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.

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

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.

named set: A grouping of dimension members or items from a data source that are named and treated as a single unit and 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.

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.

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.

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.

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.

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

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

1.2 References

References to Microsoft Open Specifications documentation do not include a publishing year because links are to the latest version of the technical documents, which are updated frequently. References to other documents include a publishing year when one is available.

1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact dochelp@microsoft.com. We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

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

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

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

- [MS-PRIMEPF] Microsoft Corporation, "[Deployment Package Format Specification](#)".
- [MS-SSAS] Microsoft Corporation, "[SQL Server Analysis Services Protocol Specification](#)".
- [MS-SSWPS] Microsoft Corporation, "[Secure Store Web Service Protocol Specification](#)".
- [MS-VGSFF] Microsoft Corporation, "[Visio Graphics Service File Format \(.vdw\) Specification](#)".
- [MS-XLS] Microsoft Corporation, "[Excel Binary File Format \(.xls\) Structure Specification](#)".
- [MS-XLSX] Microsoft Corporation, "[Excel Extensions to the Office Open XML SpreadsheetML File Format \(.xlsx\) Specification](#)".
- [RFC1738] Berners-Lee, T., Masinter, L., and McCahill, M., "Uniform Resource Locators (URL)", RFC 1738, December 1994, <http://www.ietf.org/rfc/rfc1738.txt>
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- [RFC2616] Fielding, R., Gettys, J., Mogul, J., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, <http://www.ietf.org/rfc/rfc2616.txt>
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- [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.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "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)

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[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)".

[MS-OFGLS] Microsoft Corporation, "[Microsoft Office Master Glossary](#)".

[RFC2818] Rescorla, E., "HTTP Over TLS", RFC 2818, May 2000, <http://www.ietf.org/rfc/rfc2818.txt>

1.3 Protocol Overview (Synopsis)

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:

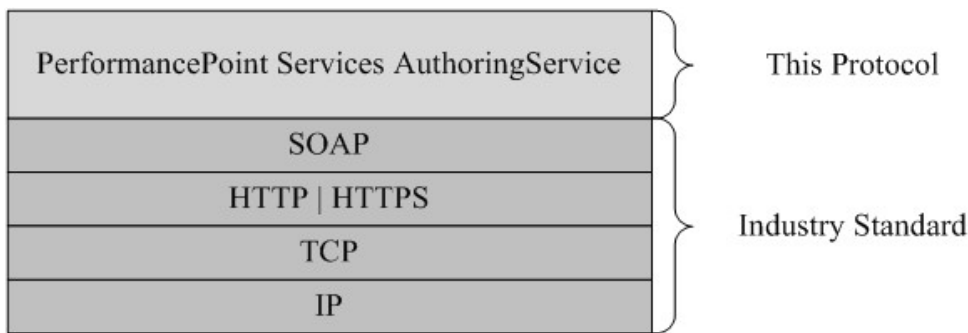


Figure 1: This protocol in relation to other protocols

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, 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 to render the data in an alternative fashion, such as for a mobile device (see section [3.1.4.18](#)).
- 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 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.

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 | http://schemas.xmlsoap.org/wsdl/http/ | |
| q1 | http://microsoft.com/wsdl/types/ | |
| qdata | http://performancepoint.microsoft.com/OLAPQueryData | |
| query | http://schemas.microsoft.com/performancepoint/2007/03/query | |
| soap | http://schemas.xmlsoap.org/wsdl/soap/ | [SOAP1.1] |
| soap12 | http://schemas.xmlsoap.org/wsdl/soap12/ | [SOAP1.2/1] [SOAP1.2/2] |
| tns | http://www.microsoft.com/performancepoint/scorecards | |
| wsdl | http://schemas.xmlsoap.org/wsdl/ | [WSDL] |
| xs | http://www.w3.org/2001/XMLSchema | [XMLSCHEMA1] |

| Prefix | Namespace URI | Reference |
|--------|---------------|------------------------------|
| | | [XMLSCHEMA2] |

2.2.2 Messages

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

| Message | Description |
|------------|---|
| SOAP fault | The operations defined in section 3.1.4 return a SOAP fault as specified in section 2.2.2.1 . |

2.2.2.1 Faults

In the event of an application error, the server 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 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 |
|---|--|
| AnnotationDeleteNotEnabled | Deletion of scorecard annotations is not enabled. |
| AnnotationNotEnabled | Scorecard annotations are not enabled. |
| BIMonitoringApplicationProxyNotFound | The server is not configured properly or is not functioning correctly. |
| BIMonitoringApplicationProxyThreadAborted | The request has timed out or has been aborted. |
| BIMonitoringApplicationUnavailable | The server is not configured properly or is not functioning correctly. |
| CannotGetWindowsIdentity | The server is not configured properly or is not functioning correctly. |
| CannotGetWindowsIdentityForNonWindowsClaim | The server cannot locate credentials for the user. |
| CannotPublishReadOnlyElement | The publish event of a read only element was aborted. |
| CreateReturnedNull | The server is not configured properly or is not |

| Error code | Description |
|--|---|
| | functioning correctly. |
| DatabaseConnectionFailed | The server is not configured properly or is not functioning correctly. |
| DataSourceConnectionFailed | See section 2.2.2.1.3 . |
| DataSourceConnectionUnsupported | See section 2.2.2.1.3 . |
| DataSourceCubeNotFound | The user does not have access to the cube specified by a DataSource (section 2.2.4.85) or the cube does not exist |
| DataSourceDatabaseNotFound | See section 2.2.2.1.3 . |
| DataSourceHostNotFound | See section 2.2.2.1.3 . |
| DataSourceNotRegistered | The server is not configured properly or is not functioning correctly. |
| DataSourceProviderMessage | An error occurred in a data source. |
| ErrorCode_InvalidNameInfo | An attribute of a NameInfo (section 2.2.4.150) is invalid. |
| ExtInvalidSetting | A value for setting on the server is invalid. |
| FCOCreateFailed | See section 2.2.2.1.3 . |
| FCOCreateFailedListAccess | See section 2.2.2.1.3 . |
| FCOCreateFailedListType | See section 2.2.2.1.3 . |
| FCOCreateFailedNameCollision | See section 2.2.2.1.3 . |
| FCODeleteFailed | See section 2.2.2.1.3 . |
| FCODeleteFailedListAccess | See section 2.2.2.1.3 . |
| FCOReadFailed | See section 2.2.2.1.3 . |
| FCOReadFailedListAccess | See section 2.2.2.1.3 . |
| FCOUpdateFailed | See section 2.2.2.1.3 . |
| FCOUpdateFailedListAccess | See section 2.2.2.1.3 . |
| FCOUpdateFailedListType | See section 2.2.2.1.3 . |
| FCOUpdateFailedNameCollision | See section 2.2.2.1.3 . |
| ImpersonationLoginFailure | The shared account credentials are not available. |
| ImportAsKpisException | An error occurred while importing a KPI from Analysis Services . |
| IncompatibleSiteDomain | The server is not configured properly or is not functioning correctly. |

| Error code | Description |
|---|--|
| InvalidAdomdDataSource | An attribute of an Analysis Services DataSource (section 2.2.4.85) is not valid. |
| InvalidAliasName | The AliasName attribute of a NameInfo (section 2.2.4.13) is invalid. |
| InvalidAnnotation | An attribute of an Annotation (section 2.2.4.18) is invalid. |
| InvalidBpmPropertyHyperlink | A FirstClassElement (section 2.2.4.99) contains an invalid hyperlink property |
| InvalidBpmPropertyList | An attribute of a BpmPropertyList (section 2.2.4.69) is invalid. |
| InvalidBpmPropertyText | An attribute of a BpmPropertyText (section 2.2.4.72) is invalid. |
| InvalidBuiltinIndicatorOperation | See section 2.2.2.1.3 . |
| InvalidCategoryName | See section 2.2.2.1.3 . |
| InvalidCharacters | The UniqueName of a BpmProperty (section 2.2.4.62) contains invalid characters. |
| InvalidComment | An attribute of an Comment (section 2.2.4.76) is invalid |
| InvalidConnectionString | Unable to connect to an Analysis Services data source. |
| InvalidDataSource | See section 2.2.2.1.3 . |
| InvalidDefaultMemberName | The DefaultMemberName attribute of a Dimension (section 2.2.4.90) is invalid. |
| InvalidElement | See section 2.2.2.1.3 . |
| InvalidElementField | See section 2.2.2.1.3 . |
| InvalidEndPoint | An attribute of an EndPoint (section 2.2.4.95) is invalid. |
| InvalidFirstClassElementField | See section 2.2.2.1.3 . |
| InvalidId | A KPI or scorecard is missing or not available to the current user. |
| InvalidIndicator | See section 2.2.2.1.3 . |
| InvalidIndicatorBand | See section 2.2.2.1.3 . |
| InvalidItemType | See section 2.2.2.1.3 . |
| InvalidKpi | See section 2.2.2.1.3 . |
| InvalidKpiMeasure | An attribute of a KPIMeasure (section 2.2.4.129) is invalid. |

| Error code | Description |
|---|---|
| InvalidMember | An attribute of a Member (section 2.2.4.135) is invalid. |
| InvalidNamedSet | An attribute of a NamedSet (section 2.2.4.148) is invalid. |
| InvalidNamedSetSetting | A named set expression is invalid. |
| InvalidObject | See section 2.2.2.1.3 . |
| InvalidOverrideFormatProperties | An attribute of a KpiNumberFormatProperties (section 2.2.4.130) is invalid. |
| InvalidPermission | See section 2.2.2.1.3 . |
| InvalidPermissionAdmin | See section 2.2.2.1.3 . |
| InvalidQueryChildMembers | The specified member (3) name is invalid. |
| InvalidQueryDimensionRootMembers | The specified dimension name is invalid. |
| InvalidReportView | See section 2.2.2.1.3 . |
| InvalidReportViewCubeName | The cube name in an MDX query is not equal to the cube specified in the Analysis Services DataSource (section 2.2.4.85) used to run the query. |
| InvalidSetting | See section 2.2.2.1.3 . |
| InvalidStatusFilterBandIndex | The BandIndex attribute of a StatusFilter (section 2.2.4.168) is invalid. |
| InvalidTextLength | A string attribute is null, empty or exceeds its specified maximum length. |
| InvalidTimeIntelligenceConfiguration | The time intelligence configuration of a data source (1) is invalid. |
| InvalidTimeIntelligenceFormula | A time intelligence expression is invalid. |
| InvalidTimeIntelligenceSetting | An attribute of a TimeIntelligenceDataSource (2.2.4.172), TimeIntelligenceFormula (2.2.4.174), TimeIntelligenceLevelBinding (2.2.4.175), or TimeIntelligenceMdxSettings (2.2.4.176) is invalid. |
| InvalidUrl | The server is not configured properly or is not functioning correctly. |
| InvalidVersion | An attribute of a ElementVersion (section 2.2.4.92) is invalid |
| MissingConnectionString | The server is not configured properly or is not functioning correctly. |
| NewSetting | An attempt was made to update a non-existent setting. |

| Error code | Description |
|--|--|
| NotAParameterizableControl | The server is not configured properly or is not functioning correctly. |
| NotTrustedLocation | See section 2.2.2.1.3 |
| OperationContextNull | The server is not configured properly or is not functioning correctly. |
| ParameterDataProviderNotRegistered | The parameter data provider is not registered. |
| QueryTimeout | A timeout occurred while querying a data source (1). |
| RepositoryLocationAbsoluteUrl | See section 2.2.2.1.3 . |
| RepositoryLocationEmpty | See section 2.2.2.1.3 . |
| RepositoryLocationUrlLength | See section 2.2.2.1.3 . |
| SharedAccountMisconfigured | The shared account credentials are not configured correctly. |
| TimeIntelligenceNotConfigured | A DataSource is not configured for time intelligence. |
| TimeIntelligenceNotSupported | A data source (1) does not support time intelligence. |
| UnableToLoadCustomDataSource | The server is not configured properly or is not functioning correctly. |
| UnableToLoadCustomParameterDataProvider | The server is not configured properly or is not functioning correctly. |
| UnableToLoadCustomViewTransform | The server is not configured properly or is not functioning correctly. |
| UnableToLoadFCODao | The server is not configured properly or is not functioning correctly. |
| Unknown | 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 in the **ErrorCode** element of the **BpmException** ([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 |
|--|---|
| DataSourceConnectionFailed | A connection to the data source (1) could not be established. |
| DatabaseConnectionNotOpen | The connection to the data source (1) has been lost. |
| DataSourceConnectionUnsupported | The host server defined by the data source (1) is not a supported server, or the server refused the connection. |

| Error code | Description |
|---|---|
| DataSourceDatabaseNotFound | A connection to the database defined by the data source (1) could not be established. |
| DataSourceHostNotFound | A connection to the host server defined by the data source (1) could not be established. This indicates a network or security issue. |
| FCOCreateFailed | There are inadequate permissions to create this object. |
| FCOCreateFailedListAccess | The content store<1> containing this object no longer exists. The object cannot be created. |
| FCOCreateFailedListType | The object cannot be created<2>. |
| FCOCreateFailedNameCollision | A data source (1) with the requested name already exists. Choose a different name. |
| FCODeleteFailed | 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. |
| FCODeleteFailedListAccess | There are inadequate permissions to delete this object. The object cannot be deleted. |
| FCOReadFailed | There are inadequate permissions to read this object or it cannot be read. |
| FCOReadFailedListAccess | The content store<5> containing this object no longer exists or there are inadequate permissions to view it. |
| FCOUpdateFailed | An update of this object failed. |
| FCOUpdateFailedListAccess | The content store<6> containing this object no longer exists or there are inadequate permissions to view it. The object cannot be updated. |
| FCOUpdateFailedListType | The content store<7> containing this object does not support the type of object being updated. The object cannot be updated. |
| FCOUpdateFailedNameCollision | An update this object failed because of a name collision. |
| InvalidBuiltinIndicatorOperation | Current operation on the indicator cannot be finished because the indicator's URL is invalid. |
| InvalidCategoryName | Current operation on the object cannot be finished because the object's containing folder is invalid. |
| InvalidDataSource | Current operation on the data source (1) cannot be finished because the data source (1) has failed validation. |
| InvalidElement | Current operation on the Element cannot be finished because the Element has failed basic validation. |
| InvalidElementField | Current operation on the Element cannot be finished because the Element has an invalid identifier. |
| InvalidFirstClassElementField | Current operation on the object cannot be finished because some of the object's data fields are invalid. |

| Error code | Description |
|--------------------------------------|--|
| InvalidIndicator | Current operation on the indicator cannot be finished because the indicator has failed validation. |
| InvalidIndicatorBand | Current operation on the indicator cannot be finished because the indicator has failed validation. |
| InvalidItemType | Current operation on the object cannot be finished because the object's corresponding SharePoint item does not have the expected content type. |
| InvalidKpi | Current operation on the KPI cannot be finished because the KPI has failed validation. |
| InvalidObject | Current operation on the Element cannot be finished because the Element has failed validation. |
| InvalidPermission | The user does not have sufficient permissions to complete the request. |
| InvalidPermissionAdmin | The user does not have sufficient administrative permissions to complete the request. |
| InvalidReportView | Current operation on the report view cannot be finished because the report view has failed validation. |
| InvalidSetting | Current operation on the object cannot be finished because some of the object's UI appearance data fields are invalid. |
| NotTrustedLocation | The location of the data source (1) or object is not configured as trusted. |
| RepositoryLocationEmpty | The URL address supplied in the RepositoryLocation (section 2.2.4.162) contains the empty string. |
| RepositoryLocationUrlLength | The URL address supplied in the RepositoryLocation (section 2.2.4.162) exceeds the maximum length of 2048 characters. |
| RepositoryLocationAbsoluteUrl | The URL address supplied in the RepositoryLocation (section 2.2.4.162) is absolute, when it MUST be relative, as specified in [RFC1808] . |
| Unknown | 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 |
|--------------------|--|
| AddAllMembersSetOp | This complex type extends the SetOperation (section |

| Complex Type | Description |
|----------------------------|--|
| | 2.2.4.166) type. It defines an operation to add all members, at the level specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddCalcMemberSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add a calculated member (3), specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddChildrenSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add child members (3), of the member (3) specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddDefaultMemberSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add the default member to a MemberSet (see section 2.2.4.145). |
| AddDescendantsLeavesSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add leaf descendant members (3), of the member (3) specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddDescendantsSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add descendant members (3), at the level specified by LevelName to the member (3) specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddDescendantsSubtreeSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add descendant members (3), from all levels subordinate to the member specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddFilterSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add a value filter set operation to a MemberSet (see section 2.2.4.145). |
| AddFilterTopBottomSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add a top or bottom filter set operation to a MemberSet (see section 2.2.4.145). |
| AddMemberSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add a member (3), specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddNamedSetSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add a named set, specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |
| AddParentSiblingsSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to add the parent's siblings (members (3)), of the member (3) specified by Name (see section 2.2.4.166), to a MemberSet (see section 2.2.4.145). |

| Complex Type | Description |
|----------------------------|--|
| AliasInfo | The AliasInfo complex type maps a KpiMeasure to a string. This mapping defines an alias used to simplify the display and definition of formulas used in calculated metrics. The format MUST be as follows: |
| AnalyticBaseReportViewData | The AnalyticBaseReportViewData is a complex type that contains the base report view details for analytic reports. |
| AnalyticChartLegend | The AnalyticChartLegend complex type specifies a chart legend. |
| AnalyticChartReportView | The AnalyticChartReportView is a complex type that contains the chart type report view details for analytic reports. |
| AnalyticGridReportView | This object defines how analytic grid reports are displayed to users. |
| Annotation | 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 (see section 3.1.4.1) and updated using UpdateAnnotation (see section 3.1.4.68). |
| AnnotationComment | 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). |
| ArrayOfAliasInfo | This complex type specifies an array of AliasInfo complex types (see section 2.2.4.13). |
| ArrayOfAnnotationComment | The ArrayOfAnnotationComment complex type specifies an array of AnnotationComment elements (see section 2.2.4.19). |
| ArrayOfAxis | A collection of axes used in a QueryState object (see section 2.2.4.159). |
| ArrayOfBpmProperty | The ArrayOfBpmProperty complex type specifies an array of BpmProperty elements (see section 2.2.4.62). |
| ArrayOfBpmPropertyListItem | The ArrayOfBpmPropertyListItem complex type specifies an array of items in a list property. |
| ArrayOfChoice1 | The ArrayOfChoice1 complex type specifies an array of property values. The type of the element in the array MUST be one of decimal, ArrayOfMember , ArrayOfMemberTransform , dateTime , string, double, guid , char , or int . |
| ArrayOfComment | The ArrayOfComment complex type specifies an array of comments. |
| ArrayOfConfiguredView | The ArrayOfConfiguredView complex type specifies an array of view definitions for a scorecard. |
| ArrayOfDashboardElement | The ArrayOfDashboardElement complex type specifies an array of DashboardElement (see section 2.2.4.80). |
| ArrayOfDataColumnMapping | The ArrayOfDataColumnMapping complex type specifies an array of DataColumnMapping (see section 2.2.4.84). |

| Complex Type | Description |
|-----------------------------------|--|
| ArrayOfDataSource | The ArrayOfDataSource complex type specifies an array of data sources. |
| ArrayOfDecimal | The ArrayOfDecimal complex type specifies an array of Decimal . |
| ArrayOfDefaultDimensionSetting | The ArrayOfDefaultDimensionSetting complex type specifies an array of DefaultDimensionSetting (see section 2.2.4.87). |
| ArrayOfDimension | The ArrayOfDimension complex type specifies an array of dimension elements. |
| ArrayOfEndPoint | The ArrayOfEndPoint complex type specifies an array of connection termination points for a consumer Web Part such as a report view or a scorecard. |
| ArrayOfFirstClassElement | The ArrayOfFirstClassElement complex type specifies an array of first-class objects. |
| ArrayOfGridCell | The ArrayOfGridCell complex type specifies an array of cells used by a grid view such as the scorecard view (section 2.2.4.121). |
| ArrayOfGridDisplayElement | An array of elements for a scorecard cell. |
| ArrayOfGridHeaderItem | The ArrayOfGridHeaderItem complex type specifies an array of headers for a scorecard. |
| ArrayOfGridViewTransformReference | The ArrayOfGridViewTransformReference complex type specifies an array of references to a grid view transform. |
| ArrayOfHierarchy | The ArrayOfHierarchy complex type specifies an array of hierarchy values for a dimension. |
| ArrayOfIndicatorBand | The ArrayOfIndicatorBand complex type specifies an array of indicator bands. |
| ArrayOfKpi | The ArrayOfKpi complex type specifies an array of KPI (section 2.2.4.128) for a scorecard. |
| ArrayOfKpiMeasure | The ArrayOfKpiMeasure complex type specifies an array of Kpi measures . |
| ArrayOfLevel | The ArrayOfLevel complex type defines an array of Level (section 2.2.4.131) complex type. |
| ArrayOfMeasure | The ArrayOfMeasure complex type defines an array of Measure (section 2.2.4.134) complex type. |
| ArrayOfMember | The ArrayOfMember complex type defines an array of Member (section 2.2.4.135) complex type. |
| ArrayOfMemberTransform | The ArrayOfMemberTransform complex type defines an array of MemberTransform (section 2.2.4.147) complex type. |
| ArrayOfNamedSet | The ArrayOfNamedSet complex type defines an array of NamedSet (section 2.2.4.148) complex type. |
| ArrayOfNameInfo | The ArrayOfNameInfo complex type <8> defines an array of |

| Complex Type | Description |
|-------------------------------------|--|
| | NameInfo (section 2.2.4.150) element. |
| ArrayOfParameter | A collection of parameters used in an analytic query . |
| ArrayOfParameterDefinition | The ArrayOfParameterDefinition complex type defines an array of ParameterDefinition (section 2.2.4.156) complex type. |
| ArrayOfParameterMapping | The ArrayOfParameterMapping complex type defines an array of ParameterMapping (section 2.2.4.157) complex type. |
| ArrayOfPropertyBag | The ArrayOfPropertyBag complex type defines an array of PropertyBag (section 2.2.4.159) elements. |
| ArrayOfSetOperation | The ArrayOfSetOperation complex type specifies an array of SetOperation elements (see section 2.2.4.166) |
| ArrayOfString | The ArrayOfString complex type specifies an array of string. |
| ArrayOfTarget | The ArrayOfTarget complex type specifies an array of Target (section 2.2.4.171) complex types. |
| ArrayOfTimeIntelligenceDataSource | A collection of time intelligence data source reference used in time intelligence parameter definitions. |
| ArrayOfTimeIntelligenceFormula | A collection of time intelligence parameter formulas. |
| ArrayOfTimeIntelligenceLevelBinding | The ArrayOfTimeIntelligenceLevelBinding complex type specifies an array of time intelligence binding elements. |
| Axis | The Axis complex type specifies information about an axis in a query result. |
| Banding | This complex type represents the banding settings of the KPI target . |
| BpmException | This complex type contains the details of a server alert. |
| BpmProperty | This BpmProperty complex type is the abstract base type for BpmPropertyDate , BpmPropertyDecimal , BpmPropertyHyperlink , BpmPropertyHyperlink2 , BpmPropertyLinkBase , BpmPropertyList , BpmPropertyListItem , BpmPropertyLongText , BpmPropertyText and BpmPropertyUser . |
| BpmPropertyBool | The BpmPropertyBool complex type defines a Boolean property. It extends the BpmProperty (section 2.2.4.62) type. |
| BpmPropertyDate | The BpmPropertyDate complex type defines a Date property. It extends the BpmProperty (section 2.2.4.62) type. |
| BpmPropertyDecimal | The BpmPropertyDecimal complex type defines a Decimal property. It extends the BpmProperty (section 2.2.4.62) type. |
| BpmPropertyHyperlink | 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). |
| BpmPropertyHyperlink2 | This complex type defines a Hyperlink property. This type extends BpmPropertyLinkBase (section 2.2.4.68). |

| Complex Type | Description |
|---------------------------|--|
| | This type is used to specify Hyperlinks as part of annotations for types that extend FirstClassElement (section 2.2.4.99). |
| BpmPropertyLinkBase | The BpmPropertyLinkBase complex type defines a Hyperlink property. It extends the BpmProperty (section 2.2.4.62) type. |
| BpmPropertyList | The BmpPropertyList complex type specifies zero or one of the ArrayOfBpmPropertyListItem (section 2.2.4.24) complex type. It extends the BpmProperty (section 2.2.4.62) type. |
| BpmPropertyListItem | This complex type specifies a name-value pair. |
| BpmPropertyLongText | This complex type defines a Long Text property. The type extends BpmProperty (section 2.2.4.62). |
| BpmPropertyText | This complex type defines a Text property. The type extends BpmProperty (section 2.2.4.62). |
| BpmPropertyUser | This complex type defines a User property. The type extends BpmProperty (section 2.2.4.62). |
| CalculatedFormulaInfo | 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. |
| CalculatedMember | Represents an OLAP calculated member in a dimension (see section 2.2.4.90).<9> |
| Comment | 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). |
| ConfiguredView | 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. |
| Cube | This complex type specifies the structure of a cube. It extends the complex type NameInfo (section 2.2.4.150). |
| Dashboard | 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). |
| DashboardElement | 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 2.2.4.164) and is the base type for DashboardElementContainer (section 2.2.4.81) and DashboardItem (section 2.2.4.83). |
| DashboardElementContainer | 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 . |

| Complex Type | Description |
|--------------------------------------|--|
| | Each zone on a dashboard page is specified by a DashboardElementContainer . The DashboardElementContainer complex type extends the DashboardElement (section 2.2.4.80) complex type. |
| DashboardElementSize | This complex type specifies the width or height of a DashboardElement (section 2.2.4.80). |
| DashboardItem | The DashboardItem complex type specifies a single report , scorecard, or filter on a dashboard page. DashboardItem extends the DashboardElement (section 2.2.4.80). |
| DataColumnMapping | The DataColumnMapping complex type specifies dimensional mapping information for a column of data. |
| DataSource | The Datasource complex type specifies a connection to an external data provider. |
| DataTableMapping | The DataTableMapping complex type specifies how data from tabular data sources is mapped to multidimensional data. |
| DefaultDimensionSetting | Specifies a default set of members in a dimension (1). It extends the Dimension (see section 2.2.4.90) type. |
| DictionaryWrapperOfStringGridCell | This complex type specifies a collection of ArrayOfGridCells (see section 2.2.4.36) with associated string keys. |
| DictionaryWrapperOfStringPropertyBag | This complex type specifies a collection of ArrayOfPropertyBags with associated string keys. |
| Dimension | This complex type specifies the structure of a dimension (1). It extends the complex type NameInfo (section 2.2.4.150). |
| Element | This abstract class specifies basic metadata about an item. This class is the base class for FirstClassElement and SecondClassElement . |
| ElementVersion | This complex type specifies the version information used to distinguish different instances of a FirstClassElement . |
| EliminateDescendantsSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to eliminate descendant members (3), of the member (3) specified by Name (see section 2.2.4.166), from a MemberSet (see section 2.2.4.145). |
| EliminateMemberSetOp | This complex type extends the SetOperation (section 2.2.4.166) type. It defines an operation to eliminate a member (3), specified by Name (see section 2.2.4.166), from a MemberSet (see section 2.2.4.145). |
| EndPoint | 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 reportview or a scorecard. |
| ExcelDataSet | Specifies the Excel workbook ([MS-XLS]) data for an ExcelWorkbook data source. |
| ExcelServicesData | Describes an Excel Services ([MS-ESP]) data connection used by |

| Complex Type | Description |
|---------------------------------|---|
| | Excel Services data sources and Excel Services reports. |
| Filter | This complex type specifies a filter. |
| FirstClassElement | This abstract class represents an object that is versionable. This is the base class for Dashboard, DataSource , Scorecard , ReportView , Kpi, and Indicator . |
| GridCell | Specifies a single cell used by the scorecard grid view and the analytic grid view. The following UML class diagram shows the GridCell and its relationship with other classes. |
| GridCellSet | 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 . |
| GridColor | This class represents the grid color for the GridCell contents. |
| GridDisplayElement | 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: |
| GridDisplayElementActual | Specifies the GridDisplayElement of a KPI's actual value in a scorecard cell. Inherits from the GridDisplayElementNumber. |
| GridDisplayElementAggregation | Specifies the GridDisplayElement of an aggregated value in a scorecard cell. Inherits from the GridDisplayElementNumber. |
| GridDisplayElementHyperLink | Specifies the GridDisplayElement of a KPI's hyperlink property in a cell. Inherits from the GridDisplayElement. |
| GridDisplayElementIndicator | Specifies the image of an indicator for the GridDisplayElement in a scorecard cell. Inherits from the GridDisplayElement. |
| GridDisplayElementIndicatorText | Specifies the descriptive name of an indicator for the GridDisplayElement in a scorecard cell. Descriptive name of the IndicatorBand is the ToolTip property of the IndicatorBand , for example: "off target" |
| GridDisplayElementNumber | Specifies a numeric GridDisplayElement in a scorecard cell. This is a base class for the following complex types GridDisplayElementsActual , GridDisplayElementTarget , GridDisplayElementScore , GridDisplayElementVariance |
| GridDisplayElementScore | Specifies the GridDisplayElement of the KPI target's score in a scorecard cell. Inherits from the GridDisplayElementNumber. |
| GridDisplayElementTarget | Specifies the GridDisplayElement of a KPI's target value in a scorecard cell. Inherits from the GridDisplayElementNumber. |
| GridDisplayElementText | Specifies the GridDisplayElement of a text value in a scorecard cell. Inherits from the GridDisplayElement. |
| GridDisplayElementVariance | Specifies the GridDisplayElement of a KPI target's variance value in a scorecard cell. Inherits from the GridDisplayElementNumber. |

| Complex Type | Description |
|----------------------------|---|
| GridFontInfo | This class represents the font display options for the GridCell contents. |
| GridFormatInfo | This class represents the display format settings for the GridCell contents. |
| GridHeaderItem | GridHeaderItem specifies the header that represents a row or a column node in a scorecard. |
| GridIndicatorSettings | Defines the settings for the Indicator in the Target field. |
| GridScoreSettings | Defines the settings for the score in the Target field. |
| GridTargetSettings | Defines the display settings for the Target column. |
| GridVarianceSettings | Defines the settings for the variance in the Target column. |
| GridViewData | Specifies the data structure that represents the scorecard view. The following diagram illustrates the scorecard view representation: The GridViewData (see section 2.2.4.121) 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. |
| GridViewDefinition | Specifies the definition of grid-based scorecard view. The following picture illustrates the role of a GridViewDefinition in a scorecard. 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 properties respectively. |
| GridViewTransformReference | This class specifies one transform operation to be applied to a GridViewData instance. |
| Hierarchy | This complex type specifies a hierarchy . It extends the complex type NameInfo (section 2.2.4.150). |
| Indicator | A set of visualizations that represent how the actual value of a KPI compares against its target value. |
| IndicatorBand | This is a visualization representing one state of an indicator . |
| Item | Represents a key-value pair in a SerializableDictionary (section 2.2.4.165). |
| Kpi | A key performance indicator (KPI) is contained in a scorecard. |
| KpiMeasure | The KpiMeasure complex type is contained in a key performance indicator (KPI). |
| KpiNumberFormatProperties | Used for custom formatting of key performance indicator (KPI) |

| Complex Type | Description |
|--------------------------------|--|
| | measure values. |
| Level | This complex type specifies a level. It extends the complex type NameInfo (section 2.2.4.150). |
| ListLocation | Contains the necessary information to identify a list (1) on the server (2). |
| MDXParameterDefinition | The MDXParameterDefinition is a complex type that specifies a custom MDX used to retrieve data. |
| Measure | This complex type specifies a measure. It extends the complex type NameInfo (section 2.2.4.150). |
| Member | Represents an OLAP member in a dimension (see section 2.2.4.90). |
| MemberList | This complex type specifies the members (3) of an OLAP hierarchy. This type extends MemberSet (section 2.2.4.145) and can be used with any axis type. |
| MemberOperation | 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 . |
| MemberOperationAllDescendants | A MemberOperation that represents all descendants of a referred member in the dimension hierarchy . This type extends MemberOperation. |
| MemberOperationChildren | A MemberOperation that represents all child members of a referred member in a dimension hierarchy. This type extends MemberOperation. |
| MemberOperationDescendants | A MemberOperation that represents all descendants of a referred member at a specified level in the hierarchy. This type extends MemberOperation. |
| MemberOperationDrillUp | A MemberOperation that represents the parent of a referred member. This type extends MemberOperation. |
| MemberOperationHide | A MemberOperation that hides a referred member. This type extends MemberOperation. |
| MemberOperationLeafDescendants | A MemberOperation that represents all descendants of a referred member that are also leaf members in the dimension hierarchy. This type extends MemberOperation. |
| MemberParameterDefinition | The MemberParameterDefinition is a complex type that represents a group of members (3) used to retrieve data. |
| MemberSet | Specifies the properties of a OLAP member hierarchy. |
| MemberSetFormula | Specifies a collection of operations on the members (3) of a OLAP hierarchy. This type extends MemberSet and can be used with any axis type. |

| Complex Type | Description |
|-----------------------------|---|
| MemberTransform | Represents a transform , such as drilldown , applied to a member, hierarchy group or KPI. |
| NamedSet | An OLAP Named Set. |
| NamedSetParameterDefinition | The NamedSetParameterDefinition is a complex type representing a set of members (3) used to retrieve data. |
| NameInfo | This complex type specifies the names and the description of a cube, dimension (1), 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 2.2.4.134). |
| NumericFormat | The NumericFormat is a complex type that represents the numeric format setting for an Analysis Services measure numeric value within an analytic grid report. |
| NumericFormatsHashtable | An array of NumericFormat objects. |
| OLAPQueryData | Represents an analytic query. |
| OLAPReportView | Contains all the state information for an analytic report. |
| Parameter | Specifies a logical element of an analytic query whose value can be changed independently of the analytic query. |
| ParameterDefinition | 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. |
| ParameterMapping | Provides the mapping information between a ParameterDefinition (section 2.2.4.156) and a DashboardItem (section 2.2.4.83). |
| PasReportViewData | Contains all the state information for a ProClarity Analytics Server report. |
| PropertyBag | The PropertyBag complex type MUST contain a pairing of keys and values. |
| QueryState | An alternate representation of a MDX query that includes the member selections of each axis. |
| ReportView | This 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. |
| RepositoryLocation | Specifies the location of a FirstClassElement stored on the server (2). |
| Scorecard | This complex type represents a scorecard. |
| SecondClassElement | This abstract class is the base class for ConfiguredView (section 2.2.4.77), DashboardElement (section 2.2.4.80), and |

| Complex Type | Description |
|---------------------------------------|--|
| | KpiMeasure (section 2.2.4.129). |
| SerializableDictionary | This complex type specifies an ordered collection of elements of complex type MemberSetFormula (section 2.2.4.146), MemberList (section 2.2.4.136), or Member (section 2.2.4.135), with their associated string keys. |
| SetOperation | 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 . |
| SqlReportViewData | Contains all the state information for a SQL Reporting Services report. |
| StatusFilter | This complex type specifies an indicator to be filtered. |
| StrategyMapViewData | This class specifies metadata information about a strategy map . |
| StringCollection | The StringCollection complex type specifies a collection of dimension properties. |
| Target | The target of a KPI used to measure against actual data. |
| TimeIntelligenceDataSource | A time intelligence data source reference used in time intelligence parameter definitions. |
| TimeIntelligenceDefinition | This complex type specifies time intelligence formulas and data sources. It is used in CustomDefinition of the ParameterDefinition (section 2.2.4.156) complex type. |
| TimeIntelligenceFormula | This complex type specifies a time intelligence parameter formula. |
| TimeIntelligenceLevelBinding | Specifies the mapping of internal cube dimensions to their time aggregation level. |
| TimeIntelligenceMdxSettings | Specifies how a dimension (1) in an Analysis Services data source maps to a time intelligence filter when running Simple Time Period Specification formulas against the data source. |
| TimeIntelligencePostFormulaDefinition | This complex type specifies a time intelligence post formula filter definition. |
| TimeIntelligenceSettings | Specifies additional time intelligence settings for a data source. |
| Title | This complex type represents a title for an analytic chart. |
| ToolbarOptions | Contains the configuration settings of the toolbar of a ConfiguredView (section 2.2.4.77). |
| Tuple | 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 2.2.4.46). |

| Complex Type | Description |
|--------------|---|
| Tuple | The Tuple complex type<10> represents an ordered collection of one or more members from different dimensions. It contains an instance of SerializableDictionary (see section 2.2.4.165). |
| XmlFont | 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 [2.2.4.166](#)) type. It defines an operation to add all members, at the level specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add a calculated member (3), specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add child members (3), of the member (3) specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add the default member to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add leaf descendant members (3), of the member (3) specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add descendant members (3), at the level specified by **LevelName** to the member (3) specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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>
```

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

LevelName: A level name from the hierarchy associated with the **MemberSet** (see section [2.2.4.145](#)). 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 [2.2.4.166](#)) type. It defines an operation to add descendant members (3), from all levels subordinate to the member specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add a value filter set operation to a **MemberSet** (see section [2.2.4.145](#)).

```
<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>
```

2.2.4.9 AddFilterTopBottomSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to add a top or bottom filter set operation to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add a member (3), specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add a named set, specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to add the parent's siblings (members (3)), of the member (3) specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<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** to a string. This mapping defines an alias used to simplify the display and 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>
```

</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 [2.2.4.152](#)).

Font: Grid font used for rendering the analytic report and specified by XmlFont (see section [2.2.4.183](#)).

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>:" 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.
 - "" 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".

| Member name | Description |
|----------------------------|---|
| ActiveBorder | The system-defined color of the active window's border. |
| ActiveCaption | The system-defined color of the background of the active window's title bar. |
| ActiveCaptionText | The system-defined color of the text in the active window's title bar. |
| AppWorkspace | 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. |
| Control | The system-defined face color of a 3-D element. |
| ControlDark | 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. |
| ControlDarkDark | 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. |
| ControlLight | 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. |
| ControlLightLight | 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. |
| ControlText | The system-defined color of text in a 3-D element. |
| Desktop | The system-defined color of the desktop. |
| GrayText | The system-defined color of dimmed text. Items in a list (1) that are disabled are displayed in dimmed text. |
| Highlight | The system-defined color of the background of selected items. This includes selected menu items as well as selected text. |
| HighlightText | The system-defined color of the text of selected items. |
| HotTrack | The system-defined color used to designate a hot-tracked item. Single-clicking a hot-tracked item runs the item. |
| InactiveBorder | The system-defined color of an inactive window's border. |
| InactiveCaption | The system-defined color of the background of an inactive window's title bar. |
| InactiveCaptionText | The system-defined color of the text in an inactive window's title bar. |
| Info | The system-defined color of the background of a ToolTip. |
| InfoText | The system-defined color of the text of a ToolTip. |
| Menu | The system-defined color of a menu's background. |

| Member name | Description |
|-----------------------|--|
| MenuText | The system-defined color of a menu's text. |
| ScrollBar | The system-defined color of the background of a scroll bar. |
| Window | The system-defined color of the background in the client area of a window. |
| WindowFrame | The system-defined color of a window frame. |
| WindowText | The system-defined color of the text in the client area of a window. |
| Transparent | A system-defined color. |
| AliceBlue | A system-defined color. |
| AntiqueWhite | A system-defined color. |
| Aqua | A system-defined color. |
| Aquamarine | A system-defined color. |
| Azure | A system-defined color. |
| Beige | A system-defined color. |
| Bisque | A system-defined color. |
| Black | A system-defined color. |
| BlanchedAlmond | A system-defined color. |
| Blue | A system-defined color. |
| BlueViolet | A system-defined color. |
| Brown | A system-defined color. |
| BurlyWood | A system-defined color. |
| CadetBlue | A system-defined color. |
| Chartreuse | A system-defined color. |
| Chocolate | A system-defined color. |
| Coral | A system-defined color. |
| CornflowerBlue | A system-defined color. |
| Cornsilk | A system-defined color. |
| Crimson | A system-defined color. |
| Cyan | A system-defined color. |
| DarkBlue | A system-defined color. |
| DarkCyan | A system-defined color. |

| Member name | Description |
|-----------------------|-------------------------|
| DarkGoldenrod | A system-defined color. |
| DarkGray | A system-defined color. |
| DarkGreen | A system-defined color. |
| DarkKhaki | A system-defined color. |
| DarkMagenta | A system-defined color. |
| DarkOliveGreen | A system-defined color. |
| DarkOrange | A system-defined color. |
| DarkOrchid | A system-defined color. |
| DarkRed | A system-defined color. |
| DarkSalmon | A system-defined color. |
| DarkSeaGreen | A system-defined color. |
| DarkSlateBlue | A system-defined color. |
| DarkSlateGray | A system-defined color. |
| DarkTurquoise | A system-defined color. |
| DarkViolet | A system-defined color. |
| DeepPink | A system-defined color. |
| DeepSkyBlue | A system-defined color. |
| DimGray | A system-defined color. |
| DodgerBlue | A system-defined color. |
| Firebrick | A system-defined color. |
| FloralWhite | A system-defined color. |
| ForestGreen | A system-defined color. |
| Fuchsia | A system-defined color. |
| Gainsboro | A system-defined color. |
| GhostWhite | A system-defined color. |
| Gold | A system-defined color. |
| Goldenrod | A system-defined color. |
| Gray | A system-defined color. |
| Green | A system-defined color. |
| GreenYellow | A system-defined color. |

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

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

| Member name | Description |
|------------------------|--|
| Red | A system-defined color. |
| RosyBrown | A system-defined color. |
| RoyalBlue | A system-defined color. |
| SaddleBrown | A system-defined color. |
| Salmon | A system-defined color. |
| SandyBrown | A system-defined color. |
| SeaGreen | A system-defined color. |
| SeaShell | A system-defined color. |
| Sienna | A system-defined color. |
| Silver | A system-defined color. |
| SkyBlue | A system-defined color. |
| SlateBlue | A system-defined color. |
| SlateGray | A system-defined color. |
| Snow | A system-defined color. |
| SpringGreen | A system-defined color. |
| SteelBlue | A system-defined color. |
| Tan | A system-defined color. |
| Teal | A system-defined color. |
| Thistle | A system-defined color. |
| Tomato | A system-defined color. |
| Turquoise | A system-defined color. |
| Violet | A system-defined color. |
| Wheat | A system-defined color. |
| White | A system-defined color. |
| WhiteSmoke | A system-defined color. |
| Yellow | A system-defined color. |
| YellowGreen | A system-defined color. |
| ButtonFace | The system-defined face color of a 3-D element. |
| ButtonHighlight | 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. |

| Member name | Description |
|--------------------------------|---|
| ButtonShadow | 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. |
| GradientActiveCaption | The system-defined color of the lightest color in the color gradient of an active window's title bar. |
| GradientInactiveCaption | The system-defined color of the lightest color in the color gradient of an inactive window's title bar. |
| MenuBar | The system-defined color of the background of a menu bar. |
| MenuHighlight | 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>:" 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.
 - "" 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>:" 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.
 - "" 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 [2.2.4.183](#)). 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>:" 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.
 - "" 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: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** (section [2.2.4.179](#)).

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 [2.2.4.14](#)).
- "ARGBColor:<A>:<R>:<G>:" 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.
 - "" 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** (section [2.2.4.15](#)).

ChartType: The type of analytic chart as specified in **AnalyticChartType** (section [2.2.5.3](#)). This 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 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, **false**.

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

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

2.2.4.17 AnalyticGridReportView

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

This object 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** object (see 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** (see section [3.1.4.1](#)) and updated using **UpdateAnnotation** (see section [3.1.4.68](#)).

```

<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:q1="http://microsoft.com/wsdl/types/" type="q1:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Guid"
xmlns:q1="http://microsoft.com/wsdl/types/" type="q1: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** (section [2.2.4.21](#)) complex type.

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

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** (see 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** (section [2.2.4.162](#)) complex type.

ConfiguredViewID: Specifies the identity of the **ConfiguredView** (section [2.2.4.77](#)) for this annotation. This element MUST be formatted as a GUID and its value MUST NOT be {000000000000-00000000-00000-00000000}.

Guid: Specifies the identity for this annotation. This element MUST be formatted as a GUID and its value MUST NOT be {000000000000-00000000-00000-00000000}.

CellPathCoordinates: Specifies the coordinates of the scorecard cell that this annotation is associated with. The value MUST be the **MDS** hash of the dimension (1) 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** (section [2.2.4.116](#)) complex type. 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 CellPath for the cell. The CellPath 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 CellPath.
 3. The CellPath for the checked cell is shown in the following table. The DimensionValue, DimensionName and DisplayText values for each header cell in the CellPath 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" |
| | | | |

| GridHeaderItem | DimensionValue | DimensionName | DisplayText |
|----------------------|--|----------------------------|-------------|
| 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 CellPath 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** (section [2.2.5.6](#)) simple type.

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 [2.2.4.159](#)).

```
<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>
```

```
</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**, **ArrayOfMemberTransform**, **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:q1="http://microsoft.com/wsdl/types/" type="q1:char"/>
    <xs:element minOccurs="1" maxOccurs="1" name="decimal" type="xs:decimal"/>
    <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:q1="http://microsoft.com/wsdl/types/" type="q1: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:choice>
</xs:complexType>
```

char: A character value.

decimal: A decimal 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 [2.2.4.47](#)) 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 [2.2.4.46](#)) complex type.

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 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.

2.2.4.31 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.

2.2.4.32 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.

2.2.4.33 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** (section [2.2.4.90](#)) complex type.

2.2.4.34 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.

2.2.4.35 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.

2.2.4.36 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.

2.2.4.37 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.

2.2.4.38 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.

2.2.4.39 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>
```

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

2.2.4.40 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** (section [2.2.4.124](#)) complex type.

2.2.4.41 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.

2.2.4.42 ArrayOfKpi

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

The **ArrayOfKpi** complex type specifies an array of KPI (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 complex type.

2.2.4.43 ArrayOfKpiMeasure

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

The **ArrayOfKpiMeasure** complex type specifies an array of **Kpi measures**.

```
<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** (section [2.2.4.129](#)) complex type.

2.2.4.44 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.

2.2.4.45 ArrayOfMeasure

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

The **ArrayOfMeasure** complex type defines an array of **Measure** (section [2.2.4.134](#)) 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 [2.2.4.134](#)) complex type.

2.2.4.46 ArrayOfMember

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

The **ArrayOfMember** complex type defines an array of **Member** (section [2.2.4.135](#)) 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 [2.2.4.135](#)) complex type.

2.2.4.47 ArrayOfMemberTransform

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

The **ArrayOfMemberTransform** complex type defines an array of **MemberTransform** (section [2.2.4.147](#)) 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 [2.2.4.147](#)) complex type.

2.2.4.48 ArrayOfNamedSet

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

The **ArrayOfNamedSet** complex type defines an array of **NamedSet** (section [2.2.4.148](#)) 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 [2.2.4.148](#)) complex type.

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 [2.2.4.155](#)).

2.2.4.50 ArrayOfParameterDefinition

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

The **ArrayOfParameterDefinition** complex type defines an array of **ParameterDefinition** (section [2.2.4.156](#)) 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 [2.2.4.156](#)) complex type.

2.2.4.51 ArrayOfParameterMapping

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

The **ArrayOfParameterMapping** complex type defines an array of **ParameterMapping** (section [2.2.4.157](#)) 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 [2.2.4.157](#)) complex type.

2.2.4.52 ArrayOfPropertyBag

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

The **ArrayOfPropertyBag** complex type defines an array of **PropertyBag** (section [2.2.4.159](#)) 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 [2.2.4.159](#)) 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 [2.2.4.166](#))

```
<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 [2.2.4.166](#)) 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 [2.2.4.171](#)) 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 [2.2.4.171](#)) 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 [2.2.4.172](#)).

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 [2.2.4.174](#)).

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** (section [2.2.4.175](#)) complex type.

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" 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** (section [2.2.5.7](#)).

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

PropertyList: Specifies a **StringCollection** (section [2.2.4.170](#)) of dimension properties. Each value in this StringCollection MUST be valid intrinsic or custom MDX dimension properties.

MemberSets: Specifies a collection of **MemberSet** (section [2.2.4.145](#)) objects.

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

SortIndex: Specifies a column index to sort by.

SortTuple: Specifies a **Tuple** (see section [2.2.4.182](#)) to sort by.

SortDescending: This value MUST be **true** if the filter axis MUST be sorted in descending order; otherwise, false.

SortPreservePeerGroups: This value MUST be **true** if peer groups MUST be preserved during sorting; otherwise, **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

This 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>
```

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

Type: The type of banding. See **BandType** (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

This complex type contains the details of a server 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, **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>

This 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** (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 **BmpPropertyList** complex type specifies zero or one of the **ArrayOfBpmPropertyListItem** (section [2.2.4.24](#)) complex type. It extends the **BpmProperty** (section [2.2.4.62](#)) type.

```
<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** (section [2.2.4.24](#)).

SelectedIndex: An integer value and MUST fall between 0 and the length of the **ListItems**.

2.2.4.70 BpmPropertyListItem

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

This 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 name string. 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 value string. 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>
```

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 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** (see section [2.2.4.90](#)).<11>

```
<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>
```

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

Expression: A string containing the multidimensional expression (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:q1="http://microsoft.com/wsdl/types/" type="q1: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:extension>
  </xs:complexContent>
</xs:complexType>
```



```

<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 [2.2.4.168](#)) items. Specifies the list (1) of status filters that can be applied to the scorecard.

ToolbarOptions: This element is of type **ToolbarOptions** (section [2.2.4.180](#)) and specifies the configuration for the toolbar displayed in column headers of the scorecard.

DataSourceLocation: This element is of type **RepositoryLocation** (section [2.2.4.162](#)) 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>

This complex type specifies the structure of a cube. It extends the complex type **NameInfo** (section [2.2.4.150](#)).

```
<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 (1) 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 [2.2.4.150](#)) items as defined in **ArrayOfNameInfo** (see section [2.2.4.34](#)). This element MUST be present.

Measures: Specifies the measures in the cube. This is an array of **Measure** (see section [2.2.4.134](#)) items as defined in **ArrayOfMeasure** (see section [2.2.4.45](#)). This element MUST be present.

NamedSets: Specifies the **named sets** in the cube. This is an array of **NamedSet** (see section [2.2.4.148](#)) items as defined in **ArrayOfNamedSet** (see section [2.2.4.48](#)). This element MUST be present.

Version: Species the **major version** of the software on the server 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 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 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 [2.2.4.164](#)) 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** (section [2.2.4.80](#)) complex type.

```
<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 [2.2.4.14](#)).

Orientation: Specifies the orientation of the **DashboardElementContainer**. This is a **LayoutOrientation** (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 [2.2.4.157](#)) items which indicate any parameters coming from other elements on the dashboard. This element **MUST** be present.

UnderlyingElementLocation: Specifies the **RepositoryLocation** (section [2.2.4.162](#)) 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. [<12>](#)

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:complexType>
```

```

<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 described 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** object (section [2.2.4.97](#)) serialized as an **XML document** and XML encoded.

For **ExcelWorkbook** data sources, **CustomData** **MUST** contain an **ExcelDataSet** 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** object (section [2.2.4.176](#)) 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.

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 Analysis Services data source. |
| SqlTabularDataSource | A SQL Server table data source. |
| ExcelServicesWorkbook | An Excel Services workbook. |
| ExcelWorkbook | An embedded Excel workbook. |
| SpListDataSource | A list data source<13>. |

ServerName: Specifies the name of the server 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 | ServerName MUST be the host name of the server running Analysis Services. |
| SqlTabularDataSource | ServerName MUST be the host name of the server instance that hosts the tabular data source. |
| ExcelServicesWorkbook | ServerName MUST be the URL of the site (2) which hosts the data source. |
| ExcelWorkbook | ServerName MUST be an empty string. |
| SpListDataSource | ServerName MUST be the URL of the site (2) containing the list (1) 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 described in the following table.

| Type | Contents |
|-----------------------|--|
| ADOMD.NET | DatabaseName MUST be the name of the multidimensional database used by the data source. |
| SqlTabularDataSource | DatabaseName MUST be the name of the database used by the data source. |
| ExcelServicesWorkbook | DatabaseName MUST be the name of the document library containing the workbook. |
| ExcelWorkbook | DatabaseName MUST be an empty string. |
| SpListDataSource | DatabaseName 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 described in the following table.

| Type | Contents |
|-----------------------|---|
| ADOMD.NET | CubeName MUST be the name of the cube used by the data source. |
| SqlTabularDataSource | CubeName MUST be the name of the table in the database used by the data source. CubeName 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 | CubeName MUST be the path and file name of the Excel Services workbook to be used. |
| ExcelWorkbook | CubeName MUST be an empty string. |
| SpListDataSource | CubeName MUST be the GUID 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 described in the following table.

| Type | Contents |
|-----------------------|---|
| ADOMD.NET | CubeDisplayName is the name of the selected cube that is displayed to the user. |
| SqlTabularDataSource | CubeDisplayName is the name of the selected SQL table that is displayed to the user. |
| ExcelServicesWorkbook | CubeDisplayName is the name of the selected Excel Services workbook that is displayed to the user. |
| ExcelWorkbook | CubeDisplayName MUST be an empty string. |
| SpListDataSource | CubeDisplayName 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.

FormattingDimensionName is only used for ADOMD.NET data sources. This attribute **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** (section [2.2.5.13](#)) type 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. If **UseConnectionString** is set to **true**, **ConnectionString** **MUST NOT** be an empty string. The

content of **ConnectionString** is determined by the type of the data source as described in the following table.

| Type | Contents |
|-----------------------|---|
| ADOMD.NET | ConnectionString MUST be a valid connection string which connects to the OLAP data source. If the ReadOnly attribute is set to "true", ConnectionString MUST be an empty string. |
| SqlTabularDataSource | ConnectionString MUST be a valid SQL table connection string. If the ReadOnly attribute is set to "true", the ConnectionString MUST be empty. |
| ExcelServicesWorkbook | ConnectionString MUST be an empty string. |
| ExcelWorkbook | ConnectionString MUST be an empty string. |
| SplistDataSource | ConnectionString 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, **Roles** 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. **UseConnectionString** is only used for ADOMD.NET and **SqlTabularDataSource** data source types.

ConnectionContext: Specifies the user **ConnectionContext** (section [2.2.5.10](#)) to be used for authentication to the data source. This attribute MUST be present. **ConnectionContext** 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. This attribute 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, **false**. When calling the **CreateDataSource** operation, if **ReadOnly** is set to **true**, the server responds with a soap fault with **ErrorCode** "CannotPublishReadOnlyElement"; if **ReadOnly** 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. This MUST be the same value as the **SourceName** element.

TargetApplicationId: Specifies the Secure Store ([\[MS-SSWPS\]](#) **target application** ID containing the credentials that MUST be used for authentication to the data source when **ConnectionContext** (section [2.2.5.10](#)) 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 (1) 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 (1). This attribute **MUST** be present and **MUST** contain at least one **DateAggregationType**.

CalendarStartMonth: Specifies the fiscal year start month used for the time dimensions (1). 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 (1). 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 (3) in a dimension (1). Contains an array of 0 or more **Member** (see section [2.2.4.135](#)) 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 [2.2.4.36](#)) 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 [2.2.4.36](#)).

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>

This complex type specifies the structure of a dimension (1). It extends the complex type **NameInfo** (section [2.2.4.150](#)).

```
<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 (1). This element MUST be present.

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

Hierarchies: Specifies the hierarchies in the dimension (1). A list (1) of the **Hierarchy** (see section [2.2.4.124](#)) elements as defined in **ArrayOfHierarchy** (section [2.2.4.40](#)). 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 (1). A list (1) of the **Level** (see section [2.2.4.131](#)) elements as defined in **ArrayOfLevel** (section [2.2.4.44](#)). 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 (1) is a measure dimension. This value MUST be **true** when the value of **Type** is "Measure" (section [2.2.4.134](#)); otherwise, **false**. This element MUST be present.

DefaultMemberName: Specifies the unique name of the default member for the dimension (1). 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 [2.2.4.166](#)) type. It defines an operation to eliminate descendant members (3), of the member (3) specified by **Name** (see section [2.2.4.166](#)), from a **MemberSet** (see section [2.2.4.145](#)).

```
<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 [2.2.4.166](#)) type. It defines an operation to eliminate a member (3), specified by **Name** (see section [2.2.4.166](#)), from a **MemberSet** (see section [2.2.4.145](#)).

```
<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 **reportview** 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>
```


</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 [2.2.4.159](#)) 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>

This 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** (Section [2.2.4.156](#)). This element MUST conform to the schema of the **ArrayOfParameterDefinition** (Section [2.2.4.50](#)) complex type.

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** (Section [2.2.4.162](#)) complex type. 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 Custom. This element MUST conform to the schema of the **ArrayOfEndPoint** (section [2.2.4.34](#)) complex type.

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 MDX 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 named set definition. |
| TimeIntelligence | Specifies a filter that contains selections provided by a time intelligence mapped data source (1). |
| TimeIntelligencePostFormula | Specifies a filter that contains selections provided by a custom formula applied against a time intelligence mapped data source (1). |

ReadOnly: **ReadOnly** 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, **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](#) (Section [2.2.5.19](#)) simple type.

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, **RendererClassName** MUST be the assembly-qualified name of the custom type.

2.2.4.99 FirstClassElement

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

This abstract class represents an object that is versionable. This is the base class for [Dashboard](#), [DataSource](#), [Scorecard](#), [ReportView](#), [Kpi](#), and [Indicator](#).

```
<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](#) information of the object. This value is optional and has default 0 value for the major and minor version. The major version will increase when the child classes: Dashboard, DataSource, Scorecard, ReportView, Kpi, Indicator are created and updated.

Location: The location information of the object, as specified by [RepositoryLocation](#).

Folder: The folder that the object belongs to, in the form of "folder1\subfolder2\subfolder3". This value is optional and has 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 will set it 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](#). 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.

ModifiedBy: The user who last modified the object. This value is optional and if it is set to the value of null, the server 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 default value of empty string.

When creating dashboard content in a content store, the dashboard content SHOULD contain at least one **BpmProperty** (section [2.2.4.62](#)). For SharePoint Server 2010, the content store is a SharePoint list. The BpmProperty's uniqueness is "8dd07d4d87794510afdb1f07664359bc_Element_Name" this uniqueness maps to the SharePoint list property "Title", which is required for a SharePoint list item. "8dd07d4d87794510afdb1f07664359bc_Element_Description" maps to 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 UML class diagram shows the **GridCell** and its relationship with other classes.

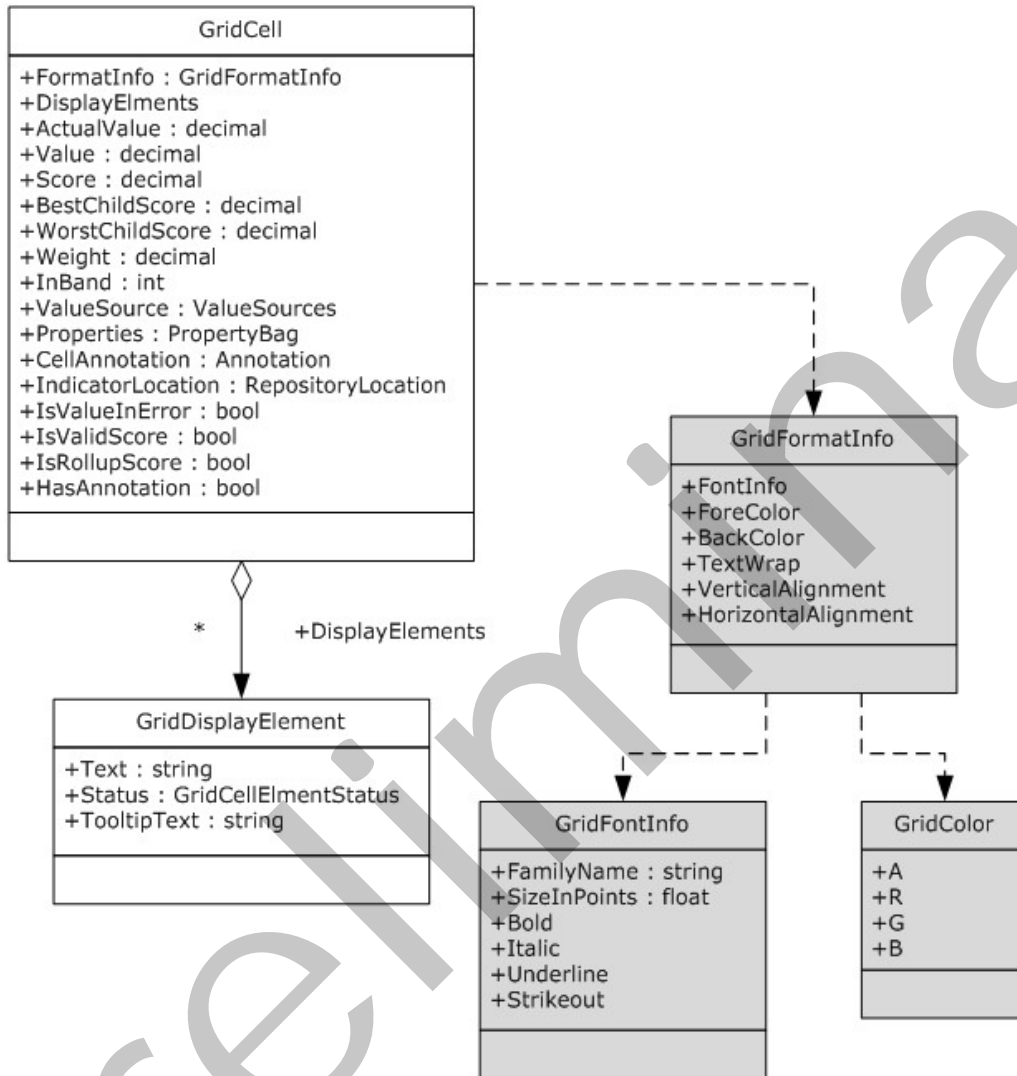


Figure 2: GridCell in relation to other classes

```

<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 style defined by the property DefaultCellFormatInfo at [GridViewDefinition](#).

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 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 - Smal | 8 |
| Stoplight - Small (Centered) | 9 |

| Indicator | ID |
|---------------------------------|-----------|
| 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 |
| 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 |

| Indicator | ID |
|-------------------------------------|-----------|
| 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 |
| 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 |

| Indicator | ID |
|------------------------------------|-----------|
| 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 |
| 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 |

| Indicator | ID |
|------------------------------|-----------|
| 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 |
| 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 |

| Indicator | ID |
|----------------------------------|-----------|
| 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 |
| 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
2. The dictionary MUST be created with one entry for each GridHeaderItem instance.
3. The keys MUST be the GridHeaderItem.DimensionValue values. If DimensionValue is null or empty, GridHeaderItem.DisplayText MUST be used.
4. The value MUST be the dictionary key concatenated with GridHeaderItem.Id.
5. The dictionary keys MUST be sorted alphabetically in descending order.
6. Build the **Table** key based on the previous described dictionary
7. 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:

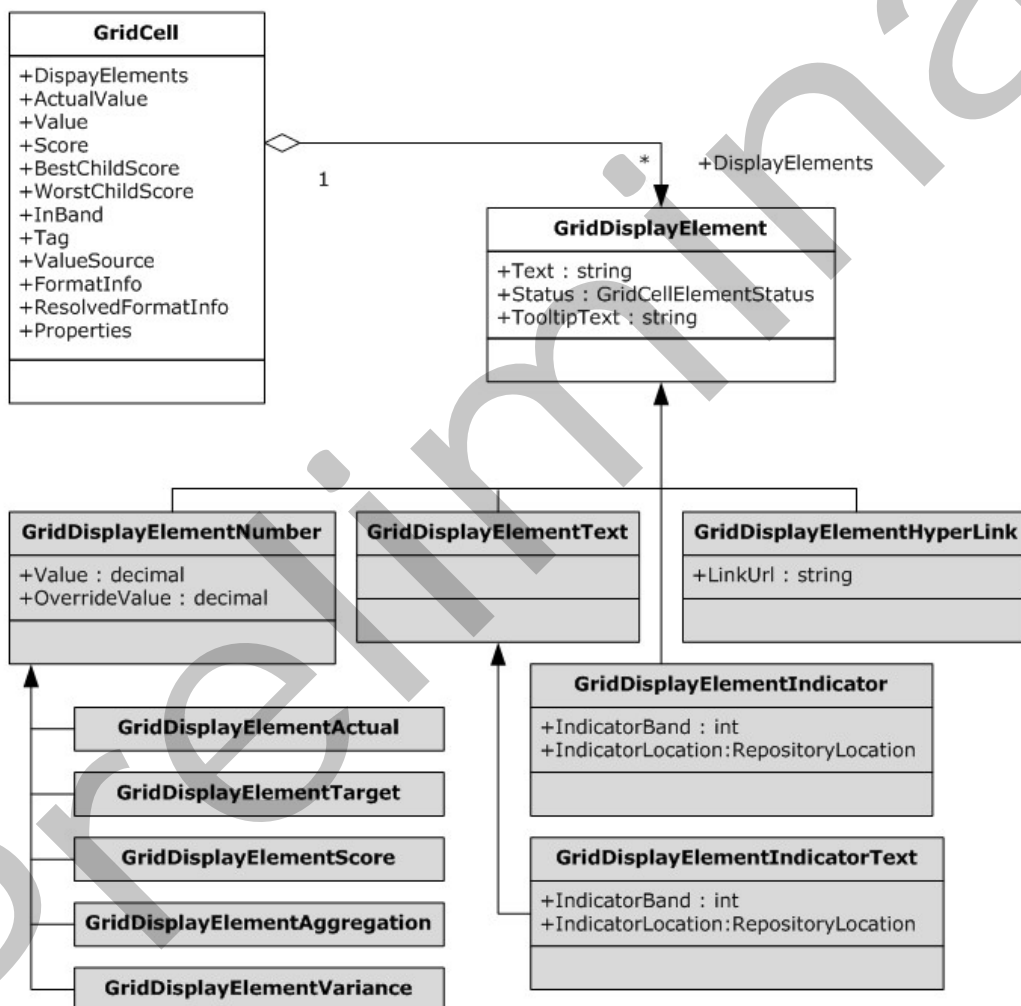


Figure 3: GridDisplayElement

```
<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. 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:extension>
  </xs:complexContent>
</xs:complexType>

```



```

    <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

GridHeaderItem 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:q1="http://microsoft.com/wsd/types/" type="q1:guid"
use="required"/>
  <xs:attribute name="DefinitionGuid" xmlns:q1="http://microsoft.com/wsd/types/"
type="q1: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 [GridFormatInfo](#), overrides the format information set for **GridHeaderItem**, under [GridViewDefinition](#) or [GridViewData](#), 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 [ArrayOfGridHeaderItem](#).

SerializeTag: A general purpose tag for **GridHeaderItem** defined as a generic **object (1)**.

DimensionMember: [Dimension](#) member associated with this header as defined in [Member](#).

OverrideIndicatorLocation: The location of the override [Indicator](#) for rollups as defined in [RepositoryLocation](#). If **null**, the default rollup indicator location as mentioned under [GridViewDefinition](#) or [GridViewData](#) will be used.

Banding: Banding settings as defined in [Banding](#). When **null**, the **BandingType.Type** is **Normalized**.

LinkedKpiLocation: Location of the linked [Kpi](#) as defined in [RepositoryLocation](#).

BpmProperties: Collection of element properties as defined in [ArrayOfBpmProperty](#).

TargetSettings: Target column settings as defined in [GridTargetSettings](#).

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 Dimension name. |
| Kpi | Scorecard__ |
| KpiActual | Scorecard_Measures__ |
| KpiTarget | Scorecard_Measures__ |
| Aggregate | Scorecard_Aggregates__ |

| Header type | Dimension name |
|------------------|---------------------------|
| 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 | RepositoryLocation of the Kpi . |
| KpiActual | This value equals the BpmPropertyText.Text value. |
| KpiTarget | This value equals the BpmPropertyText.Text value. |
| Aggregate | AggregateType as specified by AggregateTypeEnum (see section 2.2.5.1). |
| ScorecardDetails | Only the "Description", "Name", or "Person Responsible" values are supported. |
| DocumentLinks | GUID. |
| NamedSet | null |
| None | null |

HeaderType: The type of **GridHeaderItem** as defined in [ScorecardNodeTypes](#).

GroupId: Integer identifier to identify all members (3) 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 of members). Root headers are an exception to this rule because their **GroupId** value is 0.

Depth: Depth of the **GridHeaderItem** in the tree. It starts with value 0 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, **false**.

IsDynamicCellExpansionEnabled: This attribute MUST be **true** if dynamic expansion(named set expansion) setting is enabled for this header node; otherwise, **false**. This setting is valid only for Dimension members.

IsDrillEnabled: This attribute MUST be **true** if the drill operations are enabled for **GridHeaderItem**; otherwise, **false**. This setting is valid only for Dimension members.

IsDrillDownDisabled: This attribute MUST be **true** if the drilldown operation is disabled for **GridHeaderItem**; otherwise, **false**. This gets set if it is the leaf node in the [Hierarchy](#).

IsDrillUpDisabled: This attribute MUST be **true** if the drill up operation is disabled for this header; otherwise, **false**. This gets set if 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, **false**. The header item can be dynamically expanded only if the **IsDynamicCellExpansionEnabled** attribute and the corresponding [ConfiguredView](#) 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, **false**.

IsPathHidden: This attribute MUST be **true** if the header path is hidden; otherwise, **false**.

IsHiddenBasedOnFilterStatus: This attribute MUST be **true** if this **GridHeaderItem** is hidden by [Filter](#) status; otherwise, **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, "false".

IsNamedSetEmpty: This attribute MUST be **true** if the named set expression returned an empty set; otherwise, **false**.

NamedSetType: It identifies whether it is a named set header, custom formula, time formula, or none, as defined in [ScorecardNamedSetType](#).

UseLinkedElementDisplayText: This attribute MUST be **true** if the linked Kpi name should be used as the display text for **GridHeaderItem**; otherwise, **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, **false**.

Weight: Display value weight that gets used for Kpi headers.

KpiTargetName: Kpi actual or [Target](#) display name for **GridHeaderItem**.

AggregationType: Specifies the aggregation types as defined in [HeaderAggregationTypes](#).

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>

Specifies the data structure that represents the scorecard view. The following diagram illustrates the scorecard view representation:

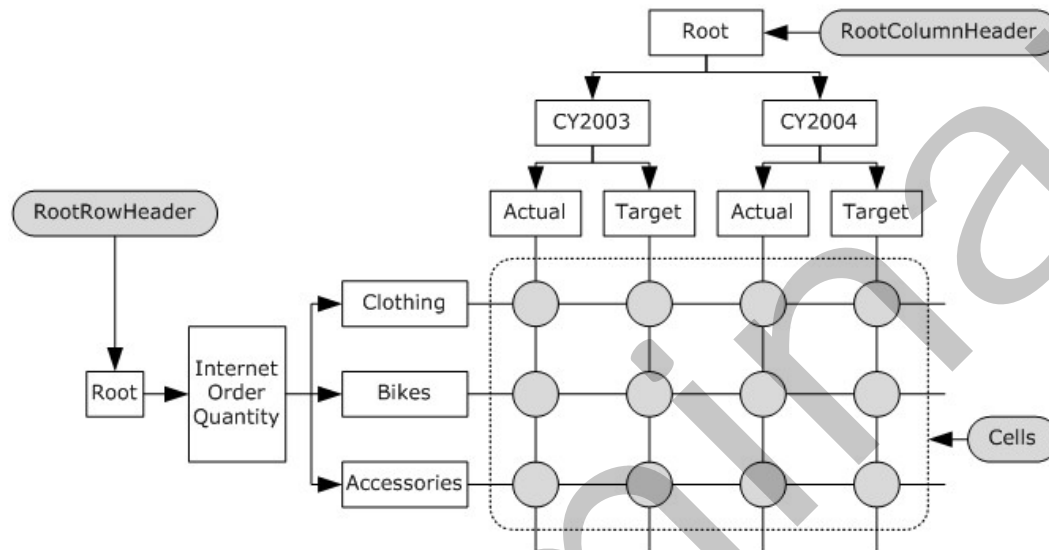


Figure 4: GridViewData

The **GridViewData** (see section [2.2.4.121](#)) 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="DefaultCellFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
      type="tns:GridFormatInfo"/>
    <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:sequence>
</xs:complexType>
```

```

    <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:q1="http://microsoft.com/wsdl/types/"
type="q1: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:q1="http://microsoft.com/wsdl/types/"
type="q1: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>

```

DefaultCellFormatInfo: Specifies the default style format applied to all scorecard cells, as defined in [GridFormatInfo](#).

DefaultRowHeaderFormatInfo: Specifies the default style format applied to scorecard row header cells, as defined in GridFormatInfo.

DefaultColumnHeaderFormatInfo: Represents the default style format applied to scorecard column header cells, as defined in GridFormatInfo.

Cells: This is a two dimensional array as defined in [GridCellSet](#). It is indexed by one [GridHeaderItem](#) object representing a row header and one [GridHeaderItem](#) object representing a column header. It MUST contain one [GridCell](#) object 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 [RepositoryLocation](#).

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](#)).

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: **PerUserTransfoms** are deprecated and MUST NOT be used.

PageFilters: Specifies a collection of members used to slice the scorecard values, as defined in [ArrayOfMember](#).

ScorecardViewId: GUID that identifies the [ConfiguredView](#) instance associated to the scorecard pointed 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](#)). If set, it represents the Simple Time Period Specification formula that is used by the scorecard query engine to filter **KpiMeasure** complex types 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 date time that is used by the scorecard query engine to evaluate **KpiMeasure** complex types that contain a time intelligence filter. If not set, the current date time of the server is used by the scorecard query engine to evaluate **KpiMeasure** complex types if a time intelligence filter is defined.

2.2.4.122 GridViewDefinition

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

Specifies the definition of grid-based scorecard view. The following picture illustrates the role of a **GridViewDefinition** in a scorecard.

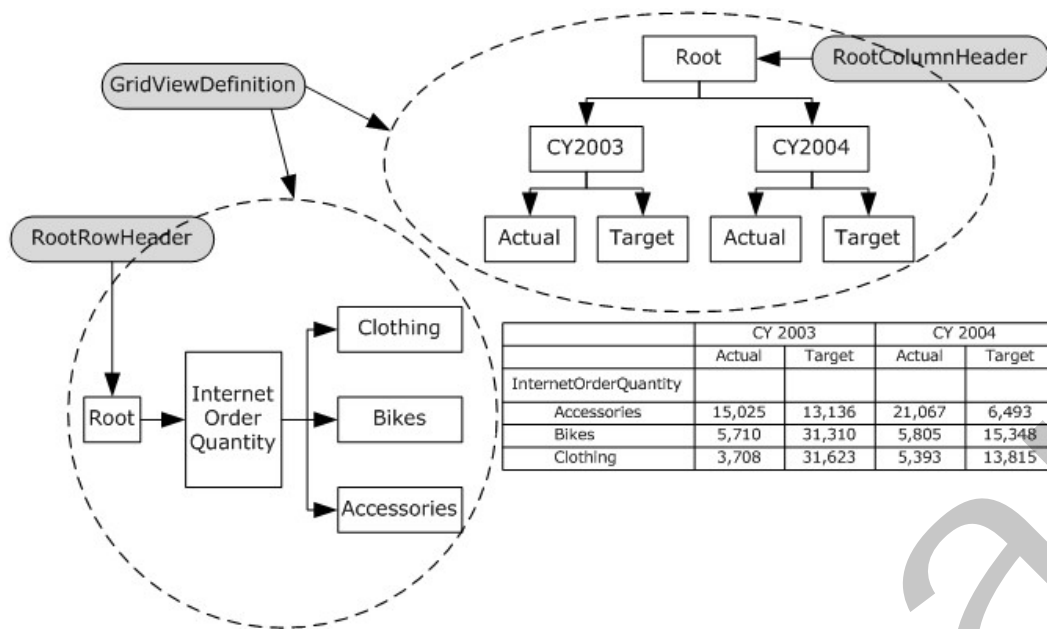


Figure 5: GridViewDefinition

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** properties 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="DefaultCellFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
      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:q1="http://microsoft.com/wsdl/types/" type="q1: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:element minOccurs="0" maxOccurs="1" name="DefaultCellBorderColor"
      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>
```

CornerCellFormatInfo: Specifies the format applied to the top left cell of the scorecard as defined in [GridFormatInfo](#).

DefaultCellFormatInfo: Specifies the default style format applied to all scorecard cells, as defined in GridFormatInfo.

DefaultRowHeaderFormatInfo: Specifies the default style format applied to scorecard row header cells, as defined in GridFormatInfo.

DefaultColumnHeaderFormatInfo: Specifies the default style format applied to scorecard column header cells, as defined in GridFormatInfo.

RootRowHeader: Specifies the root element of the row header tree, as defined in [GridHeaderItem](#).

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 [RepositoryLocation](#).

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 [GridColor](#).

DefaultCellBorderColor: Specifies the default border color applied to scorecard cells as defined in GridColor.

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, **false**.

ShowHiddenHeaders: This attribute MUST be **true** if the hidden headers (see [GridHeaderItem.IsHidden](#)) are displayed; otherwise, **false**.

ShowMetricHeaders: This attribute MUST be **true** if the metric headers are displayed; otherwise, **false**.

ShowPlusMinus: This attribute MUST be **true** if the expand/collapse signs are displayed; otherwise, **false**.

2.2.4.123 GridViewTransformReference

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

This class specifies one transform operation to be applied to a [GridViewData](#) 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 [PropertyBag](#). The **Parameters** property MAY be null or empty. If the transformation associated with the **GridViewTransformReference** 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. [<14>](#)

2.2.4.124 Hierarchy

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

This complex type specifies a hierarchy. It extends the complex type **NameInfo** (section [2.2.4.150](#)).

```
<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](#) objects in the hierarchy.

DefaultMemberName: The unique name of the hierarchy's default member.

DimensionUniqueName: The parent dimension (1) (see section [2.2.4.90](#)) name of the hierarchy.

DisplayFolder: The **display folder** of the hierarchy.

HierarchyOrigin: The hierarchy structure as defined by [HierarchyOrigin](#).

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 Portable Network Graphics (PNG) file stream that **ImageData** originates from MUST NOT exceed 512,000 bytes in length.
- Both the height and the width of the Portable Network Graphics (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 [2.2.4.165](#)).

```
<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 [2.2.4.146](#)), **MemberList** (section [2.2.4.136](#)), or **Member** (section [2.2.4.135](#)).

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 [2.2.4.171](#)) elements.

2.2.4.129 KpiMeasure

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

The **KpiMeasure** complex type is contained in a key performance indicator (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:extension>
  </xs:complexContent>
</xs:complexType>
```

```

    <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** (see section [2.2.4.128](#)), as specified by **RepositoryLocation** (see section [2.2.4.162](#)). 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** (see section [2.2.4.85](#)), as specified by **RepositoryLocation** (see section [2.2.4.162](#)). For **CalcFormulaInfo** to apply to the measure query, **DataSourceLocation.ItemUrl** MUST be empty.

DefaultDimensionSettings: An array of **DefaultDimensionSetting** (see section [2.2.4.87](#)) elements which represent the dimension slices to apply to the measure query.

OverrideFormatProperties: This allows for custom formatting of measure values, as specified by **KpiNumberFormatProperties** (see section [2.2.4.130](#)).

CalcFormulaInfo: A calculated formula to apply to the measure query, as specified by **CalculatedFormulaInfo** (see 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** (see 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 **KpiPattern** (see 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 1 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** (see section [2.2.4.85](#)) 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 **ValueSources** (see section [2.2.5.51](#)).

2.2.4.130 KpiNumberFormatProperties

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

Used for custom formatting of key performance indicator (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>
```

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 [2.2.4.150](#)).

```
<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 ListLocation

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

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 [\[RFC1738\]](#).

2.2.4.133 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.

2.2.4.134 Measure

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

This complex type specifies a measure. It extends the complex type **NameInfo** (section [2.2.4.150](#)).

```

<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 3.1.4.2.1.3.9.1.

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.

2.2.4.135 Member

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

Represents an OLAP member in a **dimension** (see 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** (see section [2.2.4.137](#)) for this member (3).

Caption: The display name for this member (3).

UniqueName: The unique name for this member (3).

HierarchyPath: The hierarchy tree path of this member (3).

LevelName: The unique name of the level (see section [2.2.4.131](#)) for this member (3).

DimensionName: The unique name of the dimension (see section [2.2.4.90](#)) that this member (3) belongs to.

LevelDepth: The numeric value of the level depth in the **hierarchy** (see section [2.2.4.124](#)) that this member belongs to. Zero means 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 (3) of this member (3).

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 (3) belongs to is the level that unites all the members (3) of the hierarchy into one element at the top of the hierarchy; otherwise, **false**.

DimensionUniqueName: The unique name of the **dimension** (see section [2.2.4.90](#)) for this member (3).

MemberType: The **MemberType** (see section [2.2.5.39](#)) for this member (3).

2.2.4.136 MemberList

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

This complex type specifies the members (3) of an OLAP hierarchy. This type extends **MemberSet** (section [2.2.4.145](#)) 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** (section [2.2.4.54](#)). Each string in the list represents the **UniqueName** string property of an OLAP **Member** (section [2.2.4.135](#)).

2.2.4.137 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"/>
```

2.2.4.138 MemberOperationAllDescendants

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

A [MemberOperation](#) 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>
```

2.2.4.139 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>
```

2.2.4.140 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](#)).

2.2.4.141 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>
```

2.2.4.142 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>
```

2.2.4.143 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>
```

2.2.4.144 MemberParameterDefinition

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

The **MemberParameterDefinition** is a complex type that represents a group of members (3) 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 (1) for the group of associated (or related) members (3).

Members: The group of members (3) used to identify the data to be retrieved.

DefaultMembers: An **ArrayOfMember** (see section [2.2.4.46](#)) object representing the list (1) of default members (3) for a specified dimension (1).

2.2.4.145 MemberSet

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

Specifies the properties of a 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.

2.2.4.146 MemberSetFormula

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

Specifies a collection of operations on the members (3) of a 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 [2.2.4.166](#)) that specify the operations on the members of the hierarchy.

2.2.4.147 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 described in the following table.

| Operation | Content |
|-------------------------------|---|
| Replace | CustomData MUST be an instance of ArrayOfMember . |
| DrillUp, DrillDown, or Expand | CustomData MUST be an instance of DataSource . |

2.2.4.148 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:complexType>

```

```

</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.

2.2.4.149 NamedSetParameterDefinition

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

The **NamedSetParameterDefinition** is a complex type representing a set of members (3) 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 (3) used to retrieve data.

2.2.4.150 NameInfo

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

This complex type specifies the names and the description of a cube, dimension (1), 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 [2.2.4.134](#)).

```

<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.

2.2.4.151 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: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.

2.2.4.152 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>
```

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

NumericFormat: This element MUST NOT be null and MUST conform to the schema of the **NumericFormat** (see section [2.2.4.151](#)) complex type.

2.2.4.153 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 [2.2.4.49](#)) 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 [2.2.4.162](#)) that specifies the location on the server 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>>`.

2.2.4.154 OLAPReportView

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

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** object (see section [2.2.4.155](#)) that specifies data source information and user-defined parameters. It MUST NOT be **null**. Either this object or the **QueryState** object 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 **AnalyticBaseReportViewData** (see section [2.2.4.14](#)). It MUST NOT be null or empty. See also **AnalyticChartReportView** (section [2.2.4.16](#)) and **AnalyticGridReportView** (section [2.2.4.17](#)) which both inherit from **AnalyticBaseReportViewData**.

ParentReportViewLocation: A **RepositoryLocation** object (see section [2.2.4.162](#)) that specifies the location of the parent report on the server. 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 if the method **SaveTemporaryAnalyticReport** is being called (see section [3.1.4.63](#)).

ShowInformationBar: Specifies whether to display an information bar along the top of the report view.

QueryState: A **QueryState** object (see section [2.2.4.161](#)) 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**, then the **QueryState** object will be used to run the query. If **QueryState.IsEnabled** is **false**, then 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.

2.2.4.155 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 (>).

2.2.4.156 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: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 MdxParameterDefinition object. |
| MemberParameterDataProvider | A MemberParameterDefinition object. |

| ParameterProviderId | CustomDefinition |
|--|---|
| NamedSetParameterDataProvider | A NamedSetParameterDefinition object. |
| ParameterScorecardCellProvider | "BeginPoint_ScorecardCell" |
| ParameterScorecardColumnMemberProvider | "BeginPoint_ScorecardColumnMember" |
| ParameterScorecardKpiProvider | "BeginPoint_Kpi" |
| ParameterScorecardRowMemberProvider | "BeginPoint_ScorecardRowMember" |
| TimeIntelligencePostFormulaProvider | A TimeIntelligencePostFormulaDefinition object. |
| TimeIntelligenceProvider | A TimeIntelligenceDefinition 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 [\[MSFT-ConnectionFormula\]](#).

2.2.4.157 ParameterMapping

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

Provides the mapping information between a **ParameterDefinition** (section [2.2.4.156](#)) 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:q1="http://microsoft.com/wsdl/types/" type="q1:guid"
    use="required"/>
  <xs:attribute name="SourceColumnName" type="xs:string"/>
</xs:complexType>
```

```

<xs:attribute name="DashboardItemId" xmlns:q1="http://microsoft.com/wsd/types/"
type="q1: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 [2.2.4.156](#)) that contains key values. The **DataTable** MUST contain a **DataColumn** with name equal to the **DisplayColumn** defined in **ParameterDefinition** (section [2.2.4.156](#)) 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 [2.2.4.156](#)).

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**.

2.2.4.158 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:q1="http://microsoft.com/wsd/types/" name="PageId" type="q1:guid"
use="required"/>
  <xs:attribute name="PagePath" type="xs:string"/>
  <xs:attribute name="ConfigOptions" type="xs:string"/>
</xs:complexType>

```

ServerUrl: The URL identifies the report view's ProClarity Analytics Server.

PageId: The ProClarity Analytics Server report view GUID identifier.

PagePath: The ProClarity Analytics Server report URL path that is relative to the server 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.

2.2.4.159 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](#).

2.2.4.160 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 [2.2.4.22](#)) 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 [2.2.4.162](#)) that specifies the location on the server of the data source object associated with this query state. It **MUST NOT** be **null**.

2.2.4.161 ReportView

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

This 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:q1="http://microsoft.com/wsd1/types/"
type="q1: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** (section [2.2.4.162](#)) 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 described in the following table.

| TypeName | Content |
|---------------------------------------|---|
| AnalyticChart | CustomData MUST contain an OlapReportView object serialized as an XML document and XML encoded. The value of the OlapReportView ReportViewData property MUST be an AnalyticChartReportView (section 2.2.4.13) serialized as an XML document. |
| DecompositionTree | CustomData MUST be ignored. |
| ExcelService | CustomData MUST contain an ExcelServicesData object (section 2.2.4.97) serialized as an XML document and XML encoded. |
| Implementation-specific custom string | CustomData 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. |

| TypeName | Content |
|--------------------|--|
| KpiDetails | CustomData MUST be ignored. |
| OLAPDrillThrough | CustomData MUST be ignored. |
| OLAPGrid | CustomData MUST contain an OlapReportView object serialized as an XML document and XML encoded. The value of the OlapReportView ReportViewData property MUST be an AnalyticGridReportView (section 2.2.4.18) serialized as an XML document. |
| PasPage | CustomData MUST contain an PasReportViewData (section 2.2.4.158) serialized as an XML document and XML encoded. |
| PivotChart | CustomData MUST be ignored. |
| PivotTable | CustomData MUST be ignored. |
| Spreadsheet | CustomData MUST be ignored. |
| StrategyMap | CustomData MUST contain an StrategyMapViewData (section 2.2.4.169) serialized as an XML document and XML encoded. |
| SqlReport | CustomData MUST contain an SqlReportViewData (section 2.2.4.167) serialized as an XML document and XML encoded. |
| TrendAnalysisChart | CustomData MUST be ignored. |
| Url | CustomData MUST NOT be null and MUST be a valid [RFC1738] URL 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, then two **Endpoint** (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** (section [2.2.4.34](#)) 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. This element MUST conform to the schema of the **ArrayOfParameterDefinition** (section [2.2.4.50](#)) complex type.

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 described 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 | TypeName MUST be "Url". |
| SQL Report | TypeName MUST be "SqlReport". |
| Spreadsheet | TypeName MUST be "Spreadsheet". |
| PivotTable | TypeName MUST be "PivotTable". |
| PivotChart | TypeName MUST be "PivotChart". |

| Type | Content |
|-------------------------------|--|
| Strategy Map | TypeName MUST be "StrategyMap". |
| Trend Analysis Chart | TypeName MUST be "TrendAnalysisChart". |
| Analytic Grid | TypeName MUST be "OLAPGrid". |
| Analytic Chart | TypeName MUST be "AnalyticChart". |
| Decomposition Tree Report | TypeName MUST be "DecompositionTree". |
| Analytic Drill Through report | TypeName MUST be "OLAPDrillThrough". |
| Excel Services Workbook | TypeName MUST be "ExcelServices". |
| PAS Page | TypeName MUST be "PasPage". |
| KPI Detail Page | TypeName MUST be "KpiDetails". |

RenderClientSide: If **true**, the report view is rendered on the client. If **false**, the report view is rendered on the server.

ConfiguredViewId: Specifies the identity of the **ConfiguredView** (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 described 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 | SubTypeId MUST be "Url". |
| SQL Report | SubTypeId MUST be "SqlReport". |
| Spreadsheet | SubTypeId MUST be "Spreadsheet". |
| PivotTable | SubTypeId MUST be "PivotTable". |
| PivotChart | SubTypeId MUST be "PivotChart". |
| Strategy Map | SubTypeId MUST be "StrategyMap". |
| Trend Analysis Chart | SubTypeId MUST be "TrendAnalysisChart". |
| Analytic Grid | SubTypeId MUST be "OLAPGrid". |
| Analytic Chart | SubTypeId MUST be "AnalyticChart". |
| Decomposition Tree Report | SubTypeId MUST be "DecompositionTree". |
| Analytic Drill Through report | SubTypeId MUST be "OLAPDrillThrough". |
| Excel Services Workbook | SubTypeId MUST be "ExcelServices". |

| Type | Content |
|-----------------|---------------------------------|
| PAS Page | SubTypeId MUST be "PasPage". |
| KPI Detail Page | SubTypeId 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.

2.2.4.162 RepositoryLocation

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

Specifies the location of a **FirstClassElement** 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"
  xmlns:q1="http://microsoft.com/wsd1/types/" type="q1:guid" use="optional"/>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteCollectionGuid"
  xmlns:q1="http://microsoft.com/wsd1/types/" type="q1:guid" use="optional"/>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteGuid"
  xmlns:q1="http://microsoft.com/wsd1/types/" type="q1:guid" use="optional"/>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpListGuid"
  xmlns:q1="http://microsoft.com/wsd1/types/" type="q1:guid" use="optional"/>
</xs:complexType>
```

ItemUrl: A **server-relative URL** to a **FirstClassElement** (see section [2.2.4.99](#)) stored by the server (2).

- If the **FirstClassElement** was created by **SaveTemporaryAnalyticReport** (see section [3.1.4.63](#)), 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** (see 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).

2.2.4.163 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 [2.2.4.34](#)) 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.

2.2.4.164 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:q1="http://microsoft.com/wsd1/types/" type="q1:guid"
use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

Guid: The element's unique identifier.

2.2.4.165 SerializableDictionary

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

This complex type specifies an ordered collection of elements of complex type **MemberSetFormula** (section [2.2.4.146](#)), **MemberList** (section [2.2.4.136](#)), or **Member** (section [2.2.4.135](#)), 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](#)).

2.2.4.166 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: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 Multidimensional Expressions (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 Multidimensional Expressions (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. |
| 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 Multidimensional Expressions (MDX) being added to a **MemberSet** (see section [2.2.4.145](#)).

2.2.4.167 SqlReportViewData

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

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.

2.2.4.168 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:q1="http://microsoft.com/wsdl/types/"
    type="q1:guid" use="required"/>
  <xs:attribute name="BandIndex" type="xs:int" use="required"/>
</xs:complexType>

```

IndicatorLocationGuid: The unique identifier for the filtered **indicator**.<15>

BandIndex: The index of the **indicator band** for the filtered **indicator**. MUST be a valid index for the indicator used in the **IndicatorLocationGuid**.

2.2.4.169 StrategyMapViewData

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

This 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 **StrategyMapToolbarOptions** (see 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** that represents the parent location of the strategy map. It MUST conform to the schema of the **RepositoryLocation** complex type and it MUST be present. **ItemUrl** 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.

2.2.4.170 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.

2.2.4.171 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:q1="http://microsoft.com/wsd/types/" type="q1: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](#) that the Target uses when the type of [Banding](#) 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** of the KPI. 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.

2.2.4.172 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.

2.2.4.173 TimeIntelligenceDefinition

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

This complex type specifies time intelligence formulas and data sources. It is used in **CustomDefinition** of the [ParameterDefinition](#) (section [2.2.4.156](#)) complex type.

```

<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 [ArrayOfTimeIntelligenceFormula](#) (section [2.2.4.57](#)).

MasterDataSource: The [TimeIntelligenceDataSource](#) (section [2.2.4.172](#)) that is queried to populate the parameter display values (section [2.2.4.156](#)).

DataSources: The [ArrayOfTimeIntelligenceDataSource](#) (section [2.2.4.56](#)) that are queried to populate the parameter message values (section [2.2.4.156](#)).

2.2.4.174 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.

2.2.4.175 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.

2.2.4.176 TimeIntelligenceMdxSettings

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

Specifies how a dimension (1) in an Analysis Services data source maps to a time intelligence filter when running Simple Time Period Specification 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 Simple Time Period Specification 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 Simple Time Period Specification formulas run against the data source. See **DataAggregationTypes** (section [2.2.5.12](#)).

ReferenceMember: Specifies the date **Member** (see section [2.2.4.135](#)) in the dimension (1) 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 Simple Time Period Specification formula. If there is no mapping for one or more of the member levels, the member (3) level **MUST NOT** have a binding present in this array. This element **MUST** be present.

2.2.4.177 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 [2.2.4.156](#)).

DataSources: The data sources (see section [2.2.4.30](#)) that are queried to populate the parameter message values (See section [2.2.4.156](#)).

2.2.4.178 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**.

2.2.4.179 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:complexType>
```



```
<xs:attribute default="Center" name="Alignment" type="tns:AlignmentType"/>
</xs:complexType>
```

Font: The font, specified by **XmlFont** (see section [2.2.4.183](#)). 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>:" 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.
 - "" 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](#)).

2.2.4.180 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.

- If set to **true**, toolbar MUST be shown following the toolbar configuration settings.
- 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 [2.2.4.168](#)) 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

- If set to **true**, toolbar options and buttons MUST include both icon and text label.
- 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.

2.2.4.181 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 [2.2.4.46](#)).

```
<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**.

2.2.4.182 Tuple

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

The **Tuple** complex type [<16>](#) represents an ordered collection of one or more [members](#) from different dimensions. It contains an instance of **SerializableDictionary** (see section [2.2.4.165](#)).

```
<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**.

2.2.4.183 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](#)).

2.2.4.184 ArrayOfNameInfo

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

The **ArrayOfNameInfo** complex type [<17>](#) defines an array of **NameInfo** (section [2.2.4.150](#)) element.

```
<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 the NameInfo (section [2.2.4.150](#)) complex type.

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 |
|-----------------------------|---|
| AggregateTypeEnum | The AggregateTypeEnum simple type specifies the method by which a KpiMeasure will be aggregated. |
| AlignmentType | Specifies the alignment of a text string relative to its layout rectangle. |
| AnalyticChartType | Type of chart to display. |
| AnalyticLegendLocation | The location of the analytic chart legend. |
| AnalyticMarkerStyle | Data Point marker shape for a line-type series of the report view. |
| AnnotationVersions | Specifies the product version that was used to create the annotation. |
| AxisType | The AxisType simple type specifies the type of an axis (as described in [MSDN-Axis]) in a query result. |
| BandType | Specifies the type of the banding for the Target (see section 2.2.4.171). |
| BeginPointEmitterType | The BeginPointEmitterType simple type specifies the type of information the parameter emits. |
| ConnectionContext | The ConnectionContext simple type specifies what identity is used to connect to the data source. |
| DataValuePosition | Specifies the display positioning for a data value. |
| DateAggregationTypes | This simple type represents a category of time intervals and MUST contain an item from the enumerated list. |
| DimensionTypeEnum | Specifies the type of information in a dimension (1). |
| EndPointCategory | The category specifying sort and filter Endpoints when connecting provider Web Parts to consumer Web Parts on the Dashboard. |
| ExcelServicesToolbarOptions | Specifies the toolbar options for an Excel Services ([MS-ESP]) report. |
| ExcelServicesToolbarType | Specifies which type of toolbar is shown on the Excel Services ([MS-ESP]) report. |
| ExcelServicesViewOptions | Specifies how a user is allowed to interact with an Excel Services ([MS-ESP]) report. |
| FactAggregations | 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. |

| Simple type | Description |
|--------------------------|--|
| FilterSelectionMode | Specifies the manner in which the items in a Filter (see section 2.2.4.98) can be selected. |
| FirstClassObjectType | Specifies the type of a first-class object. |
| FontStyle | Specifies style information applied to the font. It MUST equal Regular or any combination of the other values. |
| FormatNegativeSymbol | 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). |
| FormatType | Defines the formatting pattern for numeric values. See KpiNumberFormatProperties (section 2.2.4.130). |
| GraphicsUnit | Specifies the unit of measure for the font. |
| GridCellElementStatus | This simple type specifies the status of a display element of a scorecard cell. It MUST be 0, 1 or 2. |
| HeaderAggregationTypes | This simple type specifies the type of aggregation used by the Scorecard. |
| HierarchyOrigin | This simple type specifies the overall structure of a hierarchy. |
| HierarchyType | This simple type specifies the type of an OLAP hierarchy. |
| HorizontalAlignments | This simple type specifies how an object or text in a control is horizontally aligned relative to the control element. |
| IndicatorPosition | This simple type specifies the position of the indicator within the target value cell. |
| IndicatorType | 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. |
| KpiPattern | This simple type specifies how Banding and scoring change in appearance according to the setting of the KPI pattern. |
| LayoutOrientation | This simple type defines the layout of items within a DashboardElementContainer (see section 2.2.4.81). |
| MappedColumnDataTypes | This simple type specifies the data type of the mapped columns in DataColumnMapping (see section 2.2.4.84). |
| MappedColumnTypes | This simple type specifies the classification of a mapped column in DataColumnMapping (see section 2.2.4.84). |
| MemberRelationship | This simple type specifies the relationship among dimension members (see section 2.2.4.90). Member (see section 2.2.4.135) relationships are used in the context of a referred member. |
| MemberTransformOperation | This simple type specifies the transform action that the MemberTransform (section 2.2.4.147) will use. |
| MemberTransformType | This simple type specifies the classification of the MemberTransform (section 2.2.4.147). |

| Simple type | Description |
|------------------------------|---|
| MemberType | This simple type specifies the type represented by the member (section 2.2.4.135) object. |
| ReportLayout | Specifies the way that row and column headers are displayed in a grid report. |
| RollupTypes | This simple type enumeration specifies the types of rollup behavior that can be exhibited by a target column in a scorecard. |
| ScorecardEmptyRowsFilterMode | 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). |
| ScorecardNamedSetType | This simple type enumeration specifies how to define a set of dimension (1) members (3). 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). |
| ScorecardNodeTypes | This simple type enumeration specifies the type of scorecard node header. This is used in the GridHeaderItem (section 2.2.4.116). |
| ScoreTypes | This simple type enumeration specifies the type of score to be used when rolling up the target column in a scorecard. |
| SizeType | This simple type enumeration specifies the size unit in DashboardElementSize (section 2.2.4.82). |
| SortType | The SortType simple type specifies the manner in which the values in a query result are sorted. |
| SqlReportViewDataServerMode | Indicates when SQL Server Reporting Services integrated into a SharePoint server. |
| StrategyMapToolbarOptions | This simple type Specifies the view options for a strategy map report. |
| Trinary | This simple type specifies an enumeration type that has three possible values. |
| ValueSources | 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. |
| VarianceDisplayType | This simple type enumeration specifies how a variance value is calculated and presented. |
| VarianceType | This simple type enumeration specifies how a variance calculation uses indicator status band and target values. |
| VerticalAlignments | This simple type enumeration specifies a vertical alignment of content 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 **AggregateTypeEnum**.

| 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 **AlignmentType**.

| 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 **AnalyticChartType**.

| 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>
```



```
</xs:simpleType>
```

The following table specifies the allowable values for **AnalyticLegendLocation**.

| 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

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 **AnalyticMarkerStyle**.

| Value | Meaning |
|----------|--|
| None | No marker is displayed for the series/ data point . |
| Square | A square marker is displayed. |
| Circle | A circular marker is displayed. |
| Diamond | A diamond-shaped marker is displayed. |
| 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. |

| Value | Meaning |
|--------|---|
| 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 **AnnotationVersions**.

| Value | Meaning |
|---------------|--|
| Office14Beta2 | Annotation was created with a Beta2 or RTM version <18> . |
| Office14Beta1 | Annotation was created with a Beta1 version <19> . |
| Pps2007 | Annotation was created with a prior production version. <20> |

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 **AxisType**.

| Value | Meaning |
|--------|---|
| Filter | Specifies a FILTER axis type or the slicer axis of the query. |

| Value | Meaning |
|----------|---|
| 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 [2.2.4.171](#)).

```
<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 **BandType**.

| Value | Meaning |
|-------------|--|
| Normalized | The value will be normalized . |
| Actual | The actual value will be used. |
| StatedScore | The selected Target value will be used. See Target.StatedScore (section 2.2.4.171). |

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 **BeginPointEmitterType**.

| Value | Meaning |
|---|--|
| BothAConditionalVisibilityAndParameterEmitter | Emits information that is used for setting conditional visibility values that indicate a connected Web Part 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 **ConnectionContext**.

| 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 ([MS-SSWPS]). |

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 **DataValuePosition**.

| 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 **DateAggregationTypes**.

| 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 (1).

```
<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 **DimensionTypeEnum**.

| Value | Meaning |
|-----------------|---|
| Accounts | The dimension (1) contains an accounts structure with parent-child relationships. |
| BillOfMaterials | The dimension (1) represents a material/component breakdown. The parent-child relationship implies a parent composed of its child elements. |
| Channel | The dimension (1) contains information about a distribution channel. |
| Currency | The dimension (1) contains currency information. |
| Customers | The dimension (1) contains customer information. The lowest level represents individual customers. |
| Geography | The dimension (1) contains a geographic hierarchy. |
| Measure | The dimension (1) contains measures. |
| Organization | The dimension (1) represents the reporting structure of an organization. |
| Other | The dimension (1) type is not Time, Measure or otherwise specified. |
| Products | The dimension (1) contains product information. The lowest level contains individual products. |
| Promotion | The dimension (1) contains information about marketing and advertising promotions. |
| Quantitative | The dimension (1) contains quantitative elements (for example, income level, or number |

| Value | Meaning |
|----------|--|
| | of child elements). |
| Rates | The dimension (1) contains different types of rates (for example, buy, sell, or discounted). |
| Scenario | The dimension (1) contains different business scenarios. |
| Time | The dimension (1) refers to time (for example, year, month, week, day). |
| Unknown | The type of the dimension (1) is not specified. |
| Utility | The dimension (1) 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 **EndPointCategory**.

| 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 ([\[MS-ESP1\]](#)) 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:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

        <xs:enumeration value="AllowRecalculation"/>
        <xs:enumeration value="ShowVisibleItemButton"/>
    </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for **ExcelServicesToolbarOptions**.

| Value | Meaning |
|-------------------------|---|
| AllowInExcelOperations | Allows operations that open the Excel workbook ([MS-XLS]). |
| 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 published item. |

2.2.5.16 ExcelServicesToolbarType

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

Specifies which type of toolbar is shown on the Excel Services ([\[MS-ESP\]](#)) 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 **ExcelServicesToolbarType**.

| 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>

Specifies how a user is allowed to interact with an Excel Services ([\[MS-ESP\]](#)) report.

```

<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:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```



```

    <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>

```

The following table specifies the allowable values for **ExcelServicesViewOptions**.

| Value | Meaning |
|------------------------------|---|
| AllowInteractivity | Allows users to interact with the workbook. |
| AllowParameterModification | Allows users to change workbook parameters. |
| ShowWorkbookParameters | Allows users to view and edit workbook parameters. |
| AllowSorting | Allows users to sort when using AutoFilter , lists (1), and PivotTables. |
| 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 drilldown, find members (3), 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:restriction>
</xs:simpleType>

```

```

    <xs:enumeration value="Variance"/>
    <xs:enumeration value="FirstOccurance"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for **FactAggregations**.

| Value | Meaning |
|----------------|---|
| Average | Calculate the average of numeric fact values. |
| 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 **FilterSelectionMode**.

| 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>

```

The following table specifies the allowable values for **FirstClassObjectType**.

| Value | Meaning |
|----------------|---|
| None | Indicates the object type is undefined |
| Kpi | Indicates the object is a Kpi (see section 2.2.4.128). |
| Scorecard | Indicates the object is a Scorecard (see section 2.2.4.163) |
| ReportView | Indicates the object is a ReportView (see section 2.2.4.161) |
| Indicator | Indicates the object is an Indicator (see section 2.2.4.125) |
| DataSource | Indicates the object is a DataSource (see section 2.2.4.85) |
| Dashboard | Indicates the object is a Dashboard (see section 2.2.4.79) |
| TempReportView | Indicates the object is a temporary ReportView (see section 2.2.4.161) as created by SaveTemporaryAnalyticReport |
| Filter | Indicates the object is a Filter (see section 2.2.4.98) |

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 **FontStyle**.

| Value | Meaning |
|-----------|--------------------------------------|
| Regular | Normal text. |
| Bold | Bold text. |
| Italic | Italic text. |
| Underline | Underlined text. |
| 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 **FormatNegativeSymbol**.

| Value | Meaning |
|--------------|---|
| NegativeSign | Show minus sign preceding to the number. Example: -42.15 |
| Parenthesis | Enclose the number in parenthesis. 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 **FormatType**.

| Value | Meaning |
|------------|---|
| Default | No formatting. Formatting of the data source is used. |
| Number | General numeric formatting—for example, 12,222.003 |
| 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 **GraphicsUnit**.

| 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 pixels 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>

This simple type specifies the status of a display element of a scorecard cell. It MUST be 0, 1 or 2.

```

<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:enumeration value="2"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for **GridCellElementStatus**.

| Value | Meaning |
|-------|---|
| 0 | OK: Specifies that element is displayed correctly |
| 1 | Error: Specifies that element is in error: error state is displayed. See InvalidCell property of the GridViewDefinition |
| 2 | Null: Specifies that element is empty: empty state is displayed. See EmptyCell property of the GridViewDefinition |

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 **HeaderAggregationTypes**.

| 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 **HierarchyOrigin**.

| Value | Meaning |
|----------------------|--|
| None | The hierarchy has no structure. |
| AttributeHierarchy | The hierarchy is an attribute hierarchy . |
| 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 **HierarchyType**.

| 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 **HorizontalAlignments**.

| 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>

This 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 **IndicatorPosition**.

| 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 **IndicatorType**.

| Value | Meaning |
|----------|--|
| Standard | Indicator bands go from best to worst as values increase (or decrease). |
| Centered | Indicator bands 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 **KpiPattern**.

| 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:restriction>
</xs:simpleType>
```

```

    <xs:enumeration value="HorizontalRightJustified"/>
    <xs:enumeration value="VerticalBottomJustified"/>
    <xs:enumeration value="VerticalTopJustified"/>
    <xs:enumeration value="Stacked"/>
    <xs:enumeration value="Hidden"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for **LayoutOrientation**.

| 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 **MappedColumnDataTypes**.

| Value | Meaning |
|--------------|---|
| NotSupported | Used when MappedColumnTypes 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 UNICODE 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 **MappedColumnTypes**.

| Value | Meaning |
|---------------|---|
| Ignore | The ignore type indicates that the mapped column in DataColumnMapping MUST be ignored. |
| Fact | The mapped column contains fact data. A fact column type MUST have an associated FactAggregations (see section 2.2.5.18). |
| Dimension | The mapped column contains dimension (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 [2.2.4.135](#)) 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 **MemberRelationship**.

| Value | Meaning |
|---------------|--|
| Parent | Parent of the referred dimension (section 2.2.4.90) member (3) (section 2.2.4.135). |
| FirstSibling | First Child of the parent of the referred (section 2.2.4.90) member (3) (section 2.2.4.135). |
| PrevMember | Previous member (3) at the same level that contains the referred dimension (section 2.2.4.90) member (3) (section 2.2.4.135). |
| NextMember | Next member (3) at the same level that contains the referred dimension (section 2.2.4.90) member (3) (section 2.2.4.135). |
| LastSibling | Last Child of the parent of the referred dimension (section 2.2.4.90) member (3) (section 2.2.4.135). |
| FirstChild | First Child of the parent of the referred dimension (section 2.2.4.90) member (3) (section 2.2.4.135). |
| LastChild | Last Child of the referred dimension (section 2.2.4.90) member (3) (section 2.2.4.135). |
| CurrentMember | Current member (3) (section 2.2.4.135) 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 (3) it implies the referred member (3) itself. |
| Children | Child members (3) of the referred dimension (section 2.2.4.90) member (section 2.2.4.135). |

2.2.5.37 MemberTransformOperation

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

This simple type specifies the transform action that the **MemberTransform** (section [2.2.4.147](#)) 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 **MemberTransformOperation**.

| Value | Meaning |
|-----------|---|
| Replace | Replaces a single hierarchy (section 2.2.4.124) group or all members (3) (section 2.2.4.135) from a KPI (section 2.2.4.128) with members (3) (section 2.2.4.135) provided by filters (section 2.2.4.98). |
| DrillUp | Drills up on a referred member (3) (section 2.2.4.135). |
| DrillDown | Drills down on a referred member (3) (section 2.2.4.135). |
| Expand | Dynamically expands the child members (3) of a referred member (3) (section 2.2.4.135). |

2.2.5.38 MemberTransformType

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

This simple type specifies the classification of the **MemberTransform** (section [2.2.4.147](#)).

```
<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 **MemberTransformType**.

| Value | Meaning |
|--------|--|
| Row | The MemberTransform (section 2.2.4.147) will be applied to rows. |
| Column | The MemberTransform (section 2.2.4.147) 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 [2.2.4.135](#)) 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 **MemberType**.

| Value | Meaning |
|-----------|---|
| Regular | A regular member (3) (section 2.2.4.135). |
| Operation | The member object represents a member operation (section 2.2.4.137). |
| Default | The member object represents the default member (section 2.2.4.135). |
| 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>

```

The following table specifies the allowable values for **ReportLayout**.

| 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 **RollupTypes**.

| Value | Meaning |
|-----------------|---|
| None | Do not perform rollups. |
| AverageWeighted | Rollup a weighted average of the scores of the direct child members. |
| WorstChild | Rollup the worst score among the descendants. |
| IndicatorCount | Rollup a count of each state of each indicator found within the descendants, excluding those belonging to objective KPIs . |

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:enumeration value="AllValuesAreEmpty"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for **ScorecardEmptyRowsFilterMode**.

| 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 (1) members (3). 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 **ScorecardNamedSetType**.

| Value | Meaning |
|---------------|---|
| None | GridHeaderItem (section 2.2.4.116) does not contain any dimension (1) members (3) specified by a named set, a custom formula, or a time intelligence formula. A GridHeaderItem MUST NOT use this value if the HeaderType attribute is set to "NamedSet", as specified in ScorecardNodeTypes (section 2.2.5.44). |
| NamedSet | Dimension (1) members (3) are specified by a named set. |
| CustomFormula | Dimension (1) members (3) are specified by a custom formula. |
| TimeFormula | Dimension (1) members (3) 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 **ScorecardNodeTypes**.

| 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 dimension member node. |
| Kpi | A KPI 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 named set 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>
```



```
</xs:simpleType>
```

The following table specifies the allowable values for **ScoreTypes**.

| Value | Meaning |
|------------|--|
| Normalized | Rollup scores are determined using child scores normalized 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 **SizeType**.

| Value | Meaning |
|----------|---|
| AutoSize | Auto sized based on internal content. Any related measurement value MUST be ignored if specified. |
| Absolute | Absolute value in pixels . |
| 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 **SortType**.

| 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

Indicates when SQL Server Reporting Services integrated into a SharePoint server.

```
<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 **SqlReportViewDataServerMode**.

| Value | Meaning |
|----------------------|--|
| SharepointIntegrated | The SQL Reporting Services server is integrated into SharePoint, allowing reports to be stored and rendered using SharePoint server. |
| ReportCenter | SQL Reports are stored and rendered using a SQL Server Reporting Services server. |

2.2.5.49 StrategyMapToolBarOptions

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

This 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 **StrategyMapToolBarOptions**.

| Value | Meaning |
|----------------|--------------------------------|
| None | No options are specified. |
| ShowToolBar | The toolbar is displayed. |
| ShowPage | The drawing page is displayed. |
| 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 **Trinary**.

| 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>
```

```
</xs:simpleType>
```

The following table specifies the allowable values for **ValueSources**.

| Value | Meaning |
|---------------|---|
| Default | Use default settings: If there are child members (3), the average weighted value 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 **VarianceDisplayType**.

| Value | Meaning |
|---------------------|---|
| ShowPercent | Show variance value as the percentage variance between a target (section 2.2.4.171) value and its associated actual value. |
| ShowValue | Show the variance value as the difference between a target (section 2.2.4.171) value and its associated actual value. |
| ShowInvertedPercent | Show the variance value as the inverted percentage variance between a target (section 2.2.4.171) 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 **VarianceType**.

| Value | Meaning |
|----------------------|--|
| VarianceToTarget | Show the variance value as the inverted percentage variance between a target (section 2.2.4.171) value and its associated actual value. |
| VarianceToBestTarget | Calculate value as the variance between the actual value and a computed target (section 2.2.4.171) value. The computed target (section 2.2.4.171) value takes into account the nearest threshold of the best indicator status band . See Banding 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 **VerticalAlignments**.

| 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. Each first-class element references its dependents by their unique repository locations. The following UML diagram describes how the first-class elements are related:

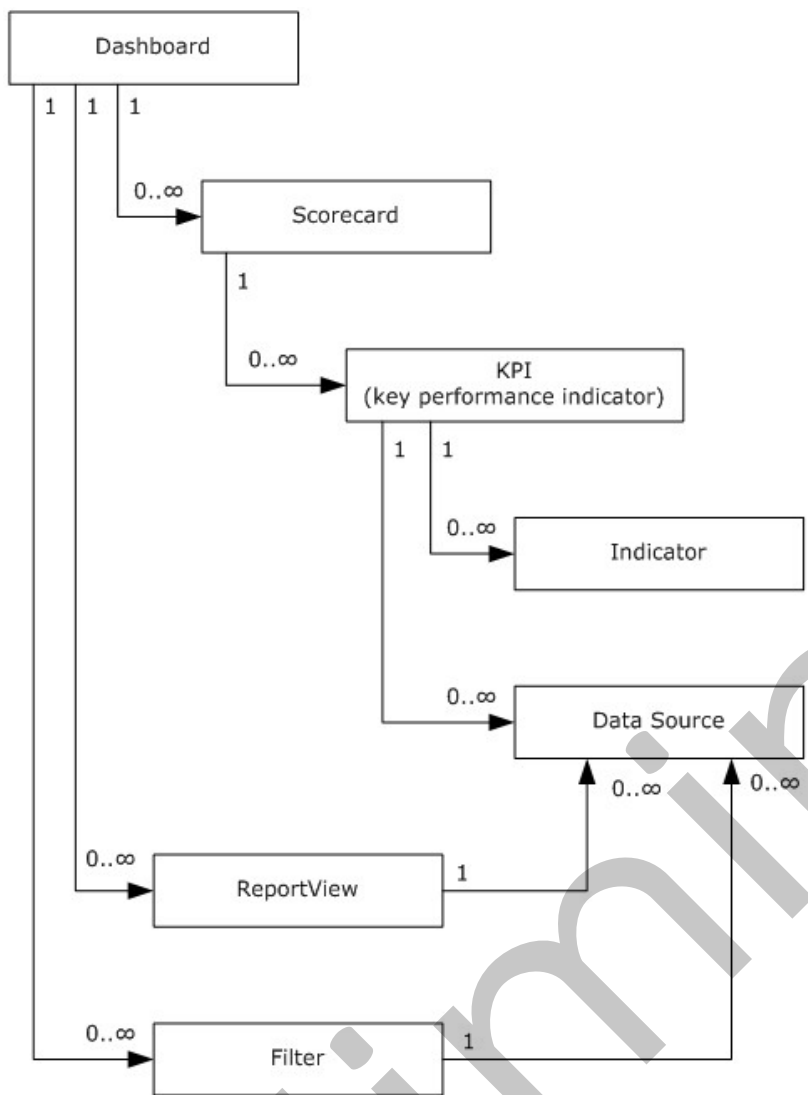


Figure 6: Overview of first-class elements

A first-class element's dependents must be published prior to that first-class element being consumed on the server. For example, all the first-class elements that a dashboard is dependent on must be 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 may 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 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 MUST return a SOAP FAULT response, which MUST contain the **Query Timeout**<21> 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 operations.

The following table summarizes the list of operations as defined by this specification:

| Operation | Description |
|------------------|---|
| CreateAnnotation | The CreateAnnotation operation is used to create an Annotation on the server (2). |
| CreateDashboard | The CreateDashboard operation is used to create a dashboard on the server (2). |
| CreateDataSource | This operation is used to create a DataSource (section 2.2.4.85) on the server (2). |
| CreateFilter | This operation is used to create a Filter (see section 2.2.4.98) on the server (2). |
| CreateIndicator | This operation is used to create an Indicator (section 2.2.4.125) on the server (2). |
| CreateKpi | This operation is used to create a KPI (see section 2.2.4.128) on the server (2). |
| CreateReportView | This operation creates a ReportView (section 2.2.4.161) on the server (2). |
| CreateScorecard | This operation creates a Scorecard (section 2.2.4.163) on the server (2). |
| DeleteAnnotation | This operation deletes an Annotation (section 2.2.4.18) from the server (2). |
| DeleteDashboard | This operation deletes a Dashboard (see section 2.2.4.79) from the server (2). |
| DeleteDataSource | This operation deletes a DataSource (see section 2.2.4.85) from the server (2). |

| Operation | Description |
|--------------------------------------|---|
| DeleteFilter | This operation deletes a Filter (see section 2.2.4.98) from the server (2). |
| DeleteIndicator | This operation deletes an Indicator (see section 2.2.4.125) from the server (2). |
| DeleteKpi | This operation deletes a KPI (see section 2.2.4.128) from the server (2). |
| DeleteReportView | This operation deletes a ReportView (see section 2.2.4.161) from the server (2). |
| DeleteScorecard | This operation deletes a Scorecard (see section 2.2.4.163) from the server (2). |
| ExportDashboard | The ExportDashboard operation <22> is used to export dashboard pages and their associated content from the server (2) into a specified Deployment Package ([MS-PRIMEPF]). |
| GenerateView | This operation generates the data structure that represents a scorecard grid view based on information stored on the server. |
| GenerateViewDirect | This operation generates the data structure that represents a scorecard grid view using information sent from the client. |
| GetAllAnnotationsByScorecardLocation | This operation retrieves an array of Annotation elements associated with a scorecard. |
| GetAnalyticReportView | This operation retrieves a report view from the server (2) that has been created through SaveTemporaryAnalyticReport (see section 3.1.4.63) or CreateReportView (see section 3.1.4.7). |
| GetAnnotation | This operation retrieves an annotation associated with a scorecard cell from the server (2). |
| GetAnnotationByID | This operation retrieves an annotation from a specified GUID from the server (2). |
| GetAnnotationSetting | This operation retrieves an AnnotationSetting object that contains the annotation settings for the server (2). |
| GetAsKpis | This operation takes in an Analysis Services data source along with a server-relative URL to the KPI (see section 2.2.4.128) list (1) and returns a collection of KPIs as defined in ArrayOfKpi (see section 2.2.4.42). |
| GetCube | This operation takes in a RepositoryLocation (see section 2.2.4.162) object and returns the associated Cube (see section 2.2.4.78) object. |
| GetCubeFromDataSource | This operation takes in a data source object and returns the associated Cube (see section 2.2.4.78) object. |
| GetCubeMetaData | This operation takes in an Analysis Services RepositoryLocation (see section 2.2.4.162) object and |

| Operation | Description |
|--------------------------------|--|
| | returns the associated Cube (see section 2.2.4.78) object. |
| GetCubeMetaDataForDataSource | This operation takes in an Analysis Services data source object and returns the associated Cube (see section 2.2.4.78) object. |
| GetCubeNameInfos | This operation retrieves an ArrayOfNameInfo (see section 2.2.4.41) that describes the cubes of the data source (1). |
| GetCurrentCultureLcid | This operation retrieves the current culture locale identifier. |
| GetCurrentUserInfo | This operation retrieves the user name and display name information of the current user. |
| GetDashboard | This operation retrieves a dashboard. |
| GetDatabaseNamesFromDataSource | This operation retrieves an array of database names associated with the data source (1). |
| GetDataSource | This operation retrieves a data source (1). |
| GetDependentElements | GetDependentElements retrieves from the server all FirstClassElements (see 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 data sources that the scorecard depends on will also be retrieved. |
| GetDimensions | This operation retrieves an array of dimension (1) objects. |
| GetDimensionsFromDataSource | This operation retrieves an array of dimension (1) objects (see section 2.2.4.90). |
| GetFilter | This operation retrieves a filter. |
| GetIndicator | This operation retrieves an indicator from the server (2). |
| GetKpi | This operation retrieves a Kpi object. |
| GetKpisFromScorecard | This operation retrieves an array of Kpi (see section 2.2.4.128) objects associated with a scorecard. |
| GetLatestAnalyticReportVersion | This operation retrieves from the server (2) the version number for a report view that has been created through <code>SaveTemporaryAnalyticReport</code> . |
| GetListItems | <code>GetListItems</code> retrieves all FirstClassElements (see section 2.2.4.99) associated with a given repository list (1) from the server. |
| GetMdx | This operation retrieves an MDX that can be used to query data sources for the given analytic report. Analytic Chart and Analytic Grid report view types |

| Operation | Description |
|---|--|
| | contain custom data that is used to generate MDX queries. See ReportView for more detail. |
| GetParameterDisplayData | This 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. |
| GetPreviewDataSet | This method retrieves a data set from a data source, which is suitable for previewing results. |
| GetQueryResultMembers | This operation retrieves an array of members (3) associated with the specified report. |
| GetRegisteredCustomFCOs | This operation retrieves custom object definitions registered on the server. |
| GetReportView | This operation retrieves a report view from the server (2). |
| GetScorecard | This operation retrieves a scorecard. |
| ImportDashboard | The ImportDashboard operation <23> is used to import content from a specified Deployment Package ([MS-PRIMEPF]) to the server (2). |
| QueryChildMembers | This method uses a data source for the specified member and returns a collection of members. |
| QueryChildMembersByRangeFromDataSource | This method queries the DataSource (see section 2.2.4.85) and returns a collection of child members. |
| QueryChildMembersFromDataSource | This method uses the data source to retrieve a collection of child members for the specified member name. |
| QueryDimensionRootMembers | This method uses a data source (1) from the repository location for the specified member and returns a collection of root members. |
| QueryDimensionRootMembersFromDataSource | This method uses the data source to retrieve a collection of root members for the specified member name. |
| QueryNamedSets | This operation is used to retrieve the named sets that are defined by a data source (1) when given the RepositoryLocation of the data source (1). |
| QueryNamedSetsFromDataSource | This operation is used to retrieve the named sets that are defined by the given data source (1). |
| QueryRelatedMember | This operation is used to retrieve a member (3) having the specified relationship to the specified member from the data source (1) at the given RepositoryLocation. |
| QueryRelatedMemberFromDataSource | This operation queries the given data source (1) for the member (3) having the specified relationship to the specified member. |

| Operation | Description |
|-----------------------------------|--|
| QueryTimeIntelligence | This operation queries a data source (1) location for the members (3) that are specified by a time intelligence formula. |
| QueryTimeIntelligenceDirect | This operation queries the provided data source (1) for the members (3) that are specified by a time intelligence formula. |
| QueryTransformMembers | This method transforms any collection of member (section 2.2.4.135) into a new set of member collection based on the operation passed on the transformType parameter as specified in section 3.1.4.62.4.1 . |
| SaveTemporaryAnalyticReport | This operation stores a temporary copy of a report view to the server. |
| TestConnection | This operation is used to determine whether a connection as specified by the dataSource element can be established. |
| TrimAnnotationByOwner | This operation removes all the annotations that are owned by a specific user. |
| TrimAnnotationByScorecardLocation | This operation removes all the annotations that belong to a scorecard at a specific location. |
| TrimAnnotationUntouchedSince | This operation removes all the annotations that haven't been updated since the specified date. |
| UpdateAnnotation | This operation updates an existing Annotation (section 2.2.4.18). |
| UpdateDashboard | This operation updates an existing Dashboard (section 2.2.4.79). |
| UpdateDataSource | This operation updates an existing DataSource (section 2.2.4.85). |
| UpdateFilter | This operation is used to update the existing filter as specified by the Filter (section 2.2.4.98) object in the UpdateFilter input element. |
| UpdateIndicator | This operation is used to update the existing indicator as specified by the Indicator (section 2.2.4.125) object in the UpdateIndicator input element. |
| UpdateKpi | This operation is used to update the existing KPI as specified by the Kpi (section 2.2.4.128) object in the UpdateKpi input element. |
| UpdateReportView | This operation is used to update the existing report view as specified by the ReportView (section 2.2.4.161) object in the UpdateReportView input element. |
| UpdateScorecard | This operation is used to update the existing scorecard as specified by the Scorecard (section 2.2.4.163) object in the UpdateScorecard input element. |
| ValidateKpi | Checks whether a KPI stored on the server is valid. |

| Operation | Description |
|------------------------|---|
| ValidateScorecard | Checks if a scorecard stored on the server (2) is valid. |
| ValidateSiteCollection | This operation is used to check if the context site has the server feature installed. |

3.1.4.1 CreateAnnotation

The CreateAnnotation operation is used to create an [Annotation](#) on the server (2).

```
<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 and the server (2) responds with a **CreateAnnotationSoapOut** response message 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

| ErrorCode | Description |
|----------------------|--|
| AnnotationNotEnabled | See Full list of possible ErrorCodes (section 2.2.2.1.2). |
| InvalidAnnotation | See Full list of possible ErrorCodes (section 2.2.2.1.2). |
| InvalidComment | See Common list of ErrorCodes (section 2.2.2.1.3). |
| InvalidPermission | See Common list of ErrorCodes (section 2.2.2.1.3). |

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 |
|-------------------------|--|
| CreateAnnotationSoapIn | The request WSDL message for the CreateAnnotation WSDL operation . |
| CreateAnnotationSoapOut | The response WSDL message for the CreateAnnotation WSDL operation . |

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 |
|--------------------------|---|
| CreateAnnotation | The input data for the CreateAnnotation WSDL operation. |
| CreateAnnotationResponse | The result data for the CreateAnnotation WSDL operation. |

3.1.4.1.2.1 CreateAnnotation

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](#) to be created on the server. MUST be present.

3.1.4.1.2.2 CreateAnnotationResponse

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](#) created on the server. MUST be present. All of the fields MUST be set as described 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 on the server (2).

```
<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, and the server (2) responds with a **CreateDashboardSoapOut** response message as follows:

- The protocol client MUST send the dashboard (as specified in section [2.2.4.79](#)) and its target location on the server.
- The server (2) MUST create the specified dashboard at the specified server location.
- If creation is successful, the server (2) MUST return the created dashboard with the following fields set as specified in FirstClassElement section [2.2.4.99](#):
 - Location
 - CreatedBy
 - ModifiedBy
 - CreatedDate
 - LastModified
 - Version

| Error code | Description |
|--------------------------------------|--|
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common list of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationUrlLength | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationAbsoluteUrl | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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](#).

3.1.4.2.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| CreateDashboardSoapIn | The request WSDL message for the CreateDashboard WSDL operation. |
| CreateDashboardSoapOut | The response WSDL message for the CreateDashboard WSDL operation. |

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 |
|-------------------------|--|
| CreateDashboard | The input data for the CreateDashboard WSDL operation. |
| CreateDashboardResponse | The result data for the CreateDashboard WSDL operation. |

3.1.4.2.2.1 CreateDashboard

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 where the dashboard is created. MUST be present. MUST be a valid URL as specified in [\[RFC1738\]](#). MUST be a valid **subsite** on the server.

dashboard: The dashboard (see section [2.2.4.79](#)) to be created on the server. MUST be present.

3.1.4.2.2.2 CreateDashboardResponse

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** (see section [2.2.4.79](#)) created on the server. MUST be present. All of the fields MUST be set as described 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

This operation is used to create a **DataSource** (section [2.2.4.85](#)) on the server (2).

```
<wsdl:operation name="CreateDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateDataSourceSoapIn"/>
  <wsdl:output message="tns:CreateDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateDataSourceSoapIn** request message, and the server (2) responds with a **CreateDataSourceSoapOut** response message as follows:

1. 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 location.
3. If creation is successful, the server (2) MUST return the created DataSource with the following fields set as specified in **FirstClassElement**, section [2.2.4.99](#):
 4. Location
 5. CreatedBy
 6. ModifiedBy
 7. CreatedDate
 8. LastModified
 9. Version

| Error code | Description |
|--------------------------------------|--|
| InvalidDataSource | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |

| Error code | Description |
|--------------------------------------|--|
| InvalidPermission | See Common list of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationUrlLength | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationAbsoluteUrl | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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](#).

3.1.4.3.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------|---|
| CreateDataSourceSoapIn | The request WSDL message for the CreateDataSource WSDL operation. |
| CreateDataSourceSoapOut | The response WSDL message for the CreateDataSource WSDL operation. |

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 |
|------------------|--|
| CreateDataSource | The input data for the CreateDataSource WSDL operation. |

| Element | Description |
|--------------------------|---|
| CreateDataSourceResponse | The result data for the CreateDataSource WSDL operation. |

3.1.4.3.2.1 CreateDataSource

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 where the **DataSource** (section [2.2.4.85](#)) is to be created. This location **MUST** be a valid relative URL, as specified in [\[RFC1808\]](#). This location **MUST** be a site(2) on the server and this element **MUST** be present.

dataSource: The DataSource to be created on the server. **MUST** be present.

3.1.4.3.2.2 CreateDataSourceResponse

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](#) created on the server. All of the fields **MUST** be set as described in section [3.1.4.3](#) **MUST** be present.

3.1.4.3.3 Complex Types

None.

3.1.4.3.4 Simple Types

None.

3.1.4.3.5 Attributes

None.

3.1.4.3.6 Groups

None.

3.1.4.3.7 Attribute Groups

None.

3.1.4.4 CreateFilter

This operation is used to create a **Filter** (see section [2.2.4.98](#)) on the server (2).

```
<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 and the server (2) responds with a **CreateFilterSoapOut** response message as follows:

- The protocol client MUST send the Filter and its target location on the server.
- The server (2) MUST create the specified Filter at the specified server location.
- If creation is successful, the server (2) MUST return the created Filter with the following fields set as specified in **FirstClassElement**, section [2.2.4.99](#):
 - CreatedBy
 - CreatedDate
 - LastModified
 - Location
 - ModifiedBy
 - Version

| Error code | Description |
|--------------------------------------|--|
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common list of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationUrlLength | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationAbsoluteUrl | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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](#).

3.1.4.4.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------|---|
| CreateFilterSoapIn | The request WSDL message for the CreateFilter WSDL operation. |
| CreateFilterSoapOut | The response WSDL message for the CreateFilter WSDL operation. |

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 |
|----------------------|---|
| CreateFilter | The input data for the CreateFilter WSDL operation. |
| CreateFilterResponse | The result data for the CreateFilter WSDL operation. |

3.1.4.4.2.1 CreateFilter

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 where the [Filter](#) is to be created. MUST be a valid relative URL, as specified in [\[RFC1808\]](#). MUST be a site(2) on the server. MUST be present.

filter: The Filter to be created on the server. MUST be present.

3.1.4.4.2 CreateFilterResponse

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](#) created on the server. All of the fields MUST be set as described in section [3.1.4.4](#). MUST be present.

3.1.4.4.3 Complex Types

None.

3.1.4.4.4 Simple Types

None.

3.1.4.4.5 Attributes

None.

3.1.4.4.6 Groups

None.

3.1.4.4.7 Attribute Groups

None.

3.1.4.5 CreateIndicator

This operation is used to create an Indicator (section [2.2.4.125](#)) on the server (2).

```
<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 and the server (2) responds with a **CreateIndicatorSoapOut** response message as follows:

- The protocol client MUST send the Indicator and its target location on the server.

- The server (2) MUST create the specified Indicator at the specified server location.
- If creation is successful, the server (2) MUST return the created Indicator with the following fields set as specified in **FirstClassElement**, section [2.2.4.99](#):
 - Location
 - CreatedBy
 - ModifiedBy
 - CreatedDate
 - LastModified
 - Version

| Error code | Description |
|--------------------------------------|--|
| InvalidIndicator | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common list of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationUrlLength | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationAbsoluteUrl | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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](#).

3.1.4.5.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| CreateIndicatorSoapIn | The request WSDL message for the CreateIndicator WSDL operation. |
| CreateIndicatorSoapOut | The response WSDL message for the CreateIndicator WSDL operation. |

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 |
|-------------------------|--|
| CreateIndicator | The input data for the CreateIndicator WSDL operation. |
| CreateIndicatorResponse | The result data for the CreateIndicator WSDL operation. |

3.1.4.5.2.1 CreateIndicator

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 where the [Indicator](#) is to be created. MUST be a valid relative URL, as specified in [RFC1808](#). MUST be a site(2) on the server. MUST be present.

indicator: The Indicator to be created on the server. MUST be present.

3.1.4.5.2.2 CreateIndicatorResponse

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>
```

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

CreateIndicatorResult: The [Indicator](#) created on the server. All of the fields MUST be set as described in section [3.1.4.5](#). MUST be present.

3.1.4.5.3 Complex Types

None.

3.1.4.5.4 Simple Types

None.

3.1.4.5.5 Attributes

None.

3.1.4.5.6 Groups

None.

3.1.4.5.7 Attribute Groups

None.

3.1.4.6 CreateKpi

This operation is used to create a KPI (see section [2.2.4.128](#)) on the server (2).

```
<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, and the server (2) responds with a **CreateKpiSoapOut** response message as follows:

- The protocol client MUST send the KPI and its target location on the server.
- The server (2) MUST create the specified KPI at the specified server location.
- If creation is successful, the server (2) MUST return the created KPI with the following fields set as specified in **FirstClassElement**, section [2.2.4.99](#), and in KpiMeasure, section [2.2.4.129](#):
 - Location
 - CreatedBy
 - ModifiedBy
 - CreatedDate

- LastModified
- Version
- Actuals.OwnerKpiLocation
- Targets.OwnerKpiLocation

| Error code | Description |
|--------------------------------------|--|
| InvalidKpi | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common list of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationUrlLength | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationAbsoluteUrl | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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 |
|------------------|--|
| CreateKpiSoapIn | The request WSDL message for the CreateKpi WSDL operation. |
| CreateKpiSoapOut | The response WSDL message for the CreateKpi WSDL operation. |

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 |
|-------------------|--|
| CreateKpi | The input data for the CreateKpi WSDL operation. |
| CreateKpiResponse | The result data for the CreateKpi WSDL operation. |

3.1.4.6.2.1 CreateKpi

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 where the [KPI](#) is to be created. This location MUST be a valid relative URL, as specified in [RFC1808](#). This location MUST be a site(2) on the server and MUST be present.

kpi: The KPI to be created on the server. MUST be present.

3.1.4.6.2.2 CreateKpiResponse

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](#) created on the server. All of the fields MUST be set as described in section [3.1.4.6](#). MUST be present.

3.1.4.6.3 Complex Types

None.

3.1.4.6.4 Simple Types

None.

3.1.4.6.5 Attributes

None.

3.1.4.6.6 Groups

None.

3.1.4.6.7 Attribute Groups

None.

3.1.4.7 CreateReportView

This operation creates a **ReportView** (section [2.2.4.161](#)) on the server (2).

```
<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, and the server (2) responds with a **CreateReportViewSoapOut** response message as follows:

- The protocol client MUST send the **ReportView** (section [2.2.4.161](#)) and URL location.
- The server (2) MUST create the specified **ReportView** (section [2.2.4.161](#)) 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 **FirstClassElement**, section [2.2.4.99](#):
 - Location
 - CreatedBy
 - ModifiedBy
 - CreatedDate
 - LastModified
 - Version

| Error code | Description |
|--------------------------|--|
| InvalidReportView | See Common List of Error Codes (section 2.2.2.1.3). |

| Error code | Description |
|--------------------------------------|--|
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common list of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationUrlLength | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationAbsoluteUrl | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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 |
|-------------------------|---|
| CreateReportViewSoapIn | The request WSDL message for the CreateReportView WSDL operation. |
| CreateReportViewSoapOut | The response WSDL message for the CreateReportView WSDL operation. |

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 |
|--------------------------|---|
| CreateReportView | The input data for the CreateReportView WSDL operation. |
| CreateReportViewResponse | The result data for the CreateReportView WSDL operation. |

3.1.4.7.2.1 CreateReportView

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** (section [2.2.4.161](#)) is to be created. This MUST be a valid relative URL, as specified in [RFC1808](#). This MUST be a site(2) on the server. This MUST be present.

reportView: The **ReportView** (section [2.2.4.161](#)) to be created on the server. This MUST be present.

3.1.4.7.2.2 CreateReportViewResponse

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** (section [2.2.4.161](#)) created on the server. All of the fields MUST be set as described in section [3.1.4.7](#). This MUST be present.

3.1.4.7.3 Complex Types

None.

3.1.4.7.4 Simple Types

None.

3.1.4.7.5 Attributes

None.

3.1.4.7.6 Groups

None.

3.1.4.7.7 Attribute Groups

None.

3.1.4.8 CreateScorecard

This operation creates a Scorecard (section [2.2.4.163](#)) on the server (2).

```
<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, and the server (2) responds with a **CreateScorecardSoapOut** response message as follows:

- The protocol client MUST send the Scorecard (section [2.2.4.163](#)) and URL location.
- The server (2) MUST create the specified Scorecard (section [2.2.4.163](#)) 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 **FirstClassElement** (section [2.2.4.99](#)):
 - Location
 - CreatedBy
 - ModifiedBy
 - CreatedDate
 - LastModified
 - Version

| Error code | Description |
|--------------------------------------|--|
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |

| Error code | Description |
|--------------------------------------|--|
| InvalidPermission | See Common list of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOCreateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationUrlLength | See Common List of Error Codes (section 2.2.2.1.3). |
| RepositoryLocationAbsoluteUrl | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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](#).

3.1.4.8.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| CreateScorecardSoapIn | The request WSDL message for the CreateScorecard WSDL operation. |
| CreateScorecardSoapOut | The response WSDL message for the CreateScorecard WSDL operation. |

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 |
|-----------------|---|
| CreateScorecard | The input data for the CreateScorecard WSDL operation. |

| Element | Description |
|-------------------------|--|
| CreateScorecardResponse | The result data for the CreateScorecard WSDL operation. |

3.1.4.8.2.1 CreateScorecard

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 the Scorecard (section [2.2.4.163](#)) is to be created. This element **MUST** be a valid relative URL, as specified in [\[RFC1808\]](#). It **MUST** be a site(2) on the server. It **MUST** be present.

scorecard: The Scorecard (section [2.2.4.163](#)) to be created on the server. This element **MUST** be present.

3.1.4.8.2.2 CreateScorecardResponse

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: The Scorecard (section [2.2.4.163](#)) created on the server. All of the fields **MUST** be set as described in section [3.1.4.8](#). This element **MUST** be present.

3.1.4.8.3 Complex Types

None.

3.1.4.8.4 Simple Types

None.

3.1.4.8.5 Attributes

None.

3.1.4.8.6 Groups

None.

3.1.4.8.7 Attribute Groups

None.

3.1.4.9 DeleteAnnotation

This operation deletes an **Annotation** (section [2.2.4.18](#)) from the server (2).

```
<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, and the server (2) responds with a **DeleteAnnotationSoapOut** message as follows:

1. The server (2) receives the RepositoryLocation (section [2.2.4.162](#)) of an Annotation.
2. The server (2) MUST delete the Annotation.

Exceptions:

| Error code | Description |
|-----------------------------------|---|
| AnnotationNotEnabled | Annotations are not enabled in the server. |
| AnnotationDeleteNotEnabled | If Annotation Delete is not enabled in the server, but this request, which would delete comments, is received, the comments will not be changed on the server and the AnnotationDeleteNotEnabled error code will be returned. |
| InvalidAnnotation | The annotation does not exist in the server. |

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 |
|-------------------------|---|
| DeleteAnnotationSoapIn | The request WSDL message for the DeleteAnnotation WSDL operation. |
| DeleteAnnotationSoapOut | The response WSDL message for the DeleteAnnotation WSDL operation. |

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 |
|--------------------------|---|
| DeleteAnnotation | The input data for the DeleteAnnotation WSDL operation. |
| DeleteAnnotationResponse | The result data for the DeleteAnnotation WSDL operation. |

3.1.4.9.2.1 DeleteAnnotation

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:q1="http://microsoft.com/wsdl/types/" type="q1:guid"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

annotationID: A GUID that specifies the **annotation** to be deleted. It MUST be present.

3.1.4.9.2.2 DeleteAnnotationResponse

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

This operation deletes a **Dashboard** (see section [2.2.4.79](#)) from the server (2).

```
<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 and the server (2) responds with a **DeleteDashboardSoapOut** message as follows:

1. The server (2) receives the RepositoryLocation (section [2.2.4.162](#)) of a Dashboard.
2. The server (2) MUST delete the Dashboard.

Exceptions:

| Error code | Description |
|---------------------------------|--|
| FCDeleteFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCDeleteFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |

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 |
|------------------------|--|
| DeleteDashboardSoapIn | The request WSDL message for the DeleteDashboard WSDL operation. |
| DeleteDashboardSoapOut | The response WSDL message for the DeleteDashboard WSDL operation. |

3.1.4.10.1.1 DeleteDashboardSoapIn

The request WSDL message for the **DeleteDashboard** WSDL operation.

The SOAP action value is:

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 |
|-------------------------|--|
| DeleteDashboard | The input data for the DeleteDashboard WSDL operation. |
| DeleteDashboardResponse | The result data for the DeleteDashboard WSDL operation. |

3.1.4.10.2.1 DeleteDashboard

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** as specified in [2.2.4.162](#). It MUST contain the location of a Dashboard. It MUST be present.

3.1.4.10.2.2 DeleteDashboardResponse

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

This operation deletes a **DataSource** (see section [2.2.4.85](#)) from the server (2).

```
<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 and the server (2) responds with a **DeleteDataSourceSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) for a DataSource.
2. The server (2) MUST delete the **DataSource**.

Exceptions:

| Error code | Description |
|---------------------------------|--|
| FCDeleteFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCDeleteFailedListAccess | 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](#).

3.1.4.11.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------|---|
| DeleteDataSourceSoapIn | The request WSDL message for the DeleteDataSource WSDL operation. |
| DeleteDataSourceSoapOut | The response WSDL message for the DeleteDataSource WSDL operation. |

3.1.4.11.1.1 DeleteDataSourceSoapIn

The request WSDL message for the **DeleteDataSource** WSDL operation.

The SOAP action value is:

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 |
|--------------------------|---|
| DeleteDataSource | The input data for the DeleteDataSource WSDL operation. |
| DeleteDataSourceResponse | The result data for the DeleteDataSource WSDL operation. |

3.1.4.11.2.1 DeleteDataSource

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** as specified in [2.2.4.162](#). MUST be present. MUST contain the location of a **DataSource**.

3.1.4.11.2.2 DeleteDataSourceResponse

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

This operation deletes a **Filter** (see section [2.2.4.98](#)) from the server (2).

```
<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 and the server (2) responds with a **DeleteFilterSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) of a Filter.
2. The server (2) MUST delete the **Filter**.

Exceptions:

| Error code | Description |
|---------------------------------|--|
| FCDeleteFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCDeleteFailedListAccess | 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](#).

3.1.4.12.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------|---|
| DeleteFilterSoapIn | The request WSDL message for the DeleteFilter WSDL operation. |
| DeleteFilterSoapOut | The response WSDL message for the DeleteFilter WSDL operation. |

3.1.4.12.1.1 DeleteFilterSoapIn

The request WSDL message for the **DeleteFilter** WSDL operation.

The SOAP action value is:

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 |
|----------------------|---|
| DeleteFilter | The input data for the DeleteFilter WSDL operation. |
| DeleteFilterResponse | The result data for the DeleteFilter WSDL operation. |

3.1.4.12.2.1 DeleteFilter

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** as specified in [2.2.4.162](#). MUST be present. MUST contain the location of a **Filter**.

3.1.4.12.2.2 DeleteFilterResponse

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

This operation deletes an **Indicator** (see section [2.2.4.125](#)) from the server (2).

```
<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, and the server (2) responds with a **DeleteIndicatorSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) of an Indicator.
2. The server (2) MUST delete the **Indicator**.

Exceptions:

| Error code | Description |
|---------------------------------|--|
| FCDeleteFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCDeleteFailedListAccess | 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](#).

3.1.4.13.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| DeleteIndicatorSoapIn | The request WSDL message for the DeleteIndicator WSDL operation. |
| DeleteIndicatorSoapOut | The response WSDL message for the DeleteIndicator WSDL operation. |

3.1.4.13.1.1 DeleteIndicatorSoapIn

The request WSDL message for the **DeleteIndicator** WSDL operation.

The SOAP action value is:

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 |
|-------------------------|--|
| DeleteIndicator | The input data for the DeleteIndicator WSDL operation. |
| DeleteIndicatorResponse | The result data for the DeleteIndicator WSDL operation. |

3.1.4.13.2.1 DeleteIndicator

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** as specified in [2.2.4.162](#). MUST be present. MUST contain the location of an Indicator.

3.1.4.13.2.2 DeleteIndicatorResponse

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

This operation deletes a KPI (see section [2.2.4.128](#)) from the server (2).

```
<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 and the server (2) responds with a **DeleteKpiSoapOut** message as follows:

1. The server (2) receives the RepositoryLocation (see section [2.2.4.162](#)) of a KPI.
2. The server (2) MUST delete the KPI.

Exceptions:

| Error code | Description |
|---------------------------------|--|
| FCDeleteFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCDeleteFailedListAccess | See Common list of ErrorCodes (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](#).

3.1.4.14.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------|--|
| DeleteKpiSoapIn | The request WSDL message for the DeleteKpi WSDL operation. |
| DeleteKpiSoapOut | The response WSDL message for the DeleteKpi WSDL operation. |

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 |
|-------------------|--|
| DeleteKpi | The input data for the DeleteKpi WSDL operation. |
| DeleteKpiResponse | The result data for the DeleteKpi WSDL operation. |

3.1.4.14.2.1 DeleteKpi

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** as specified in [2.2.4.162](#). MUST be present. MUST contain the location of a KPI.

3.1.4.14.2.2 DeleteKpiResponse

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

This operation deletes a **ReportView** (see section [2.2.4.161](#)) from the server (2).

```
<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, and the server (2) responds with a **DeleteReportViewSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) of a **ReportView**.
2. The server (2) MUST delete the **ReportView**.

Exceptions:

| Error code | Description |
|---------------------------------|--|
| FCDeleteFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCDeleteFailedListAccess | 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](#).

3.1.4.15.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------|---|
| DeleteReportViewSoapIn | The request WSDL message for the DeleteReportView WSDL operation. |
| DeleteReportViewSoapOut | The response WSDL message for the DeleteReportView WSDL operation. |

3.1.4.15.1.1 DeleteReportViewSoapIn

The request WSDL message for the **DeleteReportView** WSDL operation.

The SOAP action value is:

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 |
|--------------------------|---|
| DeleteReportView | The input data for the DeleteReportView WSDL operation. |
| DeleteReportViewResponse | The result data for the DeleteReportView WSDL operation. |

3.1.4.15.2.1 DeleteReportView

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** as specified in [2.2.4.162](#). MUST be present. MUST contain the location of a **ReportView**.

3.1.4.15.2.2 DeleteReportViewResponse

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

This operation deletes a **Scorecard** (see section [2.2.4.163](#)) from the server (2).

```
<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 and the server (2) responds with a **DeleteScorecardSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) of a Scorecard.
2. The server (2) MUST delete the **Scorecard**.

Exceptions:

| Error code | Description |
|---------------------------------|--|
| InvalidPermission | The content store 24 containing this object no longer exists or the object has already been deleted. |
| FCDeleteFailedListAccess | 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](#).

3.1.4.16.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| DeleteScorecardSoapIn | The request WSDL message for the DeleteScorecard WSDL operation. |
| DeleteScorecardSoapOut | The response WSDL message for the DeleteScorecard WSDL operation. |

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 |
|-------------------------|--|
| DeleteScorecard | The input data for the DeleteScorecard WSDL operation. |
| DeleteScorecardResponse | The result data for the DeleteScorecard WSDL operation. |

3.1.4.16.2.1 DeleteScorecard

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** as specified in [2.2.4.162](#). MUST be present. MUST contain the location of a **Scorecard**.

3.1.4.16.2.2 DeleteScorecardResponse

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 GenerateView

This operation generates the data structure that represents a scorecard grid view based on information stored on the server.

```
<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 and the server (2) responds with a **GenerateViewSoapOut** response message, as follows:

This operation is used to generate the data structure object that represents a scorecard grid view, the [GridViewData](#).

1. The server protocol uses the **scorecardLocation** to retrieve the scorecard for which the view will be generated.
2. **pageFilters** MAY be used to slice the scorecard data.
3. **propertyBags** MUST NOT be null but MAY be empty or MAY contain information that will be consumed by the server defined transforms for the scorecard (see [GridViewTransformReference](#)).
4. 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 [GetScorecard](#), and [GetDataSource](#), but MAY instead contain any other exceptions.

3.1.4.17.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------|---|
| GenerateViewSoapIn | The request WSDL message for the GenerateView WSDL operation. |
| GenerateViewSoapOut | The response WSDL message for the GenerateView WSDL operation. |

3.1.4.17.1.1 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.

3.1.4.17.1.2 GenerateViewSoapOut

The response WSDL message for the **GenerateView** WSDL operation.

The SOAP body contains the **GenerateViewResponse** element.

3.1.4.17.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------|---|
| GenerateView | The input data for the GenerateView WSDL operation. |
| GenerateViewResponse | The result data for the GenerateView WSDL operation. |

3.1.4.17.2.1 GenerateView

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 [RepositoryLocation](#). 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 (3) used to slice the scorecard values, as defined in [ArrayOfMember](#).

propertyBags: Is a dictionary as defined in [DictionaryWrapperOfStringPropertyBag](#), containing specific settings that will be consumed by each individual transformation defined for the scorecard (see [GridViewTransformReference](#)). It MUST NOT be null but MAY be empty.

3.1.4.17.2 GenerateViewResponse

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 [GridViewData](#). The returned result is **Null** if **scorecardLocation** is null, empty or invalid.

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 GenerateViewDirect

This operation generates the data structure that represents a scorecard grid view using information sent from the client.

```
<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 and the server (2) responds with a **GenerateViewDirectSoapOut** response message, as follows:

This operation is used to generate the data structure object that represents a scorecard grid view, the [GridViewData](#).

1. The server protocol uses the **scorecard**, **kpis**, **dataSources** and **indicators** to build the scorecard view. The provided information MAY be incomplete, in which case the missing information will be retrieved from the server.
2. **pageFilters** MAY be used to slice the scorecard data.
3. **propertyBags** MUST NOT be null but MAY be empty or MAY contain information that will be consumed by the server defined transforms for the scorecard (see [GridViewTransformReference](#)).

3.1.4.18.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------------|---|
| GenerateViewDirectSoapIn | The request WSDL message for the GenerateViewDirect WSDL operation. |
| GenerateViewDirectSoapOut | The response WSDL message for the GenerateViewDirect WSDL operation. |

3.1.4.18.1.1 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.

3.1.4.18.1.2 GenerateViewDirectSoapOut

The response WSDL message for the **GenerateViewDirect** WSDL operation.

The SOAP body contains the **GenerateViewDirectResponse** element.

3.1.4.18.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------------|---|
| GenerateViewDirect | The input data for the GenerateViewDirect WSDL operation. |
| GenerateViewDirectResponse | The result data for the GenerateViewDirect WSDL operation. |

3.1.4.18.2.1 GenerateViewDirect

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. It MUST NOT be **null**.

kpis: Represents a list (1) of KPIs used by **scorecard**, as defined in [ArrayOfKpi](#). 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.

dataSources: Represents a list (1) of data sources (1) used by **scorecard**, as defined in [ArrayOfDataSource](#). 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.

indicators: Represents a list (1) of **indicators** used by **scorecard**, as defined in [ArrayOfIndicator](#). 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.

pageFilters: Represents a collection of members (3) used to slice the scorecard values, as defined in [ArrayOfMember](#).

propertyBags: Is a dictionary as defined in [DictionaryWrapperOfStringPropertyBag](#), containing specific settings that will be consumed by each individual transformation defined for the scorecard (see [GridViewTransformReference](#)). MUST NOT be null, but MAY be empty.

3.1.4.18.2.2 GenerateViewDirectResponse

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 defined in [GridViewData](#). The returned result is **BpmException** ([2.2.4.61](#)) if **scorecard** is null or invalid, or if **kpis**, **dataSources**, and **indicators** together with the server store do not contain all necessary dependencies.

3.1.4.18.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

| Complex type | Description |
|------------------|---|
| ArrayOfIndicator | Specifies an array of indicators for a scorecard. |

3.1.4.18.3.1 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 and MUST conform to the schema of the **Indicator** (section [2.2.4.125](#)) complex type.

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 GetAllAnnotationsByScorecardLocation

This operation retrieves an array of **Annotation** elements associated with a scorecard.

```
<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, and the server (2) responds with a **GetAllAnnotationsByScorecardLocationSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) of a Scorecard.
2. The server (2) MUST retrieve an array of **Annotation** elements.

Exceptions:

| Error code | Description |
|--------------------------|---|
| InvalidPermission | Caused by not having access to the Scorecard. See section 2.2.2.1.3 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](#).

3.1.4.19.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---|---|
| GetAllAnnotationsByScorecardLocationSoapIn | The request WSDL message for the GetAllAnnotationsByScorecardLocation WSDL operation. |
| GetAllAnnotationsByScorecardLocationSoapOut | The response WSDL message for the GetAllAnnotationsByScorecardLocation WSDL operation. |

3.1.4.19.1.1 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.

3.1.4.19.1.2 GetAllAnnotationsByScorecardLocationSoapOut

The response WSDL message for the **GetAllAnnotationsByScorecardLocation** WSDL operation.

The SOAP body contains the **GetAllAnnotationsByScorecardLocationResponse** element.

3.1.4.19.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--|---|
| GetAllAnnotationsByScorecardLocation | The input data for the GetAllAnnotationsByScorecardLocation WSDL operation. |
| GetAllAnnotationsByScorecardLocationResponse | The result data for the GetAllAnnotationsByScorecardLocation WSDL operation. |

3.1.4.19.2.1 GetAllAnnotationsByScorecardLocation

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 **RepositoryLocation** (see section [2.2.4.162](#)). This MUST be present.

3.1.4.19.2.2 GetAllAnnotationsByScorecardLocationResponse

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** (see section [2.2.4.18](#)) elements associated with the **scorecardLocation** that was requested from the server (2).

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 |
|-------------------|---|
| ArrayOfAnnotation | Specifies an array of Annotation elements. |

3.1.4.19.3.1 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** (section [2.2.4.18](#)) 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 GetAnalyticReportView

This operation retrieves a report view from the server (2) that has been created through **SaveTemporaryAnalyticReport** (see section [3.1.4.63](#)) or **CreateReportView** (see section [3.1.4.7](#)).

```
<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, and the server (2) responds with a **GetAnalyticReportViewSoapOut** message as follows:

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the report view to be retrieved.
2. The server (2) sends the corresponding report view.
3. In the event that a report view cannot be retrieved, the server (2) SHOULD [<25>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------|---|
| InvalidPermission | If the report view was created with SaveTemporaryAnalyticReport (see section 3.1.4.63), the security permissions are inherited from the parent report view. The location of the parent report view can be determined from the RepositoryLocation (see section 2.2.4.162) object "ParentReportViewLocation" embedded within "CustomData" of the report view. |
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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](#).

3.1.4.20.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------|--|
| GetAnalyticReportViewSoapIn | The request WSDL message for the GetAnalyticReportView WSDL operation. |
| GetAnalyticReportViewSoapOut | The response WSDL message for the GetAnalyticReportView WSDL operation. |

3.1.4.20.1.1 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.

3.1.4.20.1.2 GetAnalyticReportViewSoapOut

The response WSDL message for the **GetAnalyticReportView** WSDL operation.

The SOAP body contains the **GetAnalyticReportViewResponse** element.

3.1.4.20.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------------|---|
| GetAnalyticReportView | The input data for the GetAnalyticReportView WSDL operation. |

| Element | Description |
|-------------------------------|--|
| GetAnalyticReportViewResponse | The result data for the GetAnalyticReportView WSDL operation. |

3.1.4.20.2.1 GetAnalyticReportView

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>
```

analyticReportViewLocation: The **RepositoryLocation** (see section [2.2.4.162](#)) object that specifies the location of the report view on the server.

- If the report view to be retrieved was created with **SaveTemporaryAnalyticReport** (see section [3.1.4.63](#)):
 - The **ItemGuid** property MUST equal the GUID that was returned from **SaveTemporaryAnalyticReport** (see section [3.1.4.63](#)).
 - The **ItemType** property MUST equal **TempReportView** as specified by **FirstClassObjectType** (see section [2.2.5.20](#)).
 - The **ItemUrl** property MUST equal an empty string.
- If the report view to be retrieved was created with **CreateReportView** (see section [3.1.4.7](#)), the **ItemUrl** property MUST be set to the location of the report view.

3.1.4.20.2.2 GetAnalyticReportViewResponse

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](#) object that was requested from the server (2).

3.1.4.20.3 Complex Types

None.

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 GetAnnotation

This operation retrieves an **annotation** associated with a scorecard cell from the server (2).

```
<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, and the server (2) responds with a **GetAnnotationSoapOut** message as follows:

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the scorecard containing the **annotation**. It also sends an array of **Tuple** (see section [2.2.4.162](#)) objects and a string that specifies the **annotation** within the scorecard to be retrieved. All of these **MUST** be present.
2. The server (2) sends the corresponding **annotation**.

Exceptions:

| Error code | Description |
|--------------------------|--|
| InvalidPermission | 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](#).

3.1.4.21.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|----------------------|--|
| GetAnnotationSoapIn | The request WSDL message for the GetAnnotation WSDL operation. |
| GetAnnotationSoapOut | The response WSDL message for the GetAnnotation WSDL operation. |

3.1.4.21.1.1 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.

3.1.4.21.1.2 GetAnnotationSoapOut

The response WSDL message for the **GetAnnotation** WSDL operation.

The SOAP body contains the **GetAnnotationResponse** element.

3.1.4.21.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------------|--|
| GetAnnotation | The input data for the GetAnnotation WSDL operation. |
| GetAnnotationResponse | The result data for the GetAnnotation WSDL operation. |

3.1.4.21.2.1 GetAnnotation

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: The **RepositoryLocation** (see section [2.2.4.162](#)) object that specifies the location of the scorecard on the server (2) that contains the **annotation**.

- It 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** (see section [2.2.4.162](#)) objects 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. It MUST be present.

cellPath: CellpathCoordinates, as specified in **Annotation** (see section [2.2.4.18](#)). It MUST be present.

3.1.4.21.2.2 GetAnnotationResponse

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** (see section [2.2.4.18](#)) object that was requested from the server (2).

3.1.4.21.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

| Complex type | Description |
|--------------|------------------------------|
| ArrayOfTuple | Specifies an array of Tuple. |

3.1.4.21.3.1 ArrayOfTuple

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

The **ArrayOfTuple** complex type specifies an array of Tuple (see section [2.2.4.162](#)).

```
<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** (see section [2.2.4.181](#)) complex type.

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 GetAnnotationByID

This operation retrieves an **annotation** from a specified GUID from the server (2).

```
<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, and the server (2) responds with a **GetAnnotationByIDSoapOut** message as follows:

1. The protocol client sends a GUID that specifies the **annotation** to be retrieved.
2. The server (2) sends the corresponding **annotation**.

Exceptions:

| Error code | Description |
|--------------------------|--|
| InvalidPermission | 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](#).

3.1.4.22.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--------------------------|--|
| GetAnnotationByIDSoapIn | The request WSDL message for the GetAnnotationByID WSDL operation. |
| GetAnnotationByIDSoapOut | The response WSDL message for the GetAnnotationByID WSDL operation. |

3.1.4.22.1.1 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.

3.1.4.22.1.2 GetAnnotationByIDSoapOut

The response WSDL message for the **GetAnnotationByID** WSDL operation.

The SOAP body contains the **GetAnnotationByIDResponse** element.

3.1.4.22.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---------------------------|--|
| GetAnnotationByID | The input data for the GetAnnotationByID WSDL operation. |
| GetAnnotationByIDResponse | The result data for the GetAnnotationByID WSDL operation. |

3.1.4.22.2.1 GetAnnotationByID

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:q1="http://microsoft.com/wsdl/types/" type="q1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

annotationID: A GUID that specifies the **annotation** to be retrieved. It **MUST** be present.

3.1.4.22.2.2 GetAnnotationByIDResponse

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** (see section [2.2.4.18](#)) object that was requested from the server (2).

3.1.4.22.3 Complex Types

None.

3.1.4.22.4 Simple Types

None.

3.1.4.22.5 Attributes

None.

3.1.4.22.6 Groups

None.

3.1.4.22.7 Attribute Groups

None.

3.1.4.23 GetAnnotationSetting

This operation retrieves an **AnnotationSetting** object that contains the annotation settings for the server (2).

```
<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, and the server (2) responds with a **GetAnnotationSettingSoapOut** message as follows:

1. The server (2) MUST retrieve an **AnnotationSetting** object.

3.1.4.23.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-----------------------------|---|
| GetAnnotationSettingSoapIn | The request WSDL message for the GetAnnotationSetting WSDL operation. |
| GetAnnotationSettingSoapOut | The response WSDL message for the GetAnnotationSetting WSDL operation. |

3.1.4.23.1.1 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.

3.1.4.23.1.2 GetAnnotationSettingSoapOut

The response WSDL message for the **GetAnnotationSetting** WSDL operation.

The SOAP body contains the **GetAnnotationSettingResponse** element.

3.1.4.23.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|------------------------------|---|
| GetAnnotationSetting | The input data for the GetAnnotationSetting WSDL operation. |
| GetAnnotationSettingResponse | The result data for the GetAnnotationSetting WSDL operation. |

3.1.4.23.2.1 GetAnnotationSetting

The input data for the **GetAnnotationSetting** WSDL operation.

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

3.1.4.23.2.2 GetAnnotationSettingResponse

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 (see section [3.1.4.23.3.1](#)) object that was requested from the server (2).

3.1.4.23.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

| Complex type | Description |
|-------------------|---|
| AnnotationSetting | Specifies annotation settings for this service application. |

3.1.4.23.3.1 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.

3.1.4.23.4 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 GetAsKpis

This operation takes in an Analysis Services data source along with a server-relative URL to the KPI (see section [2.2.4.128](#)) list (1) and returns a collection of KPIs as defined in ArrayOfKpi (see section [2.2.4.42](#)).

```
<wsdl:operation name="GetAsKpis" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAsKpisSoapIn"/>
  <wsdl:output message="tns:GetAsKpisSoapOut"/>
</wsdl:operation>
```

This operation is valid only for Analysis Services data sources. This operation initially validates if it is a trusted data source along with the user's access permissions. If it is from an un-trusted location

then it is added to the list (1) of untrusted data sources. The operation then retrieves the Cube (see section [2.2.4.78](#)) represented by that data Source and returns the list (1) of KPIs from that Cube.

3.1.4.24.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------|--|
| GetAsKpisSoapIn | The request WSDL message for the GetAsKpis WSDL operation. |
| GetAsKpisSoapOut | The response WSDL message for the GetAsKpis WSDL operation. |

3.1.4.24.1.1 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.

3.1.4.24.1.2 GetAsKpisSoapOut

The response WSDL message for the **GetAsKpis** WSDL operation.

The SOAP body contains the **GetAsKpisResponse** element.

3.1.4.24.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------|--|
| GetAsKpis | The input data for the GetAsKpis WSDL operation. |
| GetAsKpisResponse | The result data for the GetAsKpis WSDL operation. |

3.1.4.24.2.1 GetAsKpis

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: MUST be an Analysis Services data source.

listUrl: MUST be a server-relative URL to the Analysis Services data source (see section [2.2.4.85](#)) list (1).

3.1.4.24.2.2 GetAsKpisResponse

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: MUST return a collection of KPIs as defined in ArrayOfKpi (see section [2.2.4.42](#)).

3.1.4.24.3 Complex Types

None.

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 GetCube

This operation takes in a **RepositoryLocation** (see section [2.2.4.162](#)) object and returns the associated Cube (see section [2.2.4.78](#)) object.

```
<wsdl:operation name="GetCube" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeSoapIn"/>
  <wsdl:output message="tns:GetCubeSoapOut"/>
</wsdl:operation>
```

This operation initially retrieves the data source for the **RepositoryLocation** (see section [2.2.4.162](#)) and validates if it is a **trusted location (1)** along with the user's access permissions. If it is from an un-trusted location then it is added to the list (1) of untrusted data sources. The valid data source types include Analysis Services and Tabular data sources. The operation finally returns the **Cube** (see section [2.2.4.78](#)) represented by that data source.

| Error code | Description |
|--|---|
| DataSourceHostNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionUnsupported | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceDatabaseNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceCubeNotFound | See Full List of Possible Error Codes (section 2.2.2.1.2). |
| 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](#).

3.1.4.25.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|----------------|--|
| GetCubeSoapIn | The request WSDL message for the GetCube WSDL operation. |
| GetCubeSoapOut | The response WSDL message for the GetCube WSDL operation. |

3.1.4.25.1.1 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.

3.1.4.25.1.2 GetCubeSoapOut

The response WSDL message for the **GetCube** WSDL operation.

The SOAP body contains the **GetCubeResponse** element.

3.1.4.25.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------|--|
| GetCube | The input data for the GetCube WSDL operation. |
| GetCubeResponse | The result data for the GetCube WSDL operation. |

3.1.4.25.2.1 GetCube

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: MUST be a valid **RepositoryLocation** (see section [2.2.4.162](#)).

3.1.4.25.2.2 GetCubeResponse

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: MUST return **Null** if input fails validation; otherwise, MUST return the **Cube** (see section [2.2.4.78](#)) represented by that **RepositoryLocation** (see section [2.2.4.162](#)).

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 GetCubeFromDataSource

This operation takes in a data source object and returns the associated **Cube** (see section [2.2.4.78](#)) object.

```

<wsdl:operation name="GetCubeFromDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeFromDataSourceSoapOut"/>
</wsdl:operation>

```

This operation initially validates if the data source is in a trusted location (1) along with the user's access permissions. If it is from an un-trusted location then it is added to the list (1) of untrusted data sources. The valid data source types include Analysis Services and Tabular sources. The operation finally returns the **Cube** (see section [2.2.4.78](#)) represented by that data source.

| Error code | Description |
|-----------------------------------|--|
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceDatabaseNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceCubeNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.26.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------|--|
| GetCubeFromDataSourceSoapIn | The request WSDL message for the GetCubeFromDataSource WSDL operation. |
| GetCubeFromDataSourceSoapOut | The response WSDL message for the GetCubeFromDataSource WSDL operation. |

3.1.4.26.1.1 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.

3.1.4.26.1.2 GetCubeFromDataSourceSoapOut

The response WSDL message for the **GetCubeFromDataSource** WSDL operation.

The SOAP body contains the **GetCubeFromDataSourceResponse** element.

3.1.4.26.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------|--|
| GetCubeFromDataSource | The input data for the GetCubeFromDataSource WSDL operation. |
| GetCubeFromDataSourceResponse | The result data for the GetCubeFromDataSource WSDL operation. |

3.1.4.26.2.1 GetCubeFromDataSource

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: The **DataSource** (see section [2.2.4.85](#)) to be used for the request. MUST be present.

3.1.4.26.2.2 GetCubeFromDataSourceResponse

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: MUST return 'Null' when the Input is read-only and does not match the **DataSource** (see section [2.2.4.85](#)) stored on the server or when the Input is not read-only and the user does not have adequate permissions to open and edit the **DataSource** (see section [2.2.4.85](#)) otherwise MUST return the **Cube** (see section [2.2.4.78](#)) represented by that **DataSource** (see section [2.2.4.85](#)).

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 GetCubeMetaData

This operation takes in an Analysis Services **RepositoryLocation** (see section [2.2.4.162](#)) object and returns the associated Cube (see section [2.2.4.78](#)) object.

```
<wsdl:operation name="GetCubeMetaData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeMetaDataSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataSoapOut"/>
</wsdl:operation>
```

This operation is valid only for Analysis Services data sources. This operation initially retrieves the data source for the **RepositoryLocation** (see section [2.2.4.162](#)) and validates if it is a trusted location (1) along with the user's access permissions. If it is from an un-trusted location then it adds it to the list (1) of untrusted data sources. The operation then retrieves the Cube definition represented by that data source and generates a generic **Cube** (see section [2.2.4.78](#)) object with **Dimensions** (see section [2.2.4.90](#)) with only hierarchies and levels) from the specified Analysis Services cube definition.

| Error code | Description |
|--|---|
| UnableToLoadFCODao | See Full List of Possible Error Codes (section 2.2.2.1.2). |
| DataSourceCubeNotFound | See Full List of Possible Error Codes (section 2.2.2.1.2). |
| DatabaseConnectionNotOpen | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceHostNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionUnsupported | See Common List of Error Codes (section 2.2.2.1.3). |
| NotTrustedLocation | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceDatabaseNotFound | 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](#).

3.1.4.27.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| GetCubeMetaDataSoapIn | The request WSDL message for the GetCubeMetaData WSDL operation. |
| GetCubeMetaDataSoapOut | The response WSDL message for the GetCubeMetaData WSDL operation. |

3.1.4.27.1.1 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.

3.1.4.27.1.2 GetCubeMetaDataSoapOut

The response WSDL message for the **GetCubeMetaData** WSDL operation.

The SOAP body contains the **GetCubeMetaDataResponse** element.

3.1.4.27.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------|--|
| GetCubeMetaData | The input data for the GetCubeMetaData WSDL operation. |
| GetCubeMetaDataResponse | The result data for the GetCubeMetaData WSDL operation. |

3.1.4.27.2.1 GetCubeMetaData

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: MUST be an Analysis Services RepositoryLocation (see section [2.2.4.162](#)).

3.1.4.27.2.2 GetCubeMetaDataResponse

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>

```

GetCubeMetaDataResult: MUST return the **Cube** (see section [2.2.4.78](#)) object associated with that **RepositoryLocation** (see section [2.2.4.162](#)).

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 GetCubeMetaDataForDataSource

This operation takes in an Analysis Services data source object and returns the associated **Cube** (see section [2.2.4.78](#)) object.

```

<wsdl:operation name="GetCubeMetaDataForDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeMetaDataForDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataForDataSourceSoapOut"/>
</wsdl:operation>

```

This operation is valid only for Analysis Services data sources. This operation initially validates if it is a trusted data source along with the user's access permissions. If it is from an un-trusted location then it adds it to the list (1) of untrusted data sources. The operation then retrieves the **Cube** definition represented by that data source and generates a generic **Cube** (see section [2.2.4.78](#)) object with dimensions as defined in **Dimension** (see section [2.2.4.90](#)) from that Analysis Services cube definition.

| Error code | Description |
|-------------------------------|---|
| UnableToLoadFCODao | See Full List of Possible Error Codes (section 2.2.2.1.2). |
| DataSourceCubeNotFound | See Full List of Possible Error Codes (section 2.2.2.1.2). |

| Error code | Description |
|--|--|
| DatabaseConnectionNotOpen | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceHostNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionUnsupported | See Common List of Error Codes (section 2.2.2.1.3). |
| NotTrustedLocation | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceDatabaseNotFound | 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](#).

3.1.4.28.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------------------|---|
| GetCubeMetaDataForDataSourceSoapIn | The request WSDL message for the GetCubeMetaDataForDataSource WSDL operation. |
| GetCubeMetaDataForDataSourceSoapOut | The response WSDL message for the GetCubeMetaDataForDataSource WSDL operation. |

3.1.4.28.1.1 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.

3.1.4.28.1.2 GetCubeMetaDataForDataSourceSoapOut

The response WSDL message for the **GetCubeMetaDataForDataSource** WSDL operation.

The SOAP body contains the **GetCubeMetaDataForDataSourceResponse** element.

3.1.4.28.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--------------------------------------|--|
| GetCubeMetaDataForDataSource | The input data for the GetCubeMetaDataForDataSource WSDL operation. |
| GetCubeMetaDataForDataSourceResponse | The result data for the GetCubeMetaDataForDataSource |

| Element | Description |
|---------|-----------------|
| | WSDL operation. |

3.1.4.28.2.1 GetCubeMetaDataForDataSource

The input data for the **GetCubeMetaDataForDataSource** WSDL operation.

```
<xs:element name="GetCubeMetaDataForDataSource" 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: MUST be an Analysis Services data source (see section [2.2.4.85](#)).

3.1.4.28.2.2 GetCubeMetaDataForDataSourceResponse

The result data for the **GetCubeMetaDataForDataSource** WSDL operation.

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

GetCubeMetaDataForDataSourceResult: MUST return the **Cube** (see section [2.2.4.78](#)) object associated with the specified data source.

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 GetCubeNameInfos

This operation retrieves an **ArrayOfNameInfo** (see section [2.2.4.41](#)) that describes the cubes of the data source (1).

```
<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 **GetCubeNameInfosSoapIn** request message, and the server (2) responds with a **GetCubeNameInfosSoapOut** message as follows:

1. The server (2) receives a data source
2. The server (2) sends the NameInfo (see section [2.2.4.150](#)) object for each of the corresponding cubes.

Exceptions:

| Error code | Description |
|-----------------------------------|--|
| DataSourceDatabaseNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| NotTrustedLocation | See Common List of Error Codes (section 2.2.2.1.3). |

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 |
|-------------------------|---|
| GetCubeNameInfosSoapIn | The request WSDL message for the GetCubeNameInfos WSDL operation. |
| GetCubeNameInfosSoapOut | The response WSDL message for the GetCubeNameInfos WSDL operation. |

3.1.4.29.1.1 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.

3.1.4.29.1.2 GetCubeNameInfosSoapOut

The response WSDL message for the **GetCubeNameInfos** WSDL operation.

The SOAP body contains the **GetCubeNameInfosResponse** element.

3.1.4.29.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--------------------------|---|
| GetCubeNameInfos | The input data for the GetCubeNameInfos WSDL operation. |
| GetCubeNameInfosResponse | The result data for the GetCubeNameInfos WSDL operation. |

3.1.4.29.2.1 GetCubeNameInfos

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) MUST be present.

3.1.4.29.2.2 GetCubeNameInfosResponse

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 (see section [2.2.4.31](#)) MUST be present.

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 GetCurrentCultureLcid

This operation retrieves the current culture locale identifier.

```
<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** message, and the server (2) responds with a **GetCurrentCultureLcidSoapOut** response message 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](#).

3.1.4.30.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------|--|
| GetCurrentCultureLcidSoapIn | The request WSDL message for the GetCurrentCultureLcid WSDL operation. |
| GetCurrentCultureLcidSoapOut | The response WSDL message for the GetCurrentCultureLcid WSDL operation. |

3.1.4.30.1.1 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.

3.1.4.30.1.2 GetCurrentCultureLcidSoapOut

The response WSDL message for the **GetCurrentCultureLcid** WSDL operation.

The SOAP body contains the **GetCurrentCultureLcidResponse** element.

3.1.4.30.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------|--|
| GetCurrentCultureLcid | The input data for the GetCurrentCultureLcid WSDL operation. |
| GetCurrentCultureLcidResponse | The result data for the GetCurrentCultureLcid WSDL operation. |

3.1.4.30.2.1 GetCurrentCultureLcid

The input data for the **GetCurrentCultureLcid** WSDL operation.

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

3.1.4.30.2.2 GetCurrentCultureLcidResponse

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.

3.1.4.30.3 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 GetCurrentUserInfo

This operation retrieves the user name and display name information of the current user.

```
<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** message, and the server (2) responds with a **GetCurrentUserInfoSoapOut** response message 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".

3.1.4.31.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------------|---|
| GetCurrentUserInfoSoapIn | The request WSDL message for the GetCurrentUserInfo WSDL operation. |
| GetCurrentUserInfoSoapOut | The response WSDL message for the GetCurrentUserInfo WSDL operation. |

3.1.4.31.1.1 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.

3.1.4.31.1.2 GetCurrentUserInfoSoapOut

The response WSDL message for the **GetCurrentUserInfo** WSDL operation.

The SOAP body contains the **GetCurrentUserInfoResponse** element.

3.1.4.31.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------------|---|
| GetCurrentUserInfo | The input data for the GetCurrentUserInfo WSDL operation. |
| GetCurrentUserInfoResponse | The result data for the GetCurrentUserInfo WSDL operation. |

3.1.4.31.2.1 GetCurrentUserInfo

The input data for the **GetCurrentUserInfo** WSDL operation.

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

3.1.4.31.2.2 GetCurrentUserInfoResponse

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.

3.1.4.31.3 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 GetDashboard

This operation retrieves a dashboard.

```
<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** message, and the server (2) responds with a **GetDashboardSoapOut** response message as follows:

1. The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the dashboard to be retrieved.
2. The server (2) responds with the corresponding dashboard.
3. In the event the dashboard cannot be retrieved, the server (2) SHOULD [<26>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |

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](#).

3.1.4.32.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------|---|
| GetDashboardSoapIn | The request WSDL message for the GetDashboard WSDL operation. |
| GetDashboardSoapOut | The response WSDL message for the GetDashboard WSDL operation. |

3.1.4.32.1.1 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.

3.1.4.32.1.2 GetDashboardSoapOut

The response WSDL message for the **GetDashboard** WSDL operation.

The SOAP body contains the **GetDashboardResponse** element.

3.1.4.32.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------|---|
| GetDashboard | The input data for the GetDashboard WSDL operation. |
| GetDashboardResponse | The result data for the GetDashboard WSDL operation. |

3.1.4.32.2.1 GetDashboard

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** as specified in section [2.2.4.162](#) MUST be present. The **ItemUrl** property MUST contain a valid URL.

3.1.4.32.2.2 GetDashboardResponse

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 as specified in [2.2.4.79](#) SHOULD be present.

3.1.4.32.3 Complex Types

None.

3.1.4.32.4 Simple Types

None.

3.1.4.32.5 Attributes

None.

3.1.4.32.6 Groups

None.

3.1.4.32.7 Attribute Groups

None.

3.1.4.33 GetDatabaseNamesFromDataSource

This operation retrieves an array of database names associated with the data source (1).

```
<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, and the server (2) responds with a **GetDatabaseNamesSoapOut** message as follows:

1. The server (2) receives a **DataSource** (see section [2.2.4.85](#)).
2. The server (2) returns the name for each database associated with the data source (3).

Exceptions:

| Error code | Description |
|-----------------------------------|--|
| DataSourceDatabaseNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.33.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--------------------------------------|--|
| GetDatabaseNamesFromDataSourceSoapIn | The request WSDL message for the GetDatabaseNamesFromDataSource WSDL operation. |

| Message | Description |
|---------------------------------------|---|
| GetDatabaseNamesFromDataSourceSoapOut | The response WSDL message for the GetDatabaseNamesFromDataSource WSDL operation. |

3.1.4.33.1.1 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.

3.1.4.33.1.2 GetDatabaseNamesFromDataSourceSoapOut

The response WSDL message for the **GetDatabaseNamesFromDataSource** WSDL operation.

The SOAP body contains the **GetDatabaseNamesFromDataSourceResponse** element.

3.1.4.33.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--|---|
| GetDatabaseNamesFromDataSource | The input data for the GetDatabaseNamesFromDataSource WSDL operation. |
| GetDatabaseNamesFromDataSourceResponse | The result data for the GetDatabaseNamesFromDataSource WSDL operation. |

3.1.4.33.2.1 GetDatabaseNamesFromDataSource

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) MUST be present.

3.1.4.33.2.2 GetDatabaseNamesFromDataSourceResponse

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 MUST be present.

3.1.4.33.3 Complex Types

None.

3.1.4.33.4 Simple Types

None.

3.1.4.33.5 Attributes

None.

3.1.4.33.6 Groups

None.

3.1.4.33.7 Attribute Groups

None.

3.1.4.34 GetDataSource

This operation retrieves a data source (1).

```

<wsdl:operation name="GetDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDataSourceSoapOut"/>
</wsdl:operation>

```

GetDataSourceSoapIn The protocol client sends a **GetDataSourceSoapIn** message, and the server (2) responds with a **GetDataSourceSoapOut** response message as follows:

1. Receives a **RepositoryLocation** (see section [2.2.4.162](#)) for the data source (1) to be retrieved.
2. The server (2) sends the corresponding data source (1).
3. In the event that a data source (1) 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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](#).

3.1.4.34.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|----------------------|--|
| GetDataSourceSoapIn | The request WSDL message for the GetDataSource WSDL operation. |
| GetDataSourceSoapOut | The response WSDL message for the GetDataSource WSDL operation. |

3.1.4.34.1.1 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.

3.1.4.34.1.2 GetDataSourceSoapOut

The response WSDL message for the **GetDataSource** WSDL operation.

The SOAP body contains the **GetDataSourceResponse** element.

3.1.4.34.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------------|--|
| GetDataSource | The input data for the GetDataSource WSDL operation. |
| GetDataSourceResponse | The result data for the GetDataSource WSDL operation. |

3.1.4.34.2.1 GetDataSource

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** of a data source (see section [2.2.4.162](#)) MUST be present.

3.1.4.34.2 GetDataSourceResponse

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 **DataSource** (see section [2.2.4.85](#)) 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 GetDependentElements

GetDependentElements retrieves from the server all **FirstClassElements** (see 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 data sources that the scorecard depends on will also be retrieved.

```

<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** message, and the server responds with a **GetDependentElementsSoapOut** response message as follows:

1. The protocol client sends a list (1) of **RepositoryLocations**.
2. The server responds with a **DependentElementInfo** (see section [3.1.4.35.3.2](#)) containing all **FirstClassElement** items specified by the list of **RepositoryLocations**, all associated sub-items, and all containing list URLs.
3. In the event that all **FirstClassElement** items and sub-items referenced by the list 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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](#).

3.1.4.35.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-----------------------------|---|
| GetDependentElementsSoapIn | The request WSDL message for the GetDependentElements WSDL operation. |
| GetDependentElementsSoapOut | The response WSDL message for the GetDependentElements WSDL operation. |

3.1.4.35.1.1 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.

3.1.4.35.1.2 GetDependentElementsSoapOut

The response WSDL message for the **GetDependentElements** WSDL operation.

The SOAP body contains the **GetDependentElementsResponse** element.

3.1.4.35.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|------------------------------|---|
| GetDependentElements | The input data for the GetDependentElements WSDL operation. |
| GetDependentElementsResponse | The result data for the GetDependentElements WSDL operation. |

3.1.4.35.2.1 GetDependentElements

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** as specified in section [3.1.4.35.3.1](#). This specifies which items to retrieve.

3.1.4.35.2.2 GetDependentElementsResponse

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** as specified in section [3.1.4.35.3.2](#) MUST be present.

3.1.4.35.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

| Complex type | Description |
|---------------------------|---|
| ArrayOfRepositoryLocation | Specifies an array of RepositoryLocation . |

| Complex type | Description |
|-----------------------|---|
| DependentElementInfo | Contains elements and associated list references. |
| ArrayOfRepositoryList | Specifies an array of RepositoryList elements. |
| RepositoryList | |

3.1.4.35.3.1 ArrayOfRepositoryLocation

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

The **ArrayOfRepositoryLocation** complex type specifies an array of **RepositoryLocation** (see section [2.2.4.162](#)).

```
<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** (see section [2.2.4.162](#)) complex type.

3.1.4.35.3.2 DependentElementInfo

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

A complex type that 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:element minOccurs="0" maxOccurs="1" name="DependentElements"
      type="tns:ArrayOfFirstClassElement"/>
  </xs:sequence>
</xs:complexType>
```

DependentLists: An **ArrayOfRepositoryList** (see section [3.1.4.35.3.3](#)). A collection of lists (1) associated with the items in **DependentElements**.

DependentElements: An **ArrayOfFirstClassElement** (see section [2.2.4.35](#)). A collection of **FirstClassElement** items and all items associated through **FirstClassElement** references.

3.1.4.35.3.3 ArrayOfRepositoryList

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

The **ArrayOfRepositoryList** complex type specifies an array of RepositoryList elements (see section [3.1.4.35.3.4](#)).

```
<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** (section [3.1.4.35.3.4](#)) complex type.

3.1.4.35.3.4 RepositoryList

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

Specifies a location where **FirstClassElement** (section [2.2.4.99](#)) items are stored on the server.

```

<xs:complexType name="RepositoryList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Location">
      <xs:complexType mixed="true">
        <xs:sequence>
          <xs:any/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <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"
xmlns:q1="http://microsoft.com/wsd/types/" type="q1:guid"/>
  </xs:sequence>
</xs:complexType>

```

Location: Specifies the **ListLocation** (section [2.2.4.132](#)). This element MUST be present.

SupportedTypes: The content types that are supported in the form of [FCOContentType](#).

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.

3.1.4.35.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

| Simple type | Description |
|----------------|-------------|
| FCOContentType | |

3.1.4.35.4.1 FCOContentType

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

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 **FCOContentType**.

| Value | Meaning |
|---------------|--|
| None | The type of object is unknown. |
| PpsDashboard | The object is a Dashboard . |
| PpsScorecard | The object is a Scorecard . |
| PpsKpi | The object is a Kpi . |
| PpsReportView | The object is a ReportView . |
| PpsIndicator | The object is an Indicator . |
| PpsDataSource | The object is a DataSource . |
| PpsFilter | The object is a Filter . |

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 GetDimensions

This operation retrieves an array of dimension (1) objects.

```

<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** message, and the server (2) responds with a **GetDimensionsSoapOut** response message as follows:

1. Receives a RepositoryLocation (see section [2.2.4.162](#)) for the associated data source (1).
2. The server (2) sends the corresponding ArrayOfDimension (see section [2.2.4.33](#)).

Exceptions

| Error code | Description |
|--|--|
| DataSourceConnectionFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceHostNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionUnsupported | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceDatabaseNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.36.1 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 GetDimensions WSDL operation. |
| GetDimensionsSoapOut | The response WSDL message for the GetDimensions WSDL operation. |

3.1.4.36.1.1 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.

3.1.4.36.1.2 GetDimensionsSoapOut

The response WSDL message for the **GetDimensions** WSDL operation.

The SOAP body contains the **GetDimensionsResponse** element.

3.1.4.36.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------------|--|
| GetDimensions | The input data for the GetDimensions WSDL operation. |
| GetDimensionsResponse | The result data for the GetDimensions WSDL operation. |

3.1.4.36.2.1 GetDimensions

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** (see section [2.2.4.162](#)) MUST be present.

3.1.4.36.2.2 GetDimensionsResponse

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** (see section [2.2.4.33](#)) MUST be present.

3.1.4.36.3 Complex Types

None.

3.1.4.36.4 Simple Types

None.

3.1.4.36.5 Attributes

None.

3.1.4.36.6 Groups

None.

3.1.4.36.7 Attribute Groups

None.

3.1.4.37 GetDimensionsFromDataSource

This operation retrieves an array of dimension (1) objects (see section [2.2.4.90](#)).

```
<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** message, and the server (2) responds with a **GetDimensionsFromDataSourceSoapOut** response message as follows:

1. Receives a **DataSource** (see section [2.2.4.85](#)).
2. The server (2) sends the corresponding **ArrayOfDimension** (see section [2.2.4.33](#)).

Exceptions

| Error code | Description |
|--|--|
| DataSourceConnectionFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceHostNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionUnsupported | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceDatabaseNotFound | See Common List of Error Codes (section 2.2.2.1.3). |
| 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 |
|------------------------------------|--|
| GetDimensionsFromDataSourceSoapIn | The request WSDL message for the GetDimensionsFromDataSource WSDL operation. |
| GetDimensionsFromDataSourceSoapOut | The response WSDL message for the GetDimensionsFromDataSource WSDL operation. |

3.1.4.37.1.1 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.

3.1.4.37.1.2 GetDimensionsFromDataSourceSoapOut

The response WSDL message for the **GetDimensionsFromDataSource** WSDL operation.

The SOAP body contains the **GetDimensionsFromDataSourceResponse** element.

3.1.4.37.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------------|--|
| GetDimensionsFromDataSource | The input data for the GetDimensionsFromDataSource WSDL operation. |
| GetDimensionsFromDataSourceResponse | The result data for the GetDimensionsFromDataSource WSDL operation. |

3.1.4.37.2.1 GetDimensionsFromDataSource

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: The data source (1) (see section [2.2.4.85](#)) MUST be present.

3.1.4.37.2.2 GetDimensionsFromDataSourceResponse

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>
```



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

GetDimensionsFromDataSourceResult: An **ArrayOfDimension** (see section [2.2.4.33](#)) 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 GetFilter

This operation retrieves a filter.

```
<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** message, and the server (2) responds with a **GetFilterSoapOut** response message as follows:

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the filter to be retrieved.
2. The server (2) responds with the corresponding filter.
3. In the event the filter 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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](#).

3.1.4.38.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------|--|
| GetFilterSoapIn | The request WSDL message for the GetFilter WSDL operation. |
| GetFilterSoapOut | The response WSDL message for the GetFilter WSDL operation. |

3.1.4.38.1.1 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.

3.1.4.38.1.2 GetFilterSoapOut

The response WSDL message for the **GetFilter** WSDL operation.

The SOAP body contains the **GetFilterResponse** element.

3.1.4.38.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------|--|
| GetFilter | The input data for the GetFilter WSDL operation. |
| GetFilterResponse | The result data for the GetFilter WSDL operation. |

3.1.4.38.2.1 GetFilter

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** as specified in section [2.2.4.162](#) MUST be present. The **ItemUrl** property (see section [2.2.4.162](#)) MUST contain a valid URL.

3.1.4.38.2.2 GetFilterResponse

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 as specified in section [2.2.4.98](#) SHOULD 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 GetIndicator

This operation retrieves an **indicator** from the server (2).

```
<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, and the server (2) responds with a **GetIndicatorSoapOut** message as follows:

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the **indicator** to be retrieved.
2. The server (2) sends the corresponding **indicator**.

3. In the event that an **indicator** 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common list of ErrorCodes (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](#).

3.1.4.39.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------|---|
| GetIndicatorSoapIn | The request WSDL message for the GetIndicator WSDL operation. |
| GetIndicatorSoapOut | The response WSDL message for the GetIndicator WSDL operation. |

3.1.4.39.1.1 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.

3.1.4.39.1.2 GetIndicatorSoapOut

The response WSDL message for the **GetIndicator** WSDL operation.

The SOAP body contains the **GetIndicatorResponse** element.

3.1.4.39.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------|---|
| GetIndicator | The input data for the GetIndicator WSDL operation. |
| GetIndicatorResponse | The result data for the GetIndicator WSDL operation. |

3.1.4.39.2.1 GetIndicator

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](#) object 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**.

3.1.4.39.2.2 GetIndicatorResponse

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](#) object that was requested from the server (2).

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 GetKpi

This operation retrieves a [Kpi](#) object.

```
<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, and the server (2) responds with a **GetKpiSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) of a Kpi.
2. The server (2) MUST retrieve the **Kpi**.
3. In the event that a **Kpi** 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common list of ErrorCodes (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](#).

3.1.4.40.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------|---|
| GetKpiSoapIn | The request WSDL message for the GetKpi WSDL operation. |
| GetKpiSoapOut | The response WSDL message for the GetKpi WSDL operation. |

3.1.4.40.1.1 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.

3.1.4.40.1.2 GetKpiSoapOut

The response WSDL message for the **GetKpi** WSDL operation.

The SOAP body contains the **GetKpiResponse** element.

3.1.4.40.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------|---|
| GetKpi | The input data for the GetKpi WSDL operation. |
| GetKpiResponse | The result data for the GetKpi WSDL operation. |

3.1.4.40.2.1 GetKpi

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 key performance indicator (KPI) to be retrieved, as specified by **RepositoryLocation** (see section [2.2.4.162](#)). It **MUST** be present.

3.1.4.40.2.2 GetKpiResponse

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** (see section [2.2.4.128](#)) object 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 GetKpisFromScorecard

This operation retrieves an array of Kpi (see section [2.2.4.128](#)) objects associated with a scorecard.

```
<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, and the server (2) responds with a **GetKpisFromScorecardSoapOut** message as follows:

1. The server (2) receives the **RepositoryLocation** (see section [2.2.4.162](#)) of a Scorecard.
2. The server (2) MUST retrieve the array of **Kpi** elements.

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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](#).

3.1.4.41.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-----------------------------|---|
| GetKpisFromScorecardSoapIn | The request WSDL message for the GetKpisFromScorecard WSDL operation. |
| GetKpisFromScorecardSoapOut | The response WSDL message for the GetKpisFromScorecard WSDL operation. |

3.1.4.41.1.1 GetKpisFromScorecardSoapIn

The request WSDL message for the **GetKpisFromScorecard** WSDL operation.

The SOAP action value is:

The SOAP body contains the **GetKpisFromScorecard** element.

3.1.4.41.1.2 GetKpisFromScorecardSoapOut

The response WSDL message for the **GetKpisFromScorecard** WSDL operation.

The SOAP body contains the **GetKpisFromScorecardResponse** element.

3.1.4.41.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|------------------------------|---|
| GetKpisFromScorecard | The input data for the GetKpisFromScorecard WSDL operation. |
| GetKpisFromScorecardResponse | The result data for the GetKpisFromScorecard WSDL operation. |

3.1.4.41.2.1 GetKpisFromScorecard

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 **RepositoryLocation** (see section [2.2.4.162](#)). It MUST be present.

3.1.4.41.2.2 GetKpisFromScorecardResponse

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** (see section [2.2.4.128](#)) elements 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 GetLatestAnalyticReportVersion

This operation retrieves from the server (2) the version number for a report view that has been created through [SaveTemporaryAnalyticReport](#).

```
<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 and the server (2) responds with a **GetReportViewSoapOut** message as follows:

1. The protocol client sends a GUID that uniquely identifies a report view.
2. 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](#).

3.1.4.42.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------------------------|--|
| GetLatestAnalyticReportVersionSoapIn | The request WSDL message for the GetLatestAnalyticReportVersion WSDL operation. |
| GetLatestAnalyticReportVersionSoapOut | The response WSDL message for the |

| Message | Description |
|---------|---|
| | GetLatestAnalyticReportVersion WSDL operation. |

3.1.4.42.1.1 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.

3.1.4.42.1.2 GetLatestAnalyticReportVersionSoapOut

The response WSDL message for the **GetLatestAnalyticReportVersion** WSDL operation.

The SOAP body contains the **GetLatestAnalyticReportVersionResponse** element.

3.1.4.42.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--|---|
| GetLatestAnalyticReportVersion | The input data for the GetLatestAnalyticReportVersion WSDL operation. |
| GetLatestAnalyticReportVersionResponse | The result data for the GetLatestAnalyticReportVersion WSDL operation. |

3.1.4.42.2.1 GetLatestAnalyticReportVersion

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:q1="http://microsoft.com/wsdl/types/" type="q1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

analyticReportViewId: The **SaveTemporaryAnalyticReportResult** (see section [3.1.4.63.2.2](#)) returned when the report view was saved. It MUST be present.

3.1.4.42.2.2 GetLatestAnalyticReportVersionResponse

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. It MUST be present.

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 GetListItems

GetListItems retrieves all FirstClassElements (see section [2.2.4.99](#)) associated with a given repository list (1) from the server.

```

<wsdl:operation name="GetListItems" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetListItemsSoapIn"/>
  <wsdl:output message="tns:GetListItemsSoapOut"/>
</wsdl:operation>

```

This proceeds as follows:

1. The protocol client sends the URL of the list (1) from which to retrieve items.
2. The server (2) responds with a collection of corresponding **FirstClassElement** items.
3. In the event that all **FirstClassElement** items in the list (1) 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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](#).

3.1.4.43.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------|---|
| GetListItemsSoapIn | The request WSDL message for the GetListItems WSDL operation. |
| GetListItemsSoapOut | The response WSDL message for the GetListItems WSDL operation. |

3.1.4.43.1.1 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.

3.1.4.43.1.2 GetListItemsSoapOut

The response WSDL message for the **GetListItems** WSDL operation.

The SOAP body contains the **GetListItemsResponse** element.

3.1.4.43.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------|---|
| GetListItems | The input data for the GetListItems WSDL operation. |
| GetListItemsResponse | The result data for the GetListItems WSDL operation. |

3.1.4.43.2.1 GetListItems

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 MUST be present and MUST be a valid URL.

3.1.4.43.2.2 GetListItemsResponse

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 **FirstClassElement** as specified in section [2.2.4.35](#) MUST be present. This array MUST contain one element for each item in the requested list (1), and SHOULD NOT contain null elements.

3.1.4.43.3 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 GetMdx

This operation retrieves an MDX that can be used to query data sources for the given analytic report. **Analytic** Chart and **Analytic** Grid report view types contain custom data that is used to generate MDX queries. See [ReportView](#) for more detail.

```

<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** message, and the server (2) responds with a **GetMdxSoapOut** response message as follows:

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) referencing the analytic report from which to generate the MDX.
2. The server (2) responds with an MDX expression.
3. In the event the MDX 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | 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](#).

3.1.4.44.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------|---|
| GetMdxSoapIn | The request WSDL message for the GetMdx WSDL operation. |
| GetMdxSoapOut | The response WSDL message for the GetMdx WSDL operation. |

3.1.4.44.1.1 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.

3.1.4.44.1.2 GetMdxSoapOut

The response WSDL message for the **GetMdx** WSDL operation.

The SOAP body contains the **GetMdxResponse** element.

3.1.4.44.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------|---|
| GetMdx | The input data for the GetMdx WSDL operation. |
| GetMdxResponse | The result data for the GetMdx WSDL operation. |

3.1.4.44.2.1 GetMdx

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** as specified in section [2.2.4.162](#) MUST be present.

- If the report view was created with **CreateReportView**, the **ItemUrl** property MUST contain a valid URL. **ItemType** and **ItemGuid** are set by the server (2).
- If the report view was created with **SaveTemporaryAnalyticReport**:
 - The **ItemGuid** property MUST equal the GUID that was returned from **SaveTemporaryAnalyticReport**.
 - The **ItemType** property MUST equal **TempReportView** as specified by **FirstClassObjectType** (section [2.2.5.20](#)).
 - The **ItemUrl** property MUST equal an empty string.

3.1.4.44.2.2 GetMdxResponse

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.

3.1.4.44.3 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 GetParameterDisplayData

This 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.

```
<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 **GetParameterDisplayDataIn** request message, and the server (2) responds with a **GetParameterDisplayDataOut** response message, as follows:

1. The server (2) uses the **ParameterProviderId** property from ParameterDefinition (section [2.2.4.156](#)) 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** [<34>](#) (section [2.2.4.121](#)) referenced by **gridViewData** to create the DataTable.

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |

In case of any 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 |
|--------------------------------|--|
| GetParameterDisplayDataSoapIn | The request WSDL message for the GetParameterDisplayData WSDL operation. |
| GetParameterDisplayDataSoapOut | The response WSDL message for the GetParameterDisplayData WSDL operation. |

3.1.4.45.1.1 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.

3.1.4.45.1.2 GetParameterDisplayDataSoapOut

The response WSDL message for the **GetParameterDisplayData** WSDL operation.

The SOAP body contains the **GetParameterDisplayDataResponse** element.

3.1.4.45.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---------------------------------|--|
| GetParameterDisplayData | The input data for the GetParameterDisplayData WSDL operation. |
| GetParameterDisplayDataResponse | The result data for the GetParameterDisplayData WSDL operation. |

3.1.4.45.2.1 GetParameterDisplayData

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 parameter definition (section [2.2.4.156](#)). It MUST NOT be null and the property ParameterProviderId MUST refer to one of the parameter data providers registered on the server. This function supports only filter-type parameters shown in the following table.

| ParameterProviderId | CustomDefinition |
|-------------------------------------|---|
| MDXParameterDataProvider | A MdxParameterDefinition object. |
| MemberParameterDataProvider | A MemberParameterDefinition object. |
| NamedSetParameterDataProvider | A NamedSetParameterDefinition object. |
| TimeIntelligencePostFormulaProvider | A TimeIntelligencePostFormulaDefinition object. |
| TimeIntelligenceProvider | A TimeIntelligenceDefinition object. |

parameterSourceLocation: Specifies a data source location as defined in RepositoryLocation (section [2.2.4.162](#)). It 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. MUST be set to NULL and MUST be ignored by the protocol client.

3.1.4.45.2.2 GetParameterDisplayDataResponse

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.

3.1.4.45.3 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 GetPreviewDataSet

This method retrieves a data set from a data source, which is suitable for previewing results.

```
<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** message, and the server (2) responds with a **GetPreviewDataSetSoapOut** response message as follows:

1. The protocol client sends a **DataSource** (section [2.2.4.85](#)) that defines the data to be retrieved.
2. The server (2) responds with a data set suitable for previewing the data.
3. 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 |
|--|--|
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| DataSourceConnectionUnsupported | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.46.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--------------------------|--|
| GetPreviewDataSetSoapIn | The request WSDL message for the GetPreviewDataSet WSDL operation. |
| GetPreviewDataSetSoapOut | The response WSDL message for the GetPreviewDataSet WSDL operation. |

3.1.4.46.1.1 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.

3.1.4.46.1.2 GetPreviewDataSetSoapOut

The response WSDL message for the **GetPreviewDataSet** WSDL operation.

The SOAP body contains the **GetPreviewDataSetResponse** element.

3.1.4.46.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---------------------------|--|
| GetPreviewDataSet | The input data for the GetPreviewDataSet WSDL operation. |
| GetPreviewDataSetResponse | The result data for the GetPreviewDataSet WSDL operation. |

3.1.4.46.2.1 GetPreviewDataSet

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** (section [2.2.4.85](#)) to be used in the query. This MUST NOT be null or empty. The **DataSource** MUST allow the query of preview data sets. [<35>](#)

3.1.4.46.2.2 GetPreviewDataSetResponse

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**. 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 MAY be empty if the **dataSource** is invalid. The data table MUST include the columns specified in **dataSource**.

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 GetQueryResultMembers

This operation retrieves an array of members (3) associated with the specified report.

```

<wsdl:operation name="GetQueryResultMembers" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetQueryResultMembersSoapIn"/>
  <wsdl:output message="tns:GetQueryResultMembersSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetQueryResultMembersSoapIn** request, and the server (2) responds with a **GetQueryResultMembersSoapOut** message as follows:

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the report view. It also sends a unique dimension (1) name.
2. The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

Exceptions:

| Error code | Description |
|---------------------------|--|
| InvalidDataSource | Current operation on the data source (1) cannot be finished because the data source (1) has failed basic validation. |
| InvalidReportView | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.47.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------|--|
| GetQueryResultMembersSoapIn | The request WSDL message for the GetQueryResultMembers WSDL operation. |
| GetQueryResultMembersSoapOut | The response WSDL message for the GetQueryResultMembers WSDL operation. |

3.1.4.47.1.1 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.

3.1.4.47.1.2 GetQueryResultMembersSoapOut

The response WSDL message for the **GetQueryResultMembers** WSDL operation.

The SOAP body contains the **GetQueryResultMembersResponse** element.

3.1.4.47.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------|--|
| GetQueryResultMembers | The input data for the GetQueryResultMembers WSDL operation. |
| GetQueryResultMembersResponse | The result data for the GetQueryResultMembers WSDL operation. |

3.1.4.47.2.1 GetQueryResultMembers

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** (see section [2.2.4.162](#)) MUST be present.

formattingDimensionName: The unique name of the formatting dimension (1) MUST be present.

3.1.4.47.2.2 GetQueryResultMembersResponse

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: MUST return an **ArrayOfMember** (see section [2.2.4.46](#)).

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 GetRegisteredCustomFCOs

This operation retrieves custom object definitions registered on the server.

```
<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, and the server (2) responds with a **GetRegisteredCustomFCOsSoapOut** response message, as follows:

1. 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 **CustomFCOType** (see section [3.1.4.48.4.1](#)).
2. The server (2) reads all the custom object entries registered on the server and returns only those matching the type provided by the client protocol.
3. The result is a collection of **CustomFCODefinition** (see section [3.1.4.48.3.2](#)) objects, as defined in **ArrayOfCustomFCODefinition** (see section [3.1.4.48.3.1](#)).

3.1.4.48.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--------------------------------|--|
| GetRegisteredCustomFCOsSoapIn | The request WSDL message for the GetRegisteredCustomFCOs WSDL operation. |
| GetRegisteredCustomFCOsSoapOut | The response WSDL message for the GetRegisteredCustomFCOs WSDL operation. |

3.1.4.48.1.1 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.

3.1.4.48.1.2 GetRegisteredCustomFCOsSoapOut

The response WSDL message for the **GetRegisteredCustomFCOs** WSDL operation.

The SOAP body contains the **GetRegisteredCustomFCOsResponse** element.

3.1.4.48.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---------------------------------|--|
| GetRegisteredCustomFCOs | The input data for the GetRegisteredCustomFCOs WSDL operation. |
| GetRegisteredCustomFCOsResponse | The result data for the GetRegisteredCustomFCOs WSDL operation. |

3.1.4.48.2.1 GetRegisteredCustomFCOs

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** (see section [3.1.4.48.4.1](#)).

3.1.4.48.2.2 GetRegisteredCustomFCOsResponse

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](#) objects, as defined in [ArrayOfCustomFCODefinition](#). This collection MUST contain all the valid custom objects registered on the server that equal the type sent from the protocol client.

3.1.4.48.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

| Complex type | Description |
|----------------------------|---|
| ArrayOfCustomFCODefinition | Specifies an array of definitions for a custom object. |
| CustomFCODefinition | Specifies how instances of a custom object class are created, modified, and rendered in dashboards. |

3.1.4.48.3.1 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** (section [3.1.4.48.3.2](#)) complex type.

3.1.4.48.3.2 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 **CustomFCOType** (see section [3.1.4.48.4.1](#)). 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 Uniform Resource Locator (URL) of the associated application used to create and modify the custom object. The value MUST NOT be empty.

3.1.4.48.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

| Simple type | Description |
|---------------|--|
| CustomFCOType | Specifies the type of a custom object. |

3.1.4.48.4.1 CustomFCOType

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

This 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 **CustomFCOType**.

| Value | Meaning |
|------------|---|
| None | The object type is not specified. |
| DataSource | The object is a DataSource (see section 2.2.4.85). |
| Filter | The object is a Filter (see section 2.2.4.98). |

| Value | Meaning |
|------------|--|
| ReportView | The object is a ReportView (see section 2.2.4.161). |
| All | This object is a DataSource (see section 2.2.4.85), Filter (see section 2.2.4.98) or ReportView (see section 2.2.4.161). This value MUST only be used when GetRegisteredCustomFCOs (see section 3.1.4.48) is invoked. |

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 GetReportView

This operation retrieves a report view from the server (2).

```
<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, and the server (2) responds with a **GetReportViewSoapOut** message as follows:

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the report view to be retrieved.
2. The server (2) sends the corresponding report view.
3. In the event that a report view cannot be retrieved, the server (2) SHOULD [<36>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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](#).

3.1.4.49.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|----------------------|--|
| GetReportViewSoapIn | The request WSDL message for the GetReportView WSDL operation. |
| GetReportViewSoapOut | The response WSDL message for the GetReportView WSDL operation. |

3.1.4.49.1.1 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.

3.1.4.49.1.2 GetReportViewSoapOut

The response WSDL message for the **GetReportView** WSDL operation.

The SOAP body contains the **GetReportViewResponse** element.

3.1.4.49.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------------|--|
| GetReportView | The input data for the GetReportView WSDL operation. |
| GetReportViewResponse | The result data for the GetReportView WSDL operation. |

3.1.4.49.2.1 GetReportView

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** (see section [2.2.4.162](#)) object that specifies the location of the report view on the server (2).

- It MUST be present.

- The **ItemUrl** property MUST be set to the location of the report view.

3.1.4.49.2.2 GetReportViewResponse

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** (see section [2.2.4.161](#)) object that was requested from the server (2).

3.1.4.49.3 Complex Types

None.

3.1.4.49.4 Simple Types

None.

3.1.4.49.5 Attributes

None.

3.1.4.49.6 Groups

None.

3.1.4.49.7 Attribute Groups

None.

3.1.4.50 GetScorecard

This operation retrieves a scorecard.

```
<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** message, and the server (2) responds with a **GetScorecardSoapOut** response message as follows:

1. The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the scorecard to be retrieved.
2. The server (2) responds with the corresponding scorecard.

3. In the event that the scorecard cannot be retrieved, the server (2) SHOULD [<37>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | 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 |
|---------------------|---|
| GetScorecardSoapIn | The request WSDL message for the GetScorecard WSDL operation. |
| GetScorecardSoapOut | The response WSDL message for the GetScorecard WSDL operation. |

3.1.4.50.1.1 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.

3.1.4.50.1.2 GetScorecardSoapOut

The response WSDL message for the **GetScorecard** WSDL operation.

The SOAP body contains the **GetScorecardResponse** element.

3.1.4.50.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------|---|
| GetScorecard | The input data for the GetScorecard WSDL operation. |
| GetScorecardResponse | The result data for the GetScorecard WSDL operation. |

3.1.4.50.2.1 GetScorecard

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** as specified in section [2.2.4.162](#) MUST be present. The **ItemUrl** property MUST contain a valid URL.

3.1.4.50.2.2 GetScorecardResponse

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, as specified in section [2.2.4.163](#), SHOULD be present.

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 QueryChildMembers

This method uses a data source for the specified member and returns a collection of members.

```

<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, and the server (2) responds with a **QueryChildMembersSoapOut** response message as follows:

- The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

| Error code | Description |
|---------------------------|--|
| InvalidPermission | See the Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.51.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--------------------------|--|
| QueryChildMembersSoapIn | The request WSDL message for the QueryChildMembers WSDL operation. |
| QueryChildMembersSoapOut | The response WSDL message for the QueryChildMembers WSDL operation. |

3.1.4.51.1.1 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.

3.1.4.51.1.2 QueryChildMembersSoapOut

The response WSDL message for the **QueryChildMembers** WSDL operation.

The SOAP body contains the **QueryChildMembersResponse** element.

3.1.4.51.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---------------------------|--|
| QueryChildMembers | The input data for the QueryChildMembers WSDL operation. |
| QueryChildMembersResponse | The result data for the QueryChildMembers WSDL operation. |

3.1.4.51.2.1 QueryChildMembers

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** (section [2.2.4.162](#)) object that specifies the location of data source for the members (3) on the server.

- 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.

3.1.4.51.2.2 QueryChildMembersResponse

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: MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

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 QueryChildMembersByRangeFromDataSource

This method queries the **DataSource** (see section [2.2.4.85](#)) and returns a collection of child members.

```
<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, and the server (2) responds with a **QueryChildMembersByRangeFromDataSourceSoapOut** response message as follows:

- The protocol client sends a **DataSource** to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

| Error code | Description |
|---------------------------|--|
| InvalidPermission | See the Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.52.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---|---|
| QueryChildMembersByRangeFromDataSourceSoapIn | The request WSDL message for the QueryChildMembersByRangeFromDataSource WSDL operation. |
| QueryChildMembersByRangeFromDataSourceSoapOut | The response WSDL message for the QueryChildMembersByRangeFromDataSource WSDL operation. |

3.1.4.52.1.1 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.

3.1.4.52.1.2 QueryChildMembersByRangeFromDataSourceSoapOut

The response WSDL message for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

The SOAP body contains the **QueryChildMembersByRangeFromDataSourceResponse** element.

3.1.4.52.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--|---|
| QueryChildMembersByRangeFromDataSource | The input data for the QueryChildMembersByRangeFromDataSource WSDL operation. |
| QueryChildMembersByRangeFromDataSourceResponse | The result data for the QueryChildMembersByRangeFromDataSource WSDL operation. |

3.1.4.52.2.1 QueryChildMembersByRangeFromDataSource

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>
```

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

dataSource: The **DataSource** (see section [2.2.4.85](#)) to be used in the query. This 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 MUST NOT be null or empty or contain more than 255 characters.

start: The starting index of the records in the returned [ArrayOfMember](#). 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 0.

3.1.4.52.2.2 QueryChildMembersByRangeFromDataSourceResponse

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: MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

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 QueryChildMembersFromDataSource

This method uses the data source to retrieve a collection of child members for the specified member name.

```
<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, and the server (2) responds with a **QueryChildMembersFromDataSourceSoapOut** response message as follows:

- The protocol client sends a **DataSource** (see section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

| Error code | Description |
|---------------------------|--|
| InvalidPermission | See the Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.53.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--|--|
| QueryChildMembersFromDataSourceSoapIn | The request WSDL message for the QueryChildMembersFromDataSource WSDL operation. |
| QueryChildMembersFromDataSourceSoapOut | The response WSDL message for the QueryChildMembersFromDataSource WSDL operation. |

3.1.4.53.1.1 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.

3.1.4.53.1.2 QueryChildMembersFromDataSourceSoapOut

The response WSDL message for the **QueryChildMembersFromDataSource** WSDL operation.

The SOAP body contains the **QueryChildMembersFromDataSourceResponse** element.

3.1.4.53.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---|--|
| QueryChildMembersFromDataSource | The input data for the QueryChildMembersFromDataSource WSDL operation. |
| QueryChildMembersFromDataSourceResponse | The result data for the QueryChildMembersFromDataSource WSDL operation. |

3.1.4.53.2.1 QueryChildMembersFromDataSource

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** (see section [2.2.4.85](#)) to be used in the query. This 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.

3.1.4.53.2.2 QueryChildMembersFromDataSourceResponse

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: MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

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 QueryDimensionRootMembers

This method uses a data source (1) from the repository location for the specified member and returns a collection of root members.

```
<wsdl:operation name="QueryDimensionRootMembers"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryDimensionRootMembersSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryDimensionRootMembersSoapIn** request message, and the server (2) responds with a **QueryDimensionRootMembersSoapOut** response message as follows:

- The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

| Error code | Description |
|---------------------------|--|
| InvalidPermission | See the Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.54.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|----------------------------------|--|
| QueryDimensionRootMembersSoapIn | The request WSDL message for the QueryDimensionRootMembers WSDL operation. |
| QueryDimensionRootMembersSoapOut | The response WSDL message for the QueryDimensionRootMembers WSDL operation. |

3.1.4.54.1.1 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.

3.1.4.54.1.2 QueryDimensionRootMembersSoapOut

The response WSDL message for the **QueryDimensionRootMembers** WSDL operation.

The SOAP body contains the **QueryDimensionRootMembersResponse** element.

3.1.4.54.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------------------------|--|
| QueryDimensionRootMembers | The input data for the QueryDimensionRootMembers WSDL operation. |
| QueryDimensionRootMembersResponse | The result data for the QueryDimensionRootMembers WSDL operation. |

3.1.4.54.2.1 QueryDimensionRootMembers

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** (section [2.2.4.162](#)) that specifies the location of the data source for the members (3) on the server.

- 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.

3.1.4.54.2.2 QueryDimensionRootMembersResponse

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: MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

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 QueryDimensionRootMembersFromDataSource

This method uses the data source to retrieve a collection of root members for the specified member name.

```
<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, and the server (2) responds with a **QueryDimensionRootMembersFromDataSourceSoapOut** response message as follows:

- The protocol client sends a **DataSource** (see section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

| Error code | Description |
|---------------------------|--|
| InvalidPermission | See the Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.55.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--|--|
| QueryDimensionRootMembersFromDataSourceSoapIn | The request WSDL message for the QueryDimensionRootMembersFromDataSource WSDL operation. |
| QueryDimensionRootMembersFromDataSourceSoapOut | The response WSDL message for the QueryDimensionRootMembersFromDataSource WSDL operation. |

3.1.4.55.1.1 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.

3.1.4.55.1.2 QueryDimensionRootMembersFromDataSourceSoapOut

The response WSDL message for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

The SOAP body contains the **QueryDimensionRootMembersFromDataSourceResponse** element.

3.1.4.55.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---|--|
| QueryDimensionRootMembersFromDataSource | The input data for the QueryDimensionRootMembersFromDataSource WSDL operation. |
| QueryDimensionRootMembersFromDataSourceResponse | The result data for the QueryDimensionRootMembersFromDataSource WSDL operation. |

3.1.4.55.2.1 QueryDimensionRootMembersFromDataSource

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** (see section [2.2.4.85](#)) to be used in the query. This 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.

3.1.4.55.2.2 QueryDimensionRootMembersFromDataSourceResponse

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: MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

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 QueryNamedSets

This operation is used to retrieve the named sets that are defined by a data source (1) when given the [RepositoryLocation](#) of the data source (1).

```
<wsdl:operation name="QueryNamedSets" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryNamedSetsSoapIn"/>
  <wsdl:output message="tns:QueryNamedSetsSoapOut"/>
</wsdl:operation>
```

QueryNamedSetsSoapIn sends a request message, and the **QueryNamedSetsSoapOut** responds with a message as follows:

1. Receives a [RepositoryLocation](#) for the data source (1) to be queried for named sets.
2. The server (2) queries the corresponding data source (1).
3. The server (2) responds with the result.
4. In the event that a data source (1) cannot be retrieved for the query, the server (2) SHOULD [38](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.56.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-----------------------|---|
| QueryNamedSetsSoapIn | The request WSDL message for the QueryNamedSets WSDL operation. |
| QueryNamedSetsSoapOut | The response WSDL message for the QueryNamedSets WSDL operation. |

3.1.4.56.1.1 QueryNamedSetsSoapIn

The request WSDL message for the **QueryNamedSets** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets
```

The SOAP body contains the **QueryNamedSets** element.

3.1.4.56.1.2 QueryNamedSetsSoapOut

The response WSDL message for the **QueryNamedSets** WSDL operation.

The SOAP body contains the **QueryNamedSetsResponse** element.

3.1.4.56.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|------------------------|---|
| QueryNamedSets | The input data for the QueryNamedSets WSDL operation. |
| QueryNamedSetsResponse | The result data for the QueryNamedSets WSDL operation. |

3.1.4.56.2.1 QueryNamedSets

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 (See [RepositoryLocation](#) for specification) for the data source (1) being queried for named sets. This element **MUST** be present. The element **MUST** be a [RepositoryLocation](#) to a data source (1).

3.1.4.56.2.2 QueryNamedSetsResponse

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: MUST be either a collection of [NamedSet](#) objects (specified in [ArrayOfNamedSet](#)) or null if there are no named sets defined for the data source (1).

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 QueryNamedSetsFromDataSource

This operation is used to retrieve the named sets that are defined by the given data source (1).

```
<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 message and the server (2) responds with a response message.

QueryNamedSetsFromDataSourceSoapIn sends a request message, and the **QueryNamedSetsFromDataSourceSoapOut** responds with a message as follows:

1. Receives a [DataSource](#) to be queried for named sets.
2. The server (2) queries the received data source (1).
3. The server (2) responds with the result.

4. In the event that a data source (1) cannot be retrieved for obtaining the named sets, the server (2) SHOULD [return a SOAP fault response](#), as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.57.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------------------|---|
| QueryNamedSetsFromDataSourceSoapIn | The request WSDL message for the QueryNamedSetsFromDataSource WSDL operation. |
| QueryNamedSetsFromDataSourceSoapOut | The response WSDL message for the QueryNamedSetsFromDataSource WSDL operation. |

3.1.4.57.1.1 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.

3.1.4.57.1.2 QueryNamedSetsFromDataSourceSoapOut

The response WSDL message for the **QueryNamedSetsFromDataSource** WSDL operation.

The SOAP body contains the **QueryNamedSetsFromDataSourceResponse** element.

3.1.4.57.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--------------------------------------|---|
| QueryNamedSetsFromDataSource | The input data for the QueryNamedSetsFromDataSource WSDL operation. |
| QueryNamedSetsFromDataSourceResponse | The result data for the QueryNamedSetsFromDataSource WSDL operation. |

3.1.4.57.2.1 QueryNamedSetsFromDataSource

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. See **DataSource** (section [2.2.4.85](#)) for specification. This element **MUST** be present.

3.1.4.57.2.2 QueryNamedSetsFromDataSourceResponse

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: **MUST** be either a collection of [NamedSet](#) objects (specified in [ArrayOfNamedSet](#)) or null if there are no named sets defined for the data source (1).

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 QueryRelatedMember

This operation is used to retrieve a member (3) having the specified relationship to the specified member from the data source (1) at the given [RepositoryLocation](#).

```
<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 message, and the server (2) responds with a response message.

QueryRelatedMemberSoapIn sends a request message and the **QueryRelatedMemberSoapOut** responds with a message as follows:

1. Receives [RepositoryLocation](#) for the data source (1) to be queried for a related member (3) along with the unique member (3) name and the [MemberRelationship](#) being queried for.
2. The server (2) queries the corresponding data source (1) for the related member (3).
3. The server (2) responds with the result.
4. In the event that a data source (1) cannot be retrieved from the [RepositoryLocation](#), the server (2) SHOULD [return a SOAP fault response](#), as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.58.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--------------------------|--|
| QueryRelatedMemberSoapIn | The request WSDL message for the QueryRelatedMember WSDL operation. |

| Message | Description |
|---------------------------|---|
| QueryRelatedMemberSoapOut | The response WSDL message for the QueryRelatedMember WSDL operation. |

3.1.4.58.1.1 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.

3.1.4.58.1.2 QueryRelatedMemberSoapOut

The response WSDL message for the **QueryRelatedMember** WSDL operation.

The SOAP body contains the **QueryRelatedMemberResponse** element.

3.1.4.58.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------------|---|
| QueryRelatedMember | The input data for the QueryRelatedMember WSDL operation. |
| QueryRelatedMemberResponse | The result data for the QueryRelatedMember WSDL operation. |

3.1.4.58.2.1 QueryRelatedMember

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 (see section [2.2.4.162](#)) for the data source (1) being queried for a related member (3). This element **MUST** be present. The element **MUST** be a **RepositoryLocation** (section [2.2.4.162](#)) to a data source (1).

memberUniqueName: A value that uniquely identifies this element within the data source (1).

relationship: The relationship (see section [2.2.5.36](#)) between memberUniqueName and the result.

3.1.4.58.2.2 QueryRelatedMemberResponse

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: MUST be either the related member (3) (specified in [Member](#)) or null if there are no related members (3) or if the **MemberRelationship** (see section [2.2.5.36](#)) is "Children".

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 QueryRelatedMemberFromDataSource

This operation queries the given data source (1) for the member (3) having the specified relationship to the specified member.

```
<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 message, and the server (2) responds with a response message.

QueryRelatedMemberFromDataSourceSoapIn sends a request message and the **QueryRelatedMemberFromDataSourceSoapOut** responds with a message as follows:

1. Receives [DataSource](#) to be queried for the related member (3) along with the unique member (3) name and the [MemberRelationship](#) being queried for.
2. The server (2) queries the corresponding data source (1) for the related member (3).
3. The server (2) responds with the result.
4. 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 |
|--------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.59.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---|---|
| QueryRelatedMemberFromDataSourceSoapIn | The request WSDL message for the QueryRelatedMemberFromDataSource WSDL operation. |
| QueryRelatedMemberFromDataSourceSoapOut | The response WSDL message for the QueryRelatedMemberFromDataSource WSDL operation. |

3.1.4.59.1.1 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.

3.1.4.59.1.2 QueryRelatedMemberFromDataSourceSoapOut

The response WSDL message for the **QueryRelatedMemberFromDataSource** WSDL operation.

The SOAP body contains the **QueryRelatedMemberFromDataSourceResponse** element.

3.1.4.59.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--|---|
| QueryRelatedMemberFromDataSource | The input data for the QueryRelatedMemberFromDataSource WSDL operation. |
| QueryRelatedMemberFromDataSourceResponse | The result data for the QueryRelatedMemberFromDataSource WSDL operation. |

3.1.4.59.2.1 QueryRelatedMemberFromDataSource

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. See **DataSource** (section [2.2.4.85](#)) for specification. This element **MUST** be present.

memberUniqueName: A value that uniquely identifies this element within the data source (1).

relationship: The relationship (see [MemberRelationship](#) for specification) between **memberUniqueName** and the result.

3.1.4.59.2.2 QueryRelatedMemberFromDataSourceResponse

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: **MUST** be either the related member (3) (specified in [Member](#)) or null if there are no related members (3).

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 QueryTimeIntelligence

This operation queries a data source (1) location for the members (3) that are specified by a time intelligence formula.

```
<wsdl:operation name="QueryTimeIntelligence" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTimeIntelligenceSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceSoapOut"/>
</wsdl:operation>
```

QueryTimeIntelligenceSoapIn sends a request message, and the **QueryTimeIntelligenceSoapOut** responds with a message as follows:

1. Receives **RepositoryLocation** (see section [2.2.4.162](#)) for the data source (1) to be queried for time intelligence, along with the current time and date and a formula.
2. The server (2) queries the corresponding data source (1) using the current time and date and formula for the related member (3).
3. The server (2) responds with the result.
4. In the event that a data source (1) cannot be retrieved from the **RepositoryLocation** (see section [2.2.4.162](#)), the server (2) SHOULD [<42>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

Exceptions:

| Error code | Description |
|--------------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| TimeIntelligenceNotConfigured | The data source (1) has an invalid time intelligence configuration or time intelligence is not configured. |

| Error code | Description |
|---------------------------------------|--|
| InvalidTimeIntelligenceFormula | The time intelligence formula is invalid |
| 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](#).

3.1.4.60.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------|--|
| QueryTimeIntelligenceSoapIn | The request WSDL message for the QueryTimeIntelligence WSDL operation. |
| QueryTimeIntelligenceSoapOut | The response WSDL message for the QueryTimeIntelligence WSDL operation. |

3.1.4.60.1.1 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.

3.1.4.60.1.2 QueryTimeIntelligenceSoapOut

The response WSDL message for the **QueryTimeIntelligence** WSDL operation.

The SOAP body contains the **QueryTimeIntelligenceResponse** element.

3.1.4.60.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------|--|
| QueryTimeIntelligence | The input data for the QueryTimeIntelligence WSDL operation. |
| QueryTimeIntelligenceResponse | The result data for the QueryTimeIntelligence WSDL operation. |

3.1.4.60.2.1 QueryTimeIntelligence

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 (See [RepositoryLocation](#) for specification) for the data source (1) being queried for time intelligence. This element **MUST** be present. The element **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 Simple Time Period Specification (STPS) formula, as described in [\[MSFT-TimeIntelligence\]](#). This element **MUST** be present and its value **MUST** be a STPS formula for the data source.

3.1.4.60.2.2 QueryTimeIntelligenceResponse

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: **MUST** return a collection of **Member** (section [2.2.4.135](#)) objects as specified in **ArrayOfMember** (section [2.2.4.46](#)). 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".

3.1.4.60.3 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 QueryTimeIntelligenceDirect

This operation queries the provided data source (1) for the members (3) that are specified by a time intelligence formula.

```
<wsdl:operation name="QueryTimeIntelligenceDirect"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTimeIntelligenceDirectSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceDirectSoapOut"/>
</wsdl:operation>
```

QueryTimeIntelligenceDirectSoapIn sends a request message, and the **QueryTimeIntelligenceDirectSoapOut** responds with a message as follows:

1. Receives [DataSource](#) to be queried for the time intelligence, along with the current time and date and a formula.
2. The server (2) queries the corresponding data source (1) using the current time and date and formula for the related member (3).
3. The server (2) responds with the result.
4. 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 |
|---------------------------------------|--|
| FCOReadFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOReadFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| TimeIntelligenceNotConfigured | The data source (1) has an invalid time intelligence configuration or time intelligence is not configured. |
| InvalidTimeIntelligenceFormula | The time intelligence formula is invalid. |
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| 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](#).

3.1.4.61.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------------|--|
| QueryTimeIntelligenceDirectSoapIn | The request WSDL message for the QueryTimeIntelligenceDirect WSDL operation. |
| QueryTimeIntelligenceDirectSoapOut | The response WSDL message for the QueryTimeIntelligenceDirect WSDL operation. |

3.1.4.61.1.1 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.

3.1.4.61.1.2 QueryTimeIntelligenceDirectSoapOut

The response WSDL message for the **QueryTimeIntelligenceDirect** WSDL operation.

The SOAP body contains the **QueryTimeIntelligenceDirectResponse** element.

3.1.4.61.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------------|--|
| QueryTimeIntelligenceDirect | The input data for the QueryTimeIntelligenceDirect WSDL operation. |
| QueryTimeIntelligenceDirectResponse | The result data for the QueryTimeIntelligenceDirect WSDL operation. |

3.1.4.61.2.1 QueryTimeIntelligenceDirect

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 **DataSource** (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 Simple Time Period Specification (STPS) formula. This element **MUST** be present and its value **MUST** be a STPS formula for the data source.

3.1.4.61.2.2 QueryTimeIntelligenceDirectResponse

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: **MUST** return a collection of **Member** (section [2.2.4.135](#)) objects as specified in **ArrayOfMember** (section [2.2.4.46](#)). 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".

3.1.4.61.3 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 QueryTransformMembers

This method transforms any collection of member (section [2.2.4.135](#)) into a new set of member collection based on the operation passed on the transformType parameter as specified in section [3.1.4.62.4.1](#).

```
<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, and the server (2) responds with a **QueryTransformMembersSoapOut** response message as follows:

- The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

| Error code | Description |
|---------------------------|--|
| InvalidPermission | See the Common List of Error Codes (section 2.2.2.1.3). |
| NotTrustedLocation | See Common List of Error Codes (section 2.2.2.1.3). |

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](#).

3.1.4.62.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------|--|
| QueryTransformMembersSoapIn | The request WSDL message for the QueryTransformMembers WSDL operation. |
| QueryTransformMembersSoapOut | The response WSDL message for the QueryTransformMembers WSDL operation. |

3.1.4.62.1.1 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.

3.1.4.62.1.2 QueryTransformMembersSoapOut

The response WSDL message for the **QueryTransformMembers** WSDL operation.

The SOAP body contains the **QueryTransformMembersResponse** element.

3.1.4.62.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------|--|
| QueryTransformMembers | The input data for the QueryTransformMembers WSDL operation. |
| QueryTransformMembersResponse | The result data for the QueryTransformMembers WSDL operation. |

3.1.4.62.2.1 QueryTransformMembers

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: The **RepositoryLocation** (section [2.2.4.162](#)) object that specifies the location of data source for the members (3) on the server.

- 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: The collection of members (section [2.2.4.135](#)) that will be transformed based on the type of transformation specified in the **transformType** parameter.

transformType: The type of operation (section [3.1.4.62.4.1](#)) that will be applied to the member collection.

3.1.4.62.2.2 QueryTransformMembersResponse

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>
```

```

    </xs:complexType>
  </xs:element>

```

QueryTransformMembersResult: MUST return a collection of **Member** objects (section [2.2.4.135](#)) as specified in **ArrayOfMember** (section [2.2.4.46](#)).

3.1.4.62.3 Complex Types

None.

3.1.4.62.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

| Simple type | Description |
|---------------------------|---|
| QueryTransformMembersType | Specifies the transformation type that will be applied to the collection of member. |

3.1.4.62.4.1 QueryTransformMembersType

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

Specifies the transformation type that will be applied to the collection of member (section [2.2.4.135](#)).

```

<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 **QueryTransformMembersType**.

| 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 MUST NOT be called. |
| Ancestors | Returns the ancestor of each member on the set. This operation type is reserved and MUST NOT be called. |
| AscendantsIntersect | Returns the original set plus any direct ancestor contained in the set. |

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 SaveTemporaryAnalyticReport

This operation stores a temporary copy of a report view to the server.

```
<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** message, and the server (2) responds with a **SaveTemporaryAnalyticReportSoapOut** response message as follows:

- The protocol client MUST send a **ReportView** (section [2.2.4.161](#)).
- If the server 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. The GUID MUST be equal to the **RepositoryLocation** (section [2.2.4.162](#)) **ItemGuid** GUID. The stored ReportView MUST NOT be altered.
- If the server 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** complex type, such that the **ItemType** attribute equals **TempReportView**, as specified in **FirstClassObjectType** (section [2.2.5.20](#)), and the ItemGuid attribute equals the returned GUID.

Exceptions:

| Error code | Description |
|--------------------------|--|
| InvalidPermission | See the 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](#).

3.1.4.63.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------------|---|
| SaveTemporaryAnalyticReportSoapIn | The request WSDL message for the SaveTemporaryAnalyticReport WSDL operation. |
| SaveTemporaryAnalyticReportSoapOut | The response WSDL message for the |

| Message | Description |
|---------|--|
| | SaveTemporaryAnalyticReport WSDL operation. |

3.1.4.63.1.1 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.

3.1.4.63.1.2 SaveTemporaryAnalyticReportSoapOut

The response WSDL message for the **SaveTemporaryAnalyticReport** WSDL operation.

The SOAP body contains the **SaveTemporaryAnalyticReportResponse** element.

3.1.4.63.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------------------|--|
| SaveTemporaryAnalyticReport | The input data for the SaveTemporaryAnalyticReport WSDL operation. |
| SaveTemporaryAnalyticReportResponse | The result data for the SaveTemporaryAnalyticReport WSDL operation. |

3.1.4.63.2.1 SaveTemporaryAnalyticReport

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. MUST be present and MUST conform to the schema of the **ReportView** (section [2.2.4.161](#)) complex type.

3.1.4.63.2.2 SaveTemporaryAnalyticReportResponse

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:q1="http://microsoft.com/wsdl/types/" type="q1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

SaveTemporaryAnalyticReportResult: A GUID that uniquely identifies the **ReportView** (section [2.2.4.161](#)) and the values of all attributes and elements except **Location**. MUST be present.

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 TestConnection

This operation is used to determine whether a connection as specified by the `dataSource` element can be established.

```

<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, and the server (2) responds with a **TestConnectionSoapOut** response message 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, then the server 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 (1). Otherwise it 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.

| Error code | Description |
|---------------------------|--|
| NotTrustedLocation | See Common List of Error Codes (section 2.2.2.1.3). |

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](#)

3.1.4.64.1 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 TestConnection WSDL operation. |
| TestConnectionSoapOut | The response WSDL message for the TestConnection WSDL operation. |

3.1.4.64.1.1 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.

3.1.4.64.1.2 TestConnectionSoapOut

The response WSDL message for the **TestConnection** WSDL operation.

The SOAP body contains the **TestConnectionResponse** element.

3.1.4.64.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|------------------------|---|
| TestConnection | The input data for the TestConnection WSDL operation. |
| TestConnectionResponse | The result data for the TestConnection WSDL operation. |

3.1.4.64.2.1 TestConnection

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 **DataSource** (section [2.2.4.85](#)) for specification. MUST NOT be empty.

3.1.4.64.2.2 TestConnectionResponse

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, **false**.

3.1.4.64.3 Complex Types

None.

3.1.4.64.4 Simple Types

None.

3.1.4.64.5 Attributes

None.

3.1.4.64.6 Groups

None.

3.1.4.64.7 Attribute Groups

None.

3.1.4.65 TrimAnnotationByOwner

This operation removes all the annotations that are owned by a specific user.

```

<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, and the server (2) responds with a **TrimAnnotationByOwnerSoapOut** response message as follows:

- The protocol client MUST send the name of a user as the **Owner** element of the **TrimAnnotationByOwner** element.
- The server (2) MUST delete all **Annotations** (section [2.2.4.18](#)) for which the **Owner** element equals the **Owner** element of the passed in **TrimAnnotationByOwner** element. The server (2) MUST ignore the case when comparing the strings.

| Error code | Description |
|-------------------------------|--|
| InvalidPermissionAdmin | 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](#).

3.1.4.65.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------------|--|
| TrimAnnotationByOwnerSoapIn | The request WSDL message for the TrimAnnotationByOwner WSDL operation. |
| TrimAnnotationByOwnerSoapOut | The response WSDL message for the TrimAnnotationByOwner WSDL operation. |

3.1.4.65.1.1 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.

3.1.4.65.1.2 TrimAnnotationByOwnerSoapOut

The response WSDL message for the **TrimAnnotationByOwner** WSDL operation.

The SOAP body contains the **TrimAnnotationByOwnerResponse** element.

3.1.4.65.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-----------------------|---|
| TrimAnnotationByOwner | The input data for the TrimAnnotationByOwner WSDL operation. |

| Element | Description |
|-------------------------------|--|
| TrimAnnotationByOwnerResponse | The result data for the TrimAnnotationByOwner WSDL operation. |

3.1.4.65.2.1 TrimAnnotationByOwner

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. MUST be present and MUST have a length greater than 0.

3.1.4.65.2.2 TrimAnnotationByOwnerResponse

The result data for the **TrimAnnotationByOwner** WSDL operation.

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

3.1.4.65.3 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 TrimAnnotationByScorecardLocation

This operation removes all the annotations that belong to a scorecard at a specific location.

```
<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, and the server (2) responds with a **TrimAnnotationByScorecardLocationSoapOut** response message as follows:

- The protocol client MUST send the location of a scorecard as the `scorecardLocation` element of the **TrimAnnotationByScorecardLocation** element.
- The server (2) MUST delete all **Annotations** (section [2.2.4.18](#)) for which the `ScorecardLocation` element's `ItemUrl` attribute, as specified by **RepositoryLocation** (section [2.2.4.162](#)), equals the **ItemUrl** attribute of the passed in `scorecardLocation` element.

| Error code | Description |
|--------------------------|--|
| InvalidPermission | 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](#).

3.1.4.66.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---|--|
| <code>TrimAnnotationByScorecardLocationSoapIn</code> | The request WSDL message for the TrimAnnotationByScorecardLocation WSDL operation. |
| <code>TrimAnnotationByScorecardLocationSoapOut</code> | The response WSDL message for the TrimAnnotationByScorecardLocation WSDL operation. |

3.1.4.66.1.1 TrimAnnotationByScorecardLocationSoapIn

The request WSDL message for the **TrimAnnotationByScorecardLocation** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByScorecardLocation
```

The SOAP body contains the **TrimAnnotationByScorecardLocation** element.

3.1.4.66.1.2 TrimAnnotationByScorecardLocationSoapOut

The response WSDL message for the **TrimAnnotationByScorecardLocation** WSDL operation.

The SOAP body contains the **TrimAnnotationByScorecardLocationResponse** element.

3.1.4.66.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---|--|
| TrimAnnotationByScorecardLocation | The input data for the TrimAnnotationByScorecardLocation WSDL operation. |
| TrimAnnotationByScorecardLocationResponse | The result data for the TrimAnnotationByScorecardLocation WSDL operation. |

3.1.4.66.2.1 TrimAnnotationByScorecardLocation

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. It MUST conform to the schema of the [RepositoryLocation](#) complex type, it MUST be present, and the ItemType attribute MUST NOT equal TempReportView, as specified in **FirstClassObjectType** (section [2.2.5.20](#)).

3.1.4.66.2.2 TrimAnnotationByScorecardLocationResponse

The result data for the **TrimAnnotationByScorecardLocation** WSDL operation.

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

3.1.4.66.3 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 TrimAnnotationUntouchedSince

This operation removes all the annotations that haven't been updated since the specified date.

```
<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, and the server (2) responds with a **TrimAnnotationUntouchedSinceSoapOut** response message as follows:

- The protocol client MUST send the last modified date as the **untouchedSince** element of the **TrimAnnotationUntouchedSince** element.
- The server (2) MUST delete all the **Annotations** (section [2.2.4.18](#)) for which the date specified by **LastUpdatedOn** property is before or equal to the date specified by the client.

| Error code | Description |
|-------------------------------|---|
| InvalidPermissionAdmin | 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](#).

3.1.4.67.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------------------|---|
| TrimAnnotationUntouchedSinceSoapIn | The request WSDL message for the TrimAnnotationUntouchedSince WSDL operation. |
| TrimAnnotationUntouchedSinceSoapOut | The response WSDL message for the TrimAnnotationUntouchedSince WSDL operation. |

3.1.4.67.1.1 TrimAnnotationUntouchedSinceSoapIn

The request WSDL message for the **TrimAnnotationUntouchedSince** WSDL operation.

The SOAP action value is:

The SOAP body contains the **TrimAnnotationUntouchedSince** element.

3.1.4.67.1.2 TrimAnnotationUntouchedSinceSoapOut

The response WSDL message for the **TrimAnnotationUntouchedSince** WSDL operation.

The SOAP body contains the **TrimAnnotationUntouchedSinceResponse** element.

3.1.4.67.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--------------------------------------|---|
| TrimAnnotationUntouchedSince | The input data for the TrimAnnotationUntouchedSince WSDL operation. |
| TrimAnnotationUntouchedSinceResponse | The result data for the TrimAnnotationUntouchedSince WSDL operation. |

3.1.4.67.2.1 TrimAnnotationUntouchedSince

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 **Annotations** which MUST be deleted. MUST be present and MUST be a valid dateTime.

3.1.4.67.2.2 TrimAnnotationUntouchedSinceResponse

The result data for the **TrimAnnotationUntouchedSince** WSDL operation.

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

3.1.4.67.3 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 UpdateAnnotation

This operation updates an existing **Annotation** (section [2.2.4.18](#)).

```
<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, and the server (2) responds with an **UpdateAnnotationSoapOut** response message 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**, 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 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.

| Error code | Description |
|--------------------------|--|
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidAnnotation | The updated annotation did not validate to the conforming schema. |
| InvalidTextLength | A string attribute is null, empty or exceeds its specified maximum length. |

| Error code | Description |
|-----------------------------------|---|
| InvalidCharacters | The updated annotation properties did not validate to the conforming schema. |
| InvalidComment | The updated annotation comments did not validate to the conforming schema. |
| AnnotationNotEnabled | Annotations are not enabled in the server. |
| AnnotationDeleteNotEnabled | If Annotation Delete is not enabled in the server, but this request, which would delete comments, is received, the comments will not be changed on the server and the AnnotationDeleteNotEnabled 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](#).

3.1.4.68.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------|---|
| UpdateAnnotationSoapIn | The request WSDL message for the UpdateAnnotation WSDL operation. |
| UpdateAnnotationSoapOut | The response WSDL message for the UpdateAnnotation WSDL operation. |

3.1.4.68.1.1 UpdateAnnotationSoapIn

The request WSDL message for the **UpdateAnnotation** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateAnnotation
```

The SOAP body contains the **UpdateAnnotation** element.

3.1.4.68.1.2 UpdateAnnotationSoapOut

The response WSDL message for the **UpdateAnnotation** WSDL operation.

The SOAP body contains the **UpdateAnnotationResponse** element.

3.1.4.68.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--------------------------|---|
| UpdateAnnotation | The input data for the UpdateAnnotation WSDL operation. |
| UpdateAnnotationResponse | The result data for the UpdateAnnotation WSDL operation. |

3.1.4.68.2.1 UpdateAnnotation

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** object. This element MUST NOT be null and MUST conform to the schema of the **Annotation** (section [2.2.4.18](#)) complex type. MUST contain the original **AnnotationId** and **LastModifiedOn** values.

3.1.4.68.2.2 UpdateAnnotationResponse

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 object. MUST be a copy of the updated annotation with the new LastModifiedOn value, as stored in the server (2).

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 UpdateDashboard

This operation updates an existing Dashboard (section [2.2.4.79](#)).

```
<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, and the server (2) responds with an **UpdateDashboardSoapOut** response message 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** (section [2.2.4.79](#)).
- The server (2) MUST verify that the **Dashboard** exists by using the **Location** attribute as specified in the base class **FirstClassElement** (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 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 then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
 - 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.

| Error code | Description |
|--------------------------------------|--|
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidItemType | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |

| Error code | Description |
|-------------------------------------|--|
| FCOUpdateFailedNameCollision | 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](#).

3.1.4.69.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| UpdateDashboardSoapIn | The request WSDL message for the UpdateDashboard WSDL operation. |
| UpdateDashboardSoapOut | The response WSDL message for the UpdateDashboard WSDL operation. |

3.1.4.69.1.1 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.

3.1.4.69.1.2 UpdateDashboardSoapOut

The response WSDL message for the **UpdateDashboard** WSDL operation.

The SOAP body contains the **UpdateDashboardResponse** element.

3.1.4.69.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------|--|
| UpdateDashboard | The input data for the UpdateDashboard WSDL operation. |
| UpdateDashboardResponse | The result data for the UpdateDashboard WSDL operation. |

3.1.4.69.2.1 UpdateDashboard

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>
```



```
</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** (section [2.2.4.79](#)) complex type.

3.1.4.69.2 UpdateDashboardResponse

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** object. MUST be a copy of the updated dashboard, as stored in the server (2).

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 UpdateDataSource

This operation updates an existing DataSource (section [2.2.4.85](#)).

```
<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, and the server (2) responds with an **UpdateDataSourceSoapOut** response message 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** (section [2.2.4.85](#)).
- The server (2) MUST verify that the **DataSource** exists by using the Location attribute as specified in the base class **FirstClassElement** (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 was updated on the server storage.
 - **Version** SHOULD be updated by the server (2) with the current version of the **DataSource** object. If **Version** is updated by the server then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
- 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.

| Error code | Description |
|--------------------------------------|--|
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidDataSource | The updated data source (1) did not validate to the conforming schema. |
| FCOUpdateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidItemType | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedNameCollision | 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](#).

3.1.4.70.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------|---|
| UpdateDataSourceSoapIn | The request WSDL message for the UpdateDataSource WSDL operation. |
| UpdateDataSourceSoapOut | The response WSDL message for the UpdateDataSource WSDL operation. |

3.1.4.70.1.1 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.

3.1.4.70.1.2 UpdateDataSourceSoapOut

The response WSDL message for the **UpdateDataSource** WSDL operation.

The SOAP body contains the **UpdateDataSourceResponse** element.

3.1.4.70.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--------------------------|---|
| UpdateDataSource | The input data for the UpdateDataSource WSDL operation. |
| UpdateDataSourceResponse | The result data for the UpdateDataSource WSDL operation. |

3.1.4.70.2.1 UpdateDataSource

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** section [2.2.4.85](#)) complex type.

3.1.4.70.2 UpdateDataSourceResponse

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**. MUST be a copy of the updated **datasource** 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 UpdateFilter

This operation is used to update the existing filter as specified by the Filter (section [2.2.4.98](#)) object in the **UpdateFilter** input element.

```
<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, and the server (2) responds with an **UpdateFilterSoapOut** response message as follows:

- The protocol client MUST send a valid **Filter** (section [2.2.4.98](#)) 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** (section [2.2.4.99](#)) and 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 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 then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
 - 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.

| Error code | Description |
|--------------------------------------|--|
| FCOupdateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOupdateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidItemType | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOupdateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | 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](#).

3.1.4.71.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|---------------------|---|
| UpdateFilterSoapIn | The request WSDL message for the UpdateFilter WSDL operation. |
| UpdateFilterSoapOut | The response WSDL message for the UpdateFilter WSDL operation. |

3.1.4.71.1.1 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.

3.1.4.71.1.2 UpdateFilterSoapOut

The response WSDL message for the **UpdateFilter** WSDL operation.

The SOAP body contains the **UpdateFilterResponse** element.

3.1.4.71.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|----------------------|---|
| UpdateFilter | The input data for the UpdateFilter WSDL operation. |
| UpdateFilterResponse | The result data for the UpdateFilter WSDL operation. |

3.1.4.71.2.1 UpdateFilter

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: Filter (section [2.2.4.98](#)) object instance that specifies the new state of the filter that is being updated.

3.1.4.71.2.2 UpdateFilterResponse

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: Filter (section [2.2.4.98](#)) object instance that specifies the updated filter.

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 UpdateIndicator

This operation is used to update the existing **indicator** as specified by the **Indicator** (section [2.2.4.125](#)) object in the **UpdateIndicator** input element.

```
<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, and the server (2) responds with an **UpdateIndicatorSoapOut** response message 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** (section [2.2.4.99](#)) and 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 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 then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
 - **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**.

| Error code | Description |
|---|--|
| InvalidBuiltinIndicatorOperation | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidItemType | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidIndicator | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidIndicatorBand | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidSetting | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| Unknown | 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 |
|------------------------|--|
| UpdateIndicatorSoapIn | The request WSDL message for the UpdateIndicator WSDL operation. |
| UpdateIndicatorSoapOut | The response WSDL message for the UpdateIndicator WSDL operation. |

3.1.4.72.1.1 UpdateIndicatorSoapIn

The request WSDL message for the **UpdateIndicator** WSDL operation.

The SOAP action value is:

The SOAP body contains the **UpdateIndicator** element.

3.1.4.72.1.2 UpdateIndicatorSoapOut

The response WSDL message for the **UpdateIndicator** WSDL operation.

The SOAP body contains the **UpdateIndicatorResponse** element.

3.1.4.72.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------|--|
| UpdateIndicator | The input data for the UpdateIndicator WSDL operation. |
| UpdateIndicatorResponse | The result data for the UpdateIndicator WSDL operation. |

3.1.4.72.2.1 UpdateIndicator

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: Indicator (section [2.2.4.125](#)) object instance that specifies the new state of the **indicator** that is being updated.

3.1.4.72.2.2 UpdateIndicatorResponse

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: Indicator (section [2.2.4.125](#)) object instance that specifies the updated **indicator**.

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 UpdateKpi

This operation is used to update the existing KPI as specified by the **Kpi** (section [2.2.4.128](#)) object in the **UpdateKpi** input element.

```
<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, and the server (2) responds with an **UpdateKpiSoapOut** response message 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** (section [2.2.4.99](#)) and 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 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 then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
 - 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.

| Error code | Description |
|--------------------------------------|--|
| FCOUpdateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidItemType | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidKpi | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | 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 |
|------------------|--|
| UpdateKpiSoapIn | The request WSDL message for the UpdateKpi WSDL operation. |
| UpdateKpiSoapOut | The response WSDL message for the UpdateKpi WSDL operation. |

3.1.4.73.1.1 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.

3.1.4.73.1.2 UpdateKpiSoapOut

The response WSDL message for the **UpdateKpi** WSDL operation.

The SOAP body contains the **UpdateKpiResponse** element.

3.1.4.73.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------|--|
| UpdateKpi | The input data for the UpdateKpi WSDL operation. |
| UpdateKpiResponse | The result data for the UpdateKpi WSDL operation. |

3.1.4.73.2.1 UpdateKpi

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: Kpi (section [2.2.4.128](#)) object instance that specifies the new state of the KPI that is being updated.

3.1.4.73.2.2 UpdateKpiResponse

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: Kpi (section [2.2.4.128](#)) object instance that specifies the updated KPI.

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 UpdateReportView

This operation is used to update the existing report view as specified by the **ReportView** (section [2.2.4.161](#)) object in the **UpdateReportView** input element.

```
<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, and the server (2) responds with an **UpdateReportViewSoapOut** response message 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** (section [2.2.4.99](#)) and 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 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 then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
 - The other properties of the report view SHOULD be equal to the **Indicator** (section [2.2.4.125](#)) object submitted to the server (2).

The server (2) MUST return a new **ReportView** object instance that represents the updated report view.

| Error code | Description |
|----------------------------------|--|
| FCOUpdateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidItemType | See Common List of Error Codes (section 2.2.2.1.3). |

| Error code | Description |
|--------------------------------------|--|
| FCOUpdateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidReportView | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | 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 |
|-------------------------|---|
| UpdateReportViewSoapIn | The request WSDL message for the UpdateReportView WSDL operation. |
| UpdateReportViewSoapOut | The response WSDL message for the UpdateReportView WSDL operation. |

3.1.4.74.1.1 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.

3.1.4.74.1.2 UpdateReportViewSoapOut

The response WSDL message for the **UpdateReportView** WSDL operation.

The SOAP body contains the **UpdateReportViewResponse** element.

3.1.4.74.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|------------------|--|
| UpdateReportView | The input data for the UpdateReportView WSDL operation. |

| Element | Description |
|--------------------------|---|
| UpdateReportViewResponse | The result data for the UpdateReportView WSDL operation. |

3.1.4.74.2.1 UpdateReportView

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: ReportView (section [2.2.4.161](#)) object instance that specifies the new state of the report view that is being updated.

3.1.4.74.2.2 UpdateReportViewResponse

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: ReportView (section [2.2.4.161](#)) object instance that specifies the updated report view.

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 UpdateScorecard

This operation is used to update the existing scorecard as specified by the **Scorecard** (section [2.2.4.163](#)) object in the **UpdateScorecard** input element.

```
<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, and the server (2) responds with an **UpdateScorecardSoapOut** message as follows:

- The scorecard to be updated MUST be a valid **Scorecard**.
- The **Location** of the scorecard ([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 MUST be updated with the scorecard provided by the protocol client in the **UpdateScorecardSoapIn** request message.

| Error code | Description |
|--------------------------------------|--|
| FCOUpdateFailed | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidItemType | See Common List of Error Codes (section 2.2.2.1.3). |
| FCOUpdateFailedListType | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidObject | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidCategoryName | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidFirstClassElementField | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElement | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidElementField | 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 |
|------------------------|--|
| UpdateScorecardSoapIn | The request WSDL message for the UpdateScorecard WSDL operation. |
| UpdateScorecardSoapOut | The response WSDL message for the UpdateScorecard WSDL operation. |

3.1.4.75.1.1 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.

3.1.4.75.1.2 UpdateScorecardSoapOut

The response WSDL message for the **UpdateScorecard** WSDL operation.

The SOAP body contains the **UpdateScorecardResponse** element.

3.1.4.75.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------|--|
| UpdateScorecard | The input data for the UpdateScorecard WSDL operation. |
| UpdateScorecardResponse | The result data for the UpdateScorecard WSDL operation. |

3.1.4.75.2.1 UpdateScorecard

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**. This operation is used to update the existing scorecard as specified by the **Scorecard**.

3.1.4.75.2.2 UpdateScorecardResponse

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 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, it MUST NOT be **null** and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
- The other properties of the scorecard SHOULD be equal to the original scorecard submitted to the server (2).

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 ValidateKpi

Checks whether a KPI stored on the server is valid.

```

<wsdl:operation name="ValidateKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ValidateKpiSoapIn"/>
  <wsdl:output message="tns:ValidateKpiSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **ValidateKpiSoapIn** request message, and the server (2) responds with a **ValidateKpiSoapOut** message, as follows:

1. If the KPI contains any **Actuals** (see section [2.2.4.128](#)), each MUST be a valid **KpiMeasure** (see section [2.2.4.129](#)) as follows:
 - If the **DataSourceLocation** field of **KpiMeasure** (see section [2.2.4.129](#)) 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** (see section [2.2.4.87](#)) MUST be valid as follows:
 - If the **DefaultDimensionSetting** contains any **Member** element (see section [2.2.4.135](#)), each **Member** MUST exist in the data source.
2. If the KPI contains any **Targets** (see section [2.2.4.128](#)), each MUST be a valid Target (see section [2.2.4.171](#)) as follows:
 - If the property **RelatedActualId** (see section [2.2.4.171](#)) is not empty, it MUST refer to an existing **Actual**, which MUST be valid according to item 1.
 - The **Target** itself MUST be a valid **KpiMeasure** according to item 1.
 - If **IndicatorLocation** (see section [2.2.4.128](#)) is not empty, it MUST refer to an existing **Indicator**.
 - If **StatedScore** (see section [2.2.4.171](#)) is not empty, then it MUST be a valid **KpiMeasure** according to item 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 |
|--------------------|--|
| ValidateKpiSoapIn | The request WSDL message for the ValidateKpi WSDL operation. |
| ValidateKpiSoapOut | The response WSDL message for the ValidateKpi WSDL operation. |

3.1.4.76.1.1 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.

3.1.4.76.1.2 ValidateKpiSoapOut

The response WSDL message for the **ValidateKpi** WSDL operation.

The SOAP body contains the **ValidateKpiResponse** element.

3.1.4.76.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---------------------|--|
| ValidateKpi | The input data for the ValidateKpi WSDL operation. |
| ValidateKpiResponse | The result data for the ValidateKpi WSDL operation. |

3.1.4.76.2.1 ValidateKpi

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 section [RepositoryLocation](#)).

3.1.4.76.2.2 ValidateKpiResponse

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, then this array MUST be empty. Otherwise, it SHOULD contain one localized error message per validation failure.

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 ValidateScorecard

Checks if a scorecard stored on the server (2) is valid.

```
<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 an **ValidateScorecardSoapIn** request message, and the server (2) responds with an **ValidateScorecardSoapOut** message as follows:

- If the scorecard contains one or more KPIs, each KPI MUST be valid according to the specification in section [ValidateKPI](#) (section [3.1.4.76](#));
- If the scorecard contains any **ConfiguredViews** (section [2.2.4.77](#)), each MUST be valid as follows:
 - If the **DataSourceLocation** field is not empty, then 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 **GridViewDefinition** (section [2.2.4.122](#)) and [GridHeaderItem](#) (section [2.2.4.116](#)) MUST be valid according to the following:
 - Each column or row header that is of type **Member** (section [2.2.5.39](#)) MUST refer to a valid member in the data source.
 - Each column or row header that is of type **NamedSet** (section [2.2.5.39](#)) MUST be a well-formed named set MDX.

3.1.4.77.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|--------------------------|--|
| ValidateScorecardSoapIn | The request WSDL message for the ValidateScorecard WSDL operation. |
| ValidateScorecardSoapOut | The response WSDL message for the ValidateScorecard WSDL operation. |

3.1.4.77.1.1 ValidateScorecardSoapIn

The request WSDL message for the **ValidateScorecard** WSDL operation.

The SOAP action value is:

The SOAP body contains the **ValidateScorecard** element.

3.1.4.77.1.2 ValidateScorecardSoapOut

The response WSDL message for the **ValidateScorecard** WSDL operation.

The SOAP body contains the **ValidateScorecardResponse** element.

3.1.4.77.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|---------------------------|--|
| ValidateScorecard | The input data for the ValidateScorecard WSDL operation. |
| ValidateScorecardResponse | The result data for the ValidateScorecard WSDL operation. |

3.1.4.77.2.1 ValidateScorecard

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 [RepositoryLocation](#) (section [2.2.4.162](#)).

3.1.4.77.2.2 ValidateScorecardResponse

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, then this array MUST be empty. Otherwise, it SHOULD contain one localized error message per validation failure.

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 ValidateSiteCollection

This operation is used to check if the context site has the server feature installed.

```
<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, and the server (2) responds with a **ValidateSiteCollectionSoapOut** message 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, **ValidateSiteCollectionResult** 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** 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 other than those enumerated in items 1 to 6.

3.1.4.78.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|-------------------------------|---|
| ValidateSiteCollectionSoapIn | The request WSDL message for the ValidateSiteCollection WSDL operation. |
| ValidateSiteCollectionSoapOut | The response WSDL message for the ValidateSiteCollection WSDL operation. |

3.1.4.78.1.1 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.

3.1.4.78.1.2 ValidateSiteCollectionSoapOut

The response WSDL message for the **ValidateSiteCollection** WSDL operation.

The SOAP body contains the **ValidateSiteCollectionResponse** element.

3.1.4.78.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|--------------------------------|---|
| ValidateSiteCollection | The input data for the ValidateSiteCollection WSDL operation. |
| ValidateSiteCollectionResponse | The result data for the ValidateSiteCollection WSDL operation. |

3.1.4.78.2.1 ValidateSiteCollection

The input data for the **ValidateSiteCollection** WSDL operation.

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

3.1.4.78.2.2 ValidateSiteCollectionResponse

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 [URLValidationResult](#) for more details.

siteCollectionUrl: The site collection URL of the context site.

siteUrl: The URL of the context site.

3.1.4.78.3 Complex Types

None.

3.1.4.78.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

| Simple type | Description |
|---------------------|---|
| URLValidationResult | Specifies the possible results of URL Validation. |

3.1.4.78.4.1 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:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for **URLValidationResult**.

| Value | Meaning |
|---------------------------------|--|
| SiteCollectionOrSite | The context site is a subsite of a site collection or the top-level site (2) of a site collection that has the server (2) feature installed. |
| SiteCollection | The context site is the top-level site (2) of a site collection and the site collection has the server feature installed. |
| Site | The context site is a subsite of a site collection and the site collection has the protocol feature installed. |
| List | The context site is a list (1) of a site collection. |
| DocumentLibrary | The context site is a document library 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 feature activated. |
| URLZoneNotAllowed | The URL is not in the following security zones : Local, Intranet, or Trusted. |
| NoAccess | The user has insufficient rights to access the context site. |

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 ExportDashboard

The **ExportDashboard** operation [<43>](#) is used to export dashboard pages and their associated content from the server (2) into a specified Deployment Package ([\[MS-PRIMEPF\]](#)).

```
<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, and the server (2) responds with an **ExportDashboardSoapOut** message as follows:

1. The server (2) exports the items specified in **itemUrls** into the Deployment Package located at the filename.
2. 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 |
|------------------------------|--|
| InvalidUrl | An invalid URL was specified |
| FCOUnauthorizedAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |

3.1.4.79.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| ExportDashboardSoapIn | The request WSDL message for the ExportDashboard WSDL operation. |
| ExportDashboardSoapOut | The response WSDL message for the ExportDashboard WSDL operation. |

3.1.4.79.1.1 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.

3.1.4.79.1.2 ExportDashboardSoapOut

The response WSDL message for the **ExportDashboard** WSDL operation.

The SOAP body contains the **ExportDashboardResponse** element.

3.1.4.79.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------|--|
| ExportDashboard | The input data for the ExportDashboard WSDL operation. |
| ExportDashboardResponse | The result data for the ExportDashboard WSDL operation. |

3.1.4.79.2.1 ExportDashboard

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>
```

filename: 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: SiteCollectionUrl contains the site collection URL to use for the export. This element MUST be present.

itemUrls: 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 and MUST contain at least 1 item URL.

3.1.4.79.2.2 ExportDashboardResponse

The result data for the **ExportDashboard** WSDL operation.

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

3.1.4.79.3 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 ImportDashboard

The ImportDashboard operation [<44>](#) is used to import content from a specified Deployment Package ([\[MS-PRIMEPF\]](#)) to the server (2).

```
<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, and the server (2) responds with an **ImportDashboardSoapOut** message as follows:

1. The server (2) imports the items from the Deployment Package ([MS-PRIMEPF]) specified in the filename.
2. 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 |
|------------------------------|--|
| InvalidUrl | An invalid URL was specified |
| FCOUnauthorizedAccess | See Common List of Error Codes (section 2.2.2.1.3). |
| InvalidPermission | See Common List of Error Codes (section 2.2.2.1.3). |

3.1.4.80.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

| Message | Description |
|------------------------|--|
| ImportDashboardSoapIn | The request WSDL message for the ImportDashboard WSDL operation. |
| ImportDashboardSoapOut | The response WSDL message for the ImportDashboard WSDL operation. |

3.1.4.80.1.1 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.

3.1.4.80.1.2 ImportDashboardSoapOut

The response WSDL message for the **ImportDashboard** WSDL operation.

The SOAP body contains the **ImportDashboardResponse** element.

3.1.4.80.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

| Element | Description |
|-------------------------|--|
| ImportDashboard | The input data for the ImportDashboard WSDL operation. |
| ImportDashboardResponse | The result data for the ImportDashboard WSDL operation. |

3.1.4.80.2.1 ImportDashboard

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: SiteUrl contains the site collection URL to use for the import. This element **MUST** be present.

filename: 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: LocationMap contains a **SerializableDictionary** (section [2.2.4.165](#)) 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: DatasourceMap contains a **SerializableDictionary** (section [2.2.4.165](#)) containing keys of type string and values of type string where:

- **Key** contains the server-relative URL a **DataSource** (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 **FirstClassElements** (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: 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 it MUST NOT change the master page during import.

3.1.4.80.2 ImportDashboardResponse

The result data for the **ImportDashboard** WSDL operation.

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

3.1.4.80.3 Complex Types

None.

3.1.4.80.4 Simple Types

None.

3.1.4.80.5 Attributes

None.

3.1.4.80.6 Groups

None.

3.1.4.80.7 Attribute Groups

None.

3.1.5 Timer Events

No timer events are required on the server beyond those required by the underlying RPC transport.

3.1.6 Other Local Events

None.

Preliminary

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, then 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 Scorecard. | /PerformancePoint/Lists/Dashboard Content | 8_.000 |
| KPI | InternetSales. | /PerformancePoint/Lists/Dashboard Content | 4_.000 |
| DataSource | New DataSource. | /PerformancePoint/Data Sources | 1_.000 |

4.1.1 CreateKPI

To create a new KPI, the protocol client calls **CreateKPI**. 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 1. 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"
Content="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="94d89bc7-7a1d-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>
      <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"
        ContentType="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-
          a268-4cf1-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="94d89bc7-7ald-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
  <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000"
  ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
  SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7ald-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-2474-4746-99e6-660e8dafe1e8" 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-
a268-4cfl-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>
    <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
    HorizontalAlignment="Left">
      <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
      Underline="False" Strikeout="False" />
      <ForeColor A="255" R="0" G="0" B="0" />
      <BackColor A="255" R="255" G="255" B="255" />
    </DefaultCellFormatInfo>
    <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
    HorizontalAlignment="Left">
      <BackColor A="0" R="252" G="252" B="252" />
    </DefaultRowHeaderFormatInfo>
    <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
    HorizontalAlignment="Center">
      <BackColor A="0" R="235" G="243" B="255" />
    </DefaultColumnHeaderFormatInfo>
    <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"
ItemTypes="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cfl1-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>
    <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" />
<DefaultCellBorderColor 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: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>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: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-a1aa-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: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"
    ContentTypeId="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=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="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-
      a268-4cfl-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>
          <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>

```

```

    <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
    <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
Underline="False" Strikeout="False" />
    <ForeColor A="255" R="0" G="0" B="0" />
    <BackColor A="255" R="255" G="255" B="255" />
</DefaultCellFormatInfo>
    <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
    <BackColor A="0" R="252" G="252" B="252" />
</DefaultRowHeaderFormatInfo>
    <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
    <BackColor A="0" R="235" G="243" B="255" />
</DefaultColumnHeaderFormatInfo>
    <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-bd190f06ccd"
DefinitionGuid="b70a0ba9-ea56-4ffa-bc41-bd190f06ccd" 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>
        <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" />
  <DefaultCellBorderColor 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>

```



```

    </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>
    <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"
ContentType="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=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="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-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>
      <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-7cla350ce3e2"
      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>
        <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
        HorizontalAlignment="Left">
          <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
          Underline="False" Strikeout="False" />
          <ForeColor A="255" R="0" G="0" B="0" />
          <BackColor A="255" R="255" G="255" B="255" />
        </DefaultCellFormatInfo>
        <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
        HorizontalAlignment="Left">
          <BackColor A="0" R="252" G="252" B="252" />
        </DefaultRowHeaderFormatInfo>
        <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
        HorizontalAlignment="Center">

```

```

    <BackColor A="0" R="235" G="243" B="255" />
    </DefaultColumnHeaderFormatInfo>
    <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" />
<DefaultCellBorderColor 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:schema>

```

```

        </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: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:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:schema>
    </DisplayValues>
  </ParameterDefinition>

```



```

        <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>
</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="">
    <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
  HorizontalAlignment="Left">
      <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
  Underline="False" Strikeout="False" />
      <ForeColor A="255" R="0" G="0" B="0" />
      <BackColor A="255" R="255" G="255" B="255" />
    </DefaultCellFormatInfo>
    <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
  HorizontalAlignment="Left">
      <BackColor A="0" R="252" G="252" B="252" />
    </DefaultRowHeaderFormatInfo>
    <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
  HorizontalAlignment="Center">
      <BackColor A="0" R="235" G="243" B="255" />
    </DefaultColumnHeaderFormatInfo>
    <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>
            </DisplayElements>
          </GridCell>
        </Values>
      </Table>
    </Cells>
  </GenerateViewResult>
</GenerateViewResponse>

```

```

        <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-a268-4cfl-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>
        <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>
<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="94d89bc7-7a1d-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 data source. The protocol client creates a data source, tests connectivity to that data source, and retrieves dimension data from the data source.

It is assumed that an analysis server (cubes3) exists with a database (Adventure Works DW) and a cube (Adventure Works).

4.2.1 CreateDatasource

The protocol client calls **CreateDatasource** to create a new 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>
    <CreateDataSource xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <listUrl>/PerformancePoint/Data Sources</listUrl>
      <dataSource Folder="" CreatedBy="" CreatedDate="2009-05-21T12:59:13"
Contentype="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="94d89bc7-7a1d-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>
      </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"
Content Type="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>

```

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" />
    <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.

6 Appendix A: Full WSDL

For ease of implementation, the full WSDL is provided in this appendix.

```
<?xml version="1.0"?>
<wsdl:definitions xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
xmlns:q1="http://microsoft.com/wsdl/types/"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema xmlns:query="http://schemas.microsoft.com/performancepoint/2007/03/query"
xmlns:qdata="http://performancepoint.microsoft.com/OLAPQueryData"
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:schema>
  </wsdl:types>

```



```

    </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="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="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="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: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="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="BpmPropertyHyperlink2">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmPropertyLinkBase"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyHyperlink">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:BpmPropertyLinkBase"/>
    </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="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="q1: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: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:restriction>
</xs:simpleType>

```

```

        <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: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:extension>
    </xs:complexContent>
  </xs:complexType>

```

```

        <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="q1: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: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">
    <xs:sequence>
      <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="MemberOperationChildren">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </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="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: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="q1: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>
<xs:complexType name="ArrayOfTarget">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Target" nillable="true"
type="tns:Target"/>
    </xs:sequence>
</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:attribute name="ShowStatusFiltersByDefault" type="xs:boolean"
use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="StatusFilter">
  <xs:attribute name="IndicatorLocationGuid" type="ql: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="DefaultCellFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
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="q1: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:element minOccurs="0" maxOccurs="1" name="DefaultCellBorderColor"
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:sequence>
    </xs:complexType>

```

```

    <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="q1:guid" use="required"/>
<xs:attribute name="DefinitionGuid" type="q1: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>
<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="q1:char"/>
    <xs:element minOccurs="1" maxOccurs="1" name="decimal" type="xs:decimal"/>
    <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="q1: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: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: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: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:restriction>
  </xs:simpleType>

```

```

        <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>
  </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>
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type="tns:Filter"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="UpdateFilter">
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    </xs:complexType>
  </xs:element>
  <xs:element name="UpdateFilterResponse">
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      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="UpdateFilterResult"
type="tns:Filter"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetFilter">
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        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
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    </xs:complexType>
  </xs:element>

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</xs:element>
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type="tns:Filter"/>
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<xs:element name="DeleteFilter">
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type="tns:RepositoryLocation"/>
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<xs:element name="DeleteFilterResponse">
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</xs:element>
<xs:element name="CreateIndicator">
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    <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>
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    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
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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"/>
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nillable="true" type="tns:IndicatorBand"/>
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    <xs:enumeration value="Standard"/>
  </xs:restriction>
</xs:simpleType>

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        <xs:enumeration value="Centered"/>
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type="tns:Indicator"/>
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    </xs:complexType>
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<xs:element name="UpdateIndicator">
    <xs:complexType>
        <xs:sequence>
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        </xs:sequence>
    </xs:complexType>
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<xs:element name="UpdateIndicatorResponse">
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        <xs:sequence>
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type="tns:Indicator"/>
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    </xs:complexType>
</xs:element>
<xs:element name="GetIndicator">
    <xs:complexType>
        <xs:sequence>
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type="tns:RepositoryLocation"/>
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    </xs:complexType>
</xs:element>
<xs:element name="GetIndicatorResponse">
    <xs:complexType>
        <xs:sequence>
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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">
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    </xs:complexType>
</xs:element>

```



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    </xs:complexType>
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        <xs:sequence>
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type="tns:RepositoryLocation"/>
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type="tns:ArrayOfEndPoint"/>
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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="q1: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">
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      <xs:sequence>
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type="tns:ReportView"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="UpdateReportView">
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    </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"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetReportViewResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetReportViewResult"
type="tns:ReportView"/>
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  </xs:element>

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    </xs:complexType>
  </xs:element>
  <xs:element name="DeleteReportView">
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type="tns:RepositoryLocation"/>
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  </xs:element>
  <xs:element name="DeleteReportViewResponse">
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  </xs:element>
  <xs:element name="GetAnalyticReportView">
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      <xs:sequence>
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type="tns:RepositoryLocation"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetAnalyticReportViewResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetAnalyticReportViewResult"
type="tns:ReportView"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetLatestAnalyticReportVersion">
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        <xs:element minOccurs="1" maxOccurs="1" name="analyticReportViewId"
type="q1:guid"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetLatestAnalyticReportVersionResponse">
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name="GetLatestAnalyticReportVersionResult" type="xs:int"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="SaveTemporaryAnalyticReport">
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    </xs:complexType>
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  <xs:element name="SaveTemporaryAnalyticReportResponse">
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type="q1:guid"/>
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  </xs:element>

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type="tns:RepositoryLocation"/>
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type="xs:string"/>
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</xs:element>
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type="tns:ArrayOfMember"/>
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  </xs:complexType>
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<xs:element name="GetAnnotation">
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type="tns:RepositoryLocation"/>
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type="tns:ArrayOfTuple"/>
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type="tns:Tuple"/>
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  <xs:sequence>
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type="tns:ArrayOfMember"/>
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</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"/>
    <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" type="q1:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Guid" type="q1:guid"/>
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type="xs:string"/>
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type="tns:AnnotationVersions"/>
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        <xs:enumeration value="Office14Beta1"/>
        <xs:enumeration value="Pps2007"/>
    </xs:restriction>
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</xs:element>
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            <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationByIDResult"
type="tns:Annotation"/>
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    </xs:complexType>
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type="tns:RepositoryLocation"/>
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    </xs:sequence>
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name="GetAllAnnotationsByScorecardLocationResult" type="tns:ArrayOfAnnotation"/>
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    </xs:complexType>
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  <xs:element name="CreateAnnotationResponse">
    <xs:complexType>
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type="tns:Annotation"/>
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    </xs:complexType>
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  <xs:element name="UpdateAnnotation">
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type="tns:Annotation"/>
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    </xs:complexType>
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  <xs:element name="DeleteAnnotation">
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  <xs:element name="DeleteAnnotationResponse">
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  <xs:element name="TrimAnnotationByScorecardLocation">
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type="tns:RepositoryLocation"/>
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  <xs:element name="TrimAnnotationByScorecardLocationResponse">

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    <xs:complexType/>
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  <xs:element name="TrimAnnotationByOwner">
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  </xs:element>
  <xs:element name="TrimAnnotationUntouchedSince">
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type="xs:dateTime"/>
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  <xs:element name="TrimAnnotationUntouchedSinceResponse">
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  </xs:element>
  <xs:element name="GetDatabaseNamesFromDataSource">
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetDatabaseNamesFromDataSourceResponse">
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name="GetDatabaseNamesFromDataSourceResult" type="tns:ArrayOfString"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetMdx">
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type="tns:RepositoryLocation"/>
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  <xs:element name="GetMdxResponse">
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        <xs:element minOccurs="0" maxOccurs="1" name="GetMdxResult" type="xs:string"/>
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    </xs:complexType>
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  <xs:element name="GetCubeNameInfos">
    <xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
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<xs:element name="GetCubeNameInfosResponse">
  <xs:complexType>
    <xs:sequence>
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type="tns:ArrayOfNameInfo"/>
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  </xs:complexType>
</xs:element>
<xs:element name="GetPreviewDataSet">
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    <xs:sequence>
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    </xs:sequence>
  </xs:complexType>
</xs:element>
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  <xs:complexType>
    <xs:sequence>
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</xs:element>
<xs:element name="TestConnectionResponse">
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<xs:element name="GetCubeMetaData">
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    <xs:sequence>
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type="tns:RepositoryLocation"/>
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</xs:element>

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      <xs:attribute name="Expression" type="xs:string"/>
      <xs:attribute name="DisplayFolder" type="xs:string"/>
    </xs:complexType>
    <xs:complexType name="ArrayOfDimension">
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type="tns:Dimension"/>
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    </xs:complexType>
    <xs:complexType name="ArrayOfMeasure">
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type="tns:Measure"/>
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    <xs:complexType name="Measure">
      <xs:complexContent mixed="false">
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          <xs:attribute name="MeasureGroup" type="xs:string"/>
          <xs:attribute name="DisplayFolder" type="xs:string"/>
          <xs:attribute name="HierarchyName" type="xs:string"/>
        </xs:extension>
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    </xs:complexType>
    <xs:complexType name="ArrayOfNamedSet">
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type="tns:NamedSet"/>
      </xs:sequence>
    </xs:complexType>
    <xs:element name="GetCubeMetaDataResponse">
      <xs:complexType>
        <xs:sequence>
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type="tns:Cube"/>
        </xs:sequence>
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    </xs:element>
    <xs:complexType name="Cube">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:NameInfo">
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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>
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        </xs:extension>
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    </xs:complexType>

```



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        </xs:complexContent>
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    <xs:element name="GetCubeMetaDataForDataSource">
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        </xs:complexType>
    </xs:element>
    <xs:element name="GetCubeMetaDataForDataSourceResponse">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="GetCubeMetaDataForDataSourceResult"
type="tns:Cube"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetDimensions">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetDimensionsResponse">
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            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsResult"
type="tns:ArrayOfDimension"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetDimensionsFromDataSource">
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            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetDimensionsFromDataSourceResponse">
        <xs:complexType>
            <xs:sequence>
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type="tns:ArrayOfDimension"/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetCube">
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            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
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        </xs:complexType>
    </xs:element>
    <xs:element name="GetCubeResponse">
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            <xs:sequence>

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        <xs:element minOccurs="0" maxOccurs="1" name="GetCubeResult" type="tns:Cube"/>
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</xs:complexType>
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<xs:element name="GetCubeFromDataSource">
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        <xs:sequence>
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    </xs:complexType>
</xs:element>
<xs:element name="GetCubeFromDataSourceResponse">
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type="tns:Cube"/>
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    </xs:complexType>
</xs:element>
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        <xs:sequence>
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type="tns:RepositoryLocation"/>
            <xs:element minOccurs="0" maxOccurs="1" name="dimensionName" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryDimensionRootMembersResponse">
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        <xs:sequence>
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type="tns:ArrayOfMember"/>
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    </xs:complexType>
</xs:element>
<xs:element name="QueryDimensionRootMembersFromDataSource">
    <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"/>
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    </xs:complexType>
</xs:element>
<xs:element name="QueryDimensionRootMembersFromDataSourceResponse">
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            <xs:element minOccurs="0" maxOccurs="1"
name="QueryDimensionRootMembersFromDataSourceResult" type="tns:ArrayOfMember"/>
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    </xs:complexType>
</xs:element>
<xs:element name="QueryTransformMembers">
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        <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:sequence>
    </xs:complexType>
</xs:element>

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        <xs:element minOccurs="1" maxOccurs="1" name="transformType"
type="tns:QueryTransformMembersType"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
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    <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>
<xs:element name="QueryTransformMembersResponse">
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        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="QueryTransformMembersResult"
type="tns:ArrayOfMember"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryChildMembers">
    <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>
<xs:element name="QueryChildMembersResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="QueryChildMembersResult"
type="tns:ArrayOfMember"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryChildMembersFromDataSource">
    <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>
<xs:element name="QueryChildMembersFromDataSourceResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1"
name="QueryChildMembersFromDataSourceResult" type="tns:ArrayOfMember"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryChildMembersByRangeFromDataSource">
    <xs:complexType>
        <xs:sequence>

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        <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"/>
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</xs:complexType>
</xs:element>
<xs:element name="QueryChildMembersByRangeFromDataSourceResponse">
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        <xs:sequence>
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name="QueryChildMembersByRangeFromDataSourceResult" type="tns:ArrayOfMember"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryRelatedMember">
    <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>
<xs:simpleType name="MemberRelationship">
    <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>
<xs:element name="QueryRelatedMemberResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="QueryRelatedMemberResult"
type="tns:Member"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryRelatedMemberFromDataSource">
    <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"/>
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    </xs:complexType>
</xs:element>

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<xs:element name="QueryRelatedMemberFromDataSourceResponse">
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      <xs:element minOccurs="0" maxOccurs="1"
name="QueryRelatedMemberFromDataSourceResult" type="tns:Member"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QueryNamedSets">
  <xs:complexType>
    <xs:sequence>
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type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QueryNamedSetsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryNamedSetsResult"
type="tns:ArrayOfNamedSet"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QueryNamedSetsFromDataSource">
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  </xs:complexType>
</xs:element>
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    <xs:sequence>
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type="tns:ArrayOfNamedSet"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
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  <xs:complexType/>
</xs:element>
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  <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>
<xs:element name="GetAnnotationSettingResponse">
  <xs:complexType>
    <xs:sequence>
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type="tns:AnnotationSetting"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ValidateKpi">

```

```

    <xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="ValidateKpiResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ValidateKpiResult"
type="tns:ArrayOfString"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="ValidateScorecard">
    <xs:complexType>
      <xs:sequence>
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type="tns:RepositoryLocation"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="ValidateScorecardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ValidateScorecardResult"
type="tns:ArrayOfString"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="ValidateSiteCollection">
    <xs:complexType/>
  </xs:element>
  <xs:element name="ValidateSiteCollectionResponse">
    <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>
  <xs:simpleType name="URLValidationResult">
    <xs:restriction base="xs:string">
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      <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:restriction>
  </xs:simpleType>

```

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    </xs:restriction>
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  <xs:element name="GetCurrentCultureLcid">
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  </xs:element>
  <xs:element name="GetCurrentCultureLcidResponse">
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      <xs:sequence>
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type="xs:int"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetCurrentUserInfo">
    <xs:complexType/>
  </xs:element>
  <xs:element name="GetCurrentUserInfoResponse">
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        <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>
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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>
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  <xs:complexType name="ArrayOfPropertyBag">
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type="tns:PropertyBag"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="GridViewData">
    <xs:sequence>
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type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Cells" type="tns:GridCellSet"/>
      <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader"
type="tns:GridHeaderItem"/>
    </xs:sequence>
  </xs:complexType>

```

```

        <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="q1: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="q1: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"/>
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type="tns:DictionaryWrapperOfStringGridCell"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="DictionaryWrapperOfStringGridCell">
    <xs:sequence>
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        <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfGridCell"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfGridCell">
    <xs:sequence>
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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: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>
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    <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="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:attribute name="IndicatorBand" type="xs:int" use="required"/>
      </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:extension>
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  </xs:complexType>

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        <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
    </xs:extension>
</xs:complexContent>
</xs:complexType>
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    <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>
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    <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>
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    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
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    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
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<xs:complexType name="GridDisplayElementScore">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
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        <xs:element minOccurs="0" maxOccurs="unbounded" name="GridViewTransformReference"
nillable="true" type="tns:GridViewTransformReference"/>
    </xs:sequence>
</xs:complexType>
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    <xs:complexType>
        <xs:sequence>
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type="tns:GridViewData"/>
        </xs:sequence>
    </xs:complexType>
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<xs:element name="GenerateViewDirect">
    <xs:complexType>
        <xs:sequence>
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            <xs:element minOccurs="0" maxOccurs="1" name="dataSources"
type="tns:ArrayOfDataSource"/>
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</xs:element>

```

```

        <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:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <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="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: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: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="q1:guid" use="required"/>
  <xs:attribute name="SourceColumnName" type="xs:string"/>
  <xs:attribute name="DashboardItemId" type="q1: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: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>
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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: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>
<xs:simpleType name="CustomFCOType">
  <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>
<xs:complexType name="CustomFCODefinition">
  <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>
<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>

```



```

        <xs:element minOccurs="0" maxOccurs="1" name="GetRegisteredCustomFCOsResult"
type="tns:ArrayOfCustomFCODefinition"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="GetListItems">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="ArrayOfFirstClassElement">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="FirstClassElement"
nillable="true" type="tns:FirstClassElement"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="GetListItemsResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetListItemsResult"
type="tns:ArrayOfFirstClassElement"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetDependentElements">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="missingItems"
type="tns:ArrayOfRepositoryLocation"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="ArrayOfRepositoryLocation">
    <xs:sequence>
        <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">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="RepositoryList"
nillable="true" type="tns:RepositoryList"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="RepositoryList">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Location">
            <xs:complexType mixed="true">
                <xs:sequence>
                    <xs:any/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
    </xs:sequence>
</xs:complexType>

```

```

        </xs:sequence>
    </xs:complexType>
</xs:element>
<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="q1:guid"/>
</xs:sequence>
</xs:complexType>
<xs:element name="GetDependentElementsResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetDependentElementsResult"
type="tns:DependentElementInfo"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="AnnotationSetting" nillable="true" type="tns:AnnotationSetting"/>
<xs:element name="int" type="xs:int"/>
<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"
type="q1:guid" use="optional"/>
    <xs:attribute default="00000000-0000-0000-0000-000000000000"
name="SpSiteCollectionGuid" type="q1:guid" use="optional"/>
    <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteGuid"
type="q1:guid" use="optional"/>
    <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpListGuid"
type="q1:guid" use="optional"/>
</xs:complexType>
<xs:element name="AnalyticChartReportView" nillable="true"
type="tns:AnalyticChartReportView"/>
<xs:complexType name="AnalyticChartReportView">
    <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:sequence>
        </xs:extension>
    </complexContent>
</complexType>

```

```

        <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"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Title">
    <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>
<xs:simpleType name="AlignmentType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
    <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>
<xs:simpleType name="AnalyticChartType">
  <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>
<xs:simpleType name="AnalyticMarkerStyle">
  <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>
<xs:complexType name="ArrayOfTimeIntelligenceDataSource">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeIntelligenceDataSource"
nillable="true" type="tns:TimeIntelligenceDataSource"/>
  </xs:sequence>

```

```

</xs:complexType>
<xs:complexType name="ArrayOfTimeIntelligenceFormula">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeIntelligenceFormula"
nillable="true" type="tns:TimeIntelligenceFormula"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Axis">
  <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>
<xs:simpleType name="AxisType">
  <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>
<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">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="string" nillable="true"
type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="CalculatedMember">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Member">
      <xs:attribute name="Expression" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmException">
  <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>
<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>
</xs:complexType>
<xs:complexType name="ArrayOfParameter">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Parameter" nillable="true"
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>
<xs:element name="AnalyticGridReportView" nillable="true"
type="tns:AnalyticGridReportView"/>
<xs:complexType name="AnalyticGridReportView">
  <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>
<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="ql: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"/>
    <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">
    <xs:restriction base="xs:string">
        <xs:enumeration value="SharepointIntegrated"/>
        <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">
  <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>
<xs:element name="ListLocation" nillable="true" type="tns:ListLocation"/>
<xs:complexType name="ListLocation">
  <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>
<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>
<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"/>
  <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">
                <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:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <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>
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  <wsdl:part name="untouchedSince" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpPostOut"/>
<wsdl:message name="GetAnnotationSettingHttpPostIn"/>
<wsdl:message name="GetAnnotationSettingHttpPostOut">

```

```

    <wsdl:part name="Body" element="tns:AnnotationSetting"/>
  </wsdl:message>
  <wsdl:message name="GetCurrentCultureLcidHttpPostIn"/>
  <wsdl:message name="GetCurrentCultureLcidHttpPostOut">
    <wsdl:part name="Body" element="tns:int"/>
  </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="GetListItemsHttpPostIn">
    <wsdl:part name="listUrl" type="xs:string"/>
  </wsdl:message>
  <wsdl:message name="GetListItemsHttpPostOut">
    <wsdl:part name="Body" element="tns:ArrayOfFirstClassElement"/>
  </wsdl:message>
  <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: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:portType>

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<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"/>

```



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</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"/>

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    <wsdl:output message="tns:GetMdxSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeNameInfos">
    <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:GetCubeMetaDataSetSoapIn"/>
    <wsdl:output message="tns:GetCubeMetaDataSetSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeMetaDataSetForDataSource">
    <wsdl:input message="tns:GetCubeMetaDataSetForDataSourceSoapIn"/>
    <wsdl:output message="tns:GetCubeMetaDataSetForDataSourceSoapOut"/>
</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">

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    <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"/>
    <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>

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<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>
<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">
    <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"/>

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        </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>
            <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>
        <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"/>

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```

        </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>

```



```

    <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/GetLatestAnalyticReportVersion"
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>

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        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnnotation">
    <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>

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    </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"/>
      <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>

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        <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>
        <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>

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    </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">
      <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>

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        <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/QueryChildMembersFromDataSou
rce" 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/QueryChildMembersByRangeFrom
DataSource" style="document"/>
    <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>

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```

</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/QueryNamedSetsFromDataSource
" 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>
  <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:output>
    </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">

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```

    <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">
    <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"/>

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        </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"/>
        <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>

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        <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"/>
    <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">

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```

    <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>
        <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"/>

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    </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>
  <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>

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    <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">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteReportView"
style="document"/>
      <wsdl:input>

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        <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/GetLatestAnalyticReportVersion"
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>

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    </wsdl:operation>
    <wsdl:operation name="GetAnnotationByID">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationByID"
style="document"/>
      <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"/>

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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="TrimAnnotationByOwner">
  <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByOwner"
style="document"/>
  <wsdl:input>
    <soap12:body use="literal"/>
  </wsdl:input>
  <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>

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```

    </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>

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```

    </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/QueryChildMembersFromDataSou
rce" 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/QueryChildMembersByRangeFrom
DataSource" 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: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: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">

```

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    <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"/>

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        </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:definitions>
```

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7 Appendix B: Full XML Schema

For ease of implementation, the following sections provide the full XML schema for this protocol.

| Schema name | Prefix | Section |
|---|------------|---------------------|
| http://performancepoint.microsoft.com/OLAPQueryData | qdata | 7.1 |
| http://schemas.microsoft.com/performancepoint/2007/03/query | query | 7.2 |
| http://www.microsoft.com/performancepoint/scorecards/Analytics | Unassigned | 7.3 |

7.1 <http://performancepoint.microsoft.com/OLAPQueryData> Schema

```
<?xml version="1.0"?>
<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"?>
<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"?>
```

```
<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>
```

8 Appendix C: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft® SharePoint® Server 2010
- Microsoft® SharePoint® Server 2013 Preview

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

<1> [Section 2.2.2.1.3](#): 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 Preview.

<9> [Section 2.2.4](#): This type is available only in SharePoint Server 2013 Preview.

<10> [Section 2.2.4](#): This type is available only in SharePoint Server 2013 Preview.

<11> [Section 2.2.4.75](#): This type is available only in SharePoint Server 2013 Preview.

<12> [Section 2.2.4.83](#): The values for **UnderlyingElementTypeName** for the built-in element types in PerformancePoint Services 2010 are:

| Type | Value |
|-------------------|--|
| Scorecard | Microsoft.PerformancePoint.Scorecards.Scorecard, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c |
| ReportView | Microsoft.PerformancePoint.Scorecards.ReportView, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c |
| ▪ Filter | Microsoft.PerformancePoint.Scorecards.Filter, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c |

- <13> [Section 2.2.4.85](#): The list data source refers to a SharePoint Server 2010 list.
- <14> [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.
- <15> [Section 2.2.4.168](#): 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.
- <16> [Section 2.2.4.182](#): This type is available only in SharePoint Server 2013 Preview.
- <17> [Section 2.2.4.184](#): This type is available only in SharePoint Server 2013 Preview.
- <18> [Section 2.2.5.6](#): Beta2 or RTM refers to PerformancePoint Services 2010 Beta2 or PerformancePoint Services 2010.
- <19> [Section 2.2.5.6](#): Beta1 refers to PerformancePoint Services 2010 Beta1.
- <20> [Section 2.2.5.6](#): Microsoft Office PerformancePoint Server 2007
- <21> [Section 3.1.2](#): In PerformancePoint Services 2010, the default query timeout is 300 seconds.
- <22> [Section 3.1.4](#): This operation is available only in SharePoint Server 2013 Preview.
- <23> [Section 3.1.4](#): This operation is available only in SharePoint Server 2013 Preview.
- <24> [Section 3.1.4.16](#): The content store refers to a SharePoint Server 2010 list.
- <25> [Section 3.1.4.20](#): PerformancePoint Services 2010 returns a `GetAnalyticReportViewResponse` (see section [3.1.4.43.2.2](#)) containing a null value instead of a report view for failures unrelated to security restrictions.
- <26> [Section 3.1.4.32](#): PerformancePoint Services 2010 returns an empty **GetDashboardResponse** (see section [3.1.4.32.2.2](#)) for failures unrelated to security restrictions.
- <27> [Section 3.1.4.34](#): PerformancePoint Services 2010 returns a `GetDataSourceResponse` (see section [3.1.4.43.2.2](#)) containing a null value instead of a data source (1) for failures unrelated to security restrictions.
- <28> [Section 3.1.4.35](#): PerformancePoint Services 2010 returns a **GetDependentElementResponse** (see section [3.1.4.43.2.2](#)) containing an `DependentElementInfo` that contains a **FirstClassElementCollection** (see section [2.2.4.35](#)) with null elements for failures unrelated to security restrictions.
- <29> [Section 3.1.4.38](#): PerformancePoint Services 2010 returns an empty **GetFilterResponse** (see section [3.1.4.38.2.2](#)) for failures unrelated to security restrictions.
- <30> [Section 3.1.4.39](#): PerformancePoint Services 2010 returns a `GetIndicatorResponse` (see section [3.1.4.43.2.2](#)) containing a null value instead of an **indicator** for failures unrelated to security restrictions.
- <31> [Section 3.1.4.40](#): PerformancePoint Services 2010 returns a `GetKpiResponse` (see section [3.1.4.43.2.2](#)) containing a null value instead of a **Kpi** for failures unrelated to security restrictions.
- <32> [Section 3.1.4.43](#): PerformancePoint Services 2010 returns a **GetListItemsResponse** (see section [3.1.4.43.2.2](#)) containing an **ArrayOfFirstClassElements** (see section [2.2.4.35](#)) with null elements for failures unrelated to security restrictions.

<33> [Section 3.1.4.44](#): PerformancePoint Services 2010 returns a **GetMdxResponse** with an empty **GetMdxResult** for failures unrelated to security restrictions.

<34> [Section 3.1.4.45](#): In PerformancePoint Services 2010, **GetParameterDisplayData** receives the **GridViewData** (see section [2.2.4.121](#)) as an untyped object referenced by the customData parameter on the **GetParameterDisplayDataIn** message.

<35> [Section 3.1.4.46.2.1](#): PerformancePoint Services 2010 supports preview data sets for the following data source types: **ExcelWorkbook**, **ExcelServicesWorkbook**, **SqlTabularDataSource**, and **SPListDataSource**.

<36> [Section 3.1.4.49](#): PerformancePoint Services 2010 returns a **GetReportViewResponse** (see section [3.1.4.43.2.2](#)) containing a null value instead of a report view for failures unrelated to security restrictions.

<37> [Section 3.1.4.50](#): PerformancePoint Services 2010 returns an empty **GetScorecardResponse** (see section [3.1.4.50.2.2](#)) for failures unrelated to security restrictions.

<38> [Section 3.1.4.56](#): PerformancePoint Services 2010 returns a **QueryNamedSetsResponse** (see section [3.1.4.43.2.2](#)) containing a null value instead of named sets for failures unrelated to security restrictions.

<39> [Section 3.1.4.57](#): PerformancePoint Services 2010 returns a **QueryNamedSetsFromDataSourceResponse** (see section [3.1.4.43.2.2](#)) containing an empty collection of named sets if null is passed in for the data source (1).

<40> [Section 3.1.4.58](#): PerformancePoint Services 2010 returns a **QueryRelatedMemberResponse** (see section [3.1.4.43.2.2](#)) containing null for failures unrelated to security restrictions.

<41> [Section 3.1.4.59](#): PerformancePoint Services 2010 returns a **QueryRelatedMemberFromDataSourceResponse** (see section [3.1.4.43.2.2](#)) containing null if null is passed in for the data source (1).

<42> [Section 3.1.4.60](#): PerformancePoint Services 2010 returns a **QueryTimeIntelligenceResponse** (see section [3.1.4.43.2.2](#)) containing an Unknown error if an invalid **RepositoryLocation** (see section [2.2.4.162](#)) is passed in.

<43> [Section 3.1.4.79](#): This operation is available only in SharePoint Server 2013 Preview.

<44> [Section 3.1.4.80](#): This operation is available only in SharePoint Server 2013 Preview.

9 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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