

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

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## Revision Summary

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# 1 Introduction

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

Sections 1.8, 2, and 3 of this specification are normative and can contain the terms MAY, SHOULD, MUST, MUST NOT, and SHOULD NOT as defined in [\[RFC2119\]](#). Sections 1.5 and 1.9 are also normative but do not contain those terms. All other sections and examples in this specification are informative.

## 1.1 Glossary

The following terms are defined in [MS-OFCGLOS]:

- Analysis Services**
- attribute hierarchy**
- AutoFilter**
- average weighted value**
- banding**
- base64 encoding**
- cell**
- child**
- context site**
- cube**
- current user**
- current version**
- dashboard**
- data point**
- data source**
- descendant**
- deserialize**
- dimension**
- display folder**
- document library**
- drilldown**
- feature**
- filter**
- formula**
- GUID**
- hierarchy**
- hyperlink**
- Hypertext Transfer Protocol (HTTP)**
- Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)**
- item**
- key performance indicator (KPI)**
- level**
- list**
- list item**
- login name**
- major version**
- master page**
- MD5**
- measure**

measure group  
member  
multidimensional expression (MDX)  
named set  
object  
OLAP  
OLAP calculated member  
PivotChart  
PivotTable  
pixel  
Portable Network Graphics (PNG)  
published item  
query  
report  
report view  
rollup  
scorecard  
Secure Sockets Layer (SSL)  
security zone  
server  
server-relative URL  
site  
site collection  
slicer  
SOAP  
SOAP action  
SOAP body  
SOAP fault  
SOAP fault detail  
subsite  
target  
target application  
ToolTip  
transform  
trusted location  
tuple  
UI culture  
Uniform Resource Locator (URL)  
UTF-8  
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:

**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.

**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.

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

**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.

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

**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.

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

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

## 1.2 References

References to Microsoft Open Specification documents do not include a publishing year because links are to the latest version of the 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](mailto:dochelp@microsoft.com). We will assist you in finding the relevant information.

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

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

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

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

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

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

- [MS-VGSFF] Microsoft Corporation, "[Visio Graphics Service File Format \(.vdw\) Specification](#)".
- [MS-XLS] Microsoft Corporation, "[Excel Binary File Format \(.xls\) Structure](#)".
- [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., Eds., "Uniform Resource Locators (URL)", RFC 1738, December 1994, <http://www.ietf.org/rfc/rfc1738.txt>
- [RFC1808] Fielding, R., "Relative Uniform Resource Locators", RFC 1808, June 1995, <http://www.rfc-editor.org/rfc/rfc1808.txt>
- [RFC1952] Deutsch, P., "GZIP file format specification version 4.3", RFC 1952, May 1996, <http://www.rfc-editor.org/rfc/rfc1952.txt>
- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.rfc-editor.org/rfc/rfc2119.txt>
- [RFC2616] Fielding, R., Gettys, J., Mogul, J., et al., "Hypertext Transfer Protocol -- HTTP/1.1", RFC 2616, June 1999, <http://www.rfc-editor.org/rfc/rfc2616.txt>
- [SOAP1.1] Box, D., Ehnebuske, D., Kakivaya, G., et al., "Simple Object Access Protocol (SOAP) 1.1", May 2000, <http://www.w3.org/TR/2000/NOTE-SOAP-20000508/>
- [SOAP1.2/1] Gudgin, M., Hadley, M., Mendelsohn, N., Moreau, J., and Nielsen, H.F., "SOAP Version 1.2 Part 1: Messaging Framework", W3C Recommendation, June 2003, <http://www.w3.org/TR/2003/REC-soap12-part1-20030624>
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- [UNICODE] The Unicode Consortium, "The Unicode Consortium Home Page", 2006, <http://www.unicode.org/>
- [WSDL] Christensen, E., Curbera, F., Meredith, G., and Weerawarana, S., "Web Services Description Language (WSDL) 1.1", W3C Note, March 2001, <http://www.w3.org/TR/2001/NOTE-wsdl-20010315>
- [XMLNS] Bray, T., Hollander, D., Layman, A., et al., Eds., "Namespaces in XML 1.0 (Third Edition)", W3C Recommendation, December 2009, <http://www.w3.org/TR/2009/REC-xml-names-20091208/>
- [XMLSCHEMA1] Thompson, H., Beech, D., Maloney, M., and Mendelsohn, N., Eds., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/>
- [XMLSCHEMA2] Biron, P.V., Ed. and Malhotra, A., Ed., "XML Schema Part 2: Datatypes", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>

## 1.2.2 Informative References

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



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

[MSFT-TimeIntelligence] Microsoft Corporation, "About syntax for Time Intelligence expressions", Office Online, <http://office.microsoft.com/en-us/help/HA102411381033.aspx>

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

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

### 1.3 Overview

Dashboard platforms typically support workflow whereby a user creates and publishes content representing the various parts that make up **dashboards**, such as indicators, scorecards, reports in a variety of forms, and data source references. This content is composed of metadata (such as names of **dimensions** (1) 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:

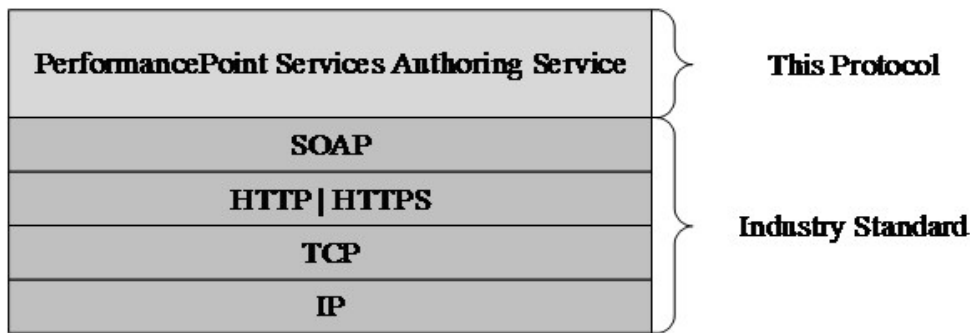
- Create, read, update, validate and delete a variety of dashboard content in a content store. The types and sub-types of content were summarized previously, and described in detail by Common Message Syntax (section 2.)
- Create, read, update, and delete annotations in an annotation store.
- Retrieve metadata, such as the names of dimensions (1) or measures, via data source references.
- Retrieve data sets via data source references.
- Retrieve a listing of content sub-types and component information from a configuration store.

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

### 1.4 Relationship to Other Protocols

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

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



**Figure 1: This protocol in relation to other protocols**

## 1.5 Prerequisites/Preconditions

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

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

## 1.6 Applicability Statement

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

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

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

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

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

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

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

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

## 1.7 Versioning and Capability Negotiation

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

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

## 1.8 Vendor-Extensible Fields

None.

## 1.9 Standards Assignments

None.

## 2 Messages

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

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

### 2.1 Transport

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

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

### 2.2 Common Message Syntax

This section contains common definitions that are used by this protocol. The syntax of the definitions uses **XML schema**, as specified in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and WSDL, as specified in [\[WSDL\]](#).

#### 2.2.1 Namespaces

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

Prefix	Namespace URI	Reference
http	<a href="http://schemas.xmlsoap.org/wsdl/http/">http://schemas.xmlsoap.org/wsdl/http/</a>	
qdata	<a href="http://performancepoint.microsoft.com/OLAPQueryData">http://performancepoint.microsoft.com/OLAPQueryData</a>	
query	<a href="http://schemas.microsoft.com/performancepoint/2007/03/query">http://schemas.microsoft.com/performancepoint/2007/03/query</a>	
s1	<a href="http://microsoft.com/wsdl/types/">http://microsoft.com/wsdl/types/</a>	
soap	<a href="http://schemas.xmlsoap.org/wsdl/soap/">http://schemas.xmlsoap.org/wsdl/soap/</a>	<a href="#">[SOAP1.1]</a>
soap12	<a href="http://schemas.xmlsoap.org/wsdl/soap12/">http://schemas.xmlsoap.org/wsdl/soap12/</a>	<a href="#">[SOAP1.2/1]</a> <a href="#">[SOAP1.2/2]</a>
tns	<a href="http://www.microsoft.com/performancepoint/scorecards">http://www.microsoft.com/performancepoint/scorecards</a>	
wsdl	<a href="http://schemas.xmlsoap.org/wsdl/">http://schemas.xmlsoap.org/wsdl/</a>	<a href="#">[WSDL]</a>
xs	<a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>	<a href="#">[XMLSCHEMA1]</a>

Prefix	Namespace URI	Reference
		<a href="#">[XMLSCHEMA2]</a>

## 2.2.2 Messages

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

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

This specification does not define any common WSDL message definitions.

### 2.2.2.1 Faults

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

#### 2.2.2.1.1 SOAP Fault Detail Element

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

The SOAP fault detail element MUST contain a **BpmException** ([2.2.4.61](#)).

#### 2.2.2.1.2 Full List of Possible Error Codes

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

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

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

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

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

Error code	Description
<b>InvalidMember</b>	An attribute of a <b>Member</b> (section <a href="#">2.2.4.134</a> ) is invalid.
<b>InvalidNamedSet</b>	An attribute of a <b>NamedSet</b> (section <a href="#">2.2.4.147</a> ) is invalid.
<b>InvalidNamedSetSetting</b>	A <b>named set</b> expression is invalid.
<b>InvalidObject</b>	See section <a href="#">2.2.2.1.3</a> .
<b>InvalidOverrideFormatProperties</b>	An attribute of a <b>KpiNumberFormatProperties</b> (section <a href="#">2.2.4.130</a> ) is invalid.
<b>InvalidPermission</b>	See section <a href="#">2.2.2.1.3</a> .
<b>InvalidPermissionAdmin</b>	See section <a href="#">2.2.2.1.3</a> .
<b>InvalidQueryChildMembers</b>	The specified <b>member</b> (3) name is invalid.
<b>InvalidQueryDimensionRootMembers</b>	The specified dimension (1) name is invalid.
<b>InvalidReportView</b>	See section <a href="#">2.2.2.1.3</a> .
<b>InvalidReportViewCubeName</b>	The cube name in an <b>MDX</b> query is not equal to the cube specified in the Analysis Services <b>DataSource</b> (section <a href="#">2.2.4.85</a> ) used to run the query.
<b>InvalidSetting</b>	See section <a href="#">2.2.2.1.3</a> .
<b>InvalidStatusFilterBandIndex</b>	The <b>BandIndex</b> attribute of a <b>StatusFilter</b> (section <a href="#">2.2.4.167</a> ) is invalid.
<b>InvalidTextLength</b>	A string attribute is null, empty or exceeds its specified maximum length.
<b>InvalidTimeIntelligenceConfiguration</b>	The <b>time intelligence</b> configuration of a <b>data source</b> (1) is invalid.
<b>InvalidTimeIntelligenceFormula</b>	A time intelligence expression is invalid.
<b>InvalidTimeIntelligenceSetting</b>	An attribute of a <b>TimeIntelligenceDataSource</b> ( <a href="#">2.2.4.171</a> ), <b>TimeIntelligenceFormula</b> ( <a href="#">2.2.4.173</a> ), <b>TimeIntelligenceLevelBinding</b> ( <a href="#">2.2.4.174</a> ), or <b>TimeIntelligenceMdxSettings</b> ( <a href="#">2.2.4.175</a> ) is invalid.
<b>InvalidUrl</b>	The server (2) is not configured properly or is not functioning correctly.
<b>InvalidVersion</b>	An attribute of a <b>ElementVersion</b> (section <a href="#">2.2.4.92</a> ) is invalid
<b>MissingConnectionString</b>	The server (2) is not configured properly or is not functioning correctly.
<b>NewSetting</b>	An attempt was made to update a non-existent setting.



Error code	Description
<b>NotAParameterizableControl</b>	The server (2) is not configured properly or is not functioning correctly.
<b>NotTrustedLocation</b>	See section <a href="#">2.2.2.1.3</a>
<b>OperationContextNull</b>	The server (2) is not configured properly or is not functioning correctly.
<b>ParameterDataProviderNotRegistered</b>	The parameter data provider is not registered.
<b>QueryTimeout</b>	A timeout occurred while querying a data source (1).
<b>RepositoryLocationAbsoluteUrl</b>	See section <a href="#">2.2.2.1.3</a> .
<b>RepositoryLocationEmpty</b>	See section <a href="#">2.2.2.1.3</a> .
<b>RepositoryLocationUrlLength</b>	See section <a href="#">2.2.2.1.3</a> .
<b>SharedAccountMisconfigured</b>	The shared account credentials are not configured correctly.
<b>TimeIntelligenceNotConfigured</b>	A <b>DataSource</b> is not configured for time intelligence.
<b>TimeIntelligenceNotSupported</b>	A data source (1) does not support time intelligence.
<b>UnableToLoadCustomDataSource</b>	The server (2) is not configured properly or is not functioning correctly.
<b>UnableToLoadCustomParameterDataProvider</b>	The server (2) is not configured properly or is not functioning correctly.
<b>UnableToLoadCustomViewTransform</b>	The server (2) is not configured properly or is not functioning correctly.
<b>UnableToLoadFCODao</b>	The server (2) is not configured properly or is not functioning correctly.
<b>Unknown</b>	See section <a href="#">2.2.2.1.3</a> .

### 2.2.2.1.3 Common List of Error Codes

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

Error code	Description
<b>DataSourceConnectionFailed</b>	A connection to the data source (1) could not be established.
<b>DatabaseConnectionNotOpen</b>	The connection to the data source (1) has been lost.
<b>DataSourceConnectionUnsupported</b>	The host server (2) defined by the data source (1) is not a supported server (2), or the server (2) refused the connection.

<b>Error code</b>	<b>Description</b>
<b>DataSourceDatabaseNotFound</b>	A connection to the database defined by the data source (1) could not be established.
<b>DataSourceHostNotFound</b>	A connection to the host server (2) defined by the data source (1) could not be established. This indicates a network or security issue.
<b>FCOCreateFailed</b>	There are inadequate permissions to create this object.
<b>FCOCreateFailedListAccess</b>	The content store<1> containing this object no longer exists. The object cannot be created.
<b>FCOCreateFailedListType</b>	The object cannot be created<2>.
<b>FCOCreateFailedNameCollision</b>	A data source (1) with the requested name already exists. Choose a different name.
<b>FCODeleteFailed</b>	The content store<3> containing this object no longer exists, there are inadequate permissions to view the content store<4> or the object has already been deleted.
<b>FCODeleteFailedListAccess</b>	There are inadequate permissions to delete this object. The object cannot be deleted.
<b>FCOReadFailed</b>	There are inadequate permissions to read this object or it cannot be read.
<b>FCOReadFailedListAccess</b>	The content store<5> containing this object no longer exists or there are inadequate permissions to view it.
<b>FCOUpdateFailed</b>	An update of this object failed.
<b>FCOUpdateFailedListAccess</b>	The content store<6> containing this object no longer exists or there are inadequate permissions to view it. The object cannot be updated.
<b>FCOUpdateFailedListType</b>	The content store<7> containing this object does not support the type of object being updated. The object cannot be updated.
<b>FCOUpdateFailedNameCollision</b>	An update this object failed because of a name collision.
<b>InvalidBuiltinIndicatorOperation</b>	Current operation on the indicator cannot be finished because the indicator's URL is invalid.
<b>InvalidCategoryName</b>	Current operation on the object cannot be finished because the object's containing folder is invalid.
<b>InvalidDataSource</b>	Current operation on the data source (1) cannot be finished because the data source (1) has failed validation.
<b>InvalidElement</b>	Current operation on the Element cannot be finished because the Element has failed basic validation.
<b>InvalidElementField</b>	Current operation on the Element cannot be finished because the Element has an invalid identifier.
<b>InvalidFirstClassElementField</b>	Current operation on the object cannot be finished because some of the object's data fields are invalid.

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

### 2.2.3 Elements

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

### 2.2.4 Complex Types

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

Complex type	Description
<b>AddAllMembersSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add all

Complex type	Description
	members, at the <b>level</b> specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddCalcMemberSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add a calculated member (3), specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddChildrenSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add <b>child</b> members (3), of the member (3) specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddDefaultMemberSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add the <b>default member</b> to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddDescendantsLeavesSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add leaf <b>descendant</b> members (3), of the member (3) specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddDescendantsSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add descendant members (3), at the level specified by <b>LevelName</b> to the member (3) specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddDescendantsSubtreeSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add descendant members (3), from all levels subordinate to the member specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddFilterSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add a value <b>filter</b> set operation to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddFilterTopBottomSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add a top or bottom filter set operation to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddMemberSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add a member (3), specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddNamedSetSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add a named set, specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AddParentSiblingsSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to add the parent's siblings (members (3)), of the member (3) specified by

Complex type	Description
	<b>Name</b> (see section <a href="#">2.2.4.165</a> ), to a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>AliasInfo</b>	The <b>AliasInfo</b> complex type maps a <b>KpiMeasure</b> complex type (section <a href="#">2.2.4.129</a> ) to a string. This mapping defines an alias used to simplify the display, and the definition of formulas used in calculated metrics.
<b>AnalyticBaseReportViewData</b>	The <b>AnalyticBaseReportViewData</b> is a complex type that contains the base report view details for analytic reports.
<b>AnalyticChartLegend</b>	The <b>AnalyticChartLegend</b> complex type specifies a chart legend.
<b>AnalyticChartReportView</b>	The <b>AnalyticChartReportView</b> is a complex type that contains the chart type report view details for analytic reports.
<b>AnalyticGridReportView</b>	The <b>AnalyticGridReportView</b> complex type defines how analytic grid reports are displayed to users.
<b>Annotation</b>	The <b>Annotation</b> complex type associates a collection of comments to a <b>cell</b> in a particular <b>slice</b> of a scorecard. An annotation is created using <b>CreateAnnotation</b> operation (section <a href="#">3.1.4.1</a> ), and updated using the <b>UpdateAnnotation</b> operation (section <a href="#">3.1.4.70</a> ).
<b>AnnotationComment</b>	This complex type specifies a comment for an <b>Annotation</b> (see section <a href="#">2.2.4.18</a> ). This type extends <b>Comment</b> type (see section <a href="#">2.2.4.76</a> ).
<b>ArrayOfAliasInfo</b>	This complex type specifies an array of <b>AliasInfo</b> complex types (see section <a href="#">2.2.4.13</a> ).
<b>ArrayOfAnnotationComment</b>	The <b>ArrayOfAnnotationComment</b> complex type specifies an array of <b>AnnotationComment</b> elements (see section <a href="#">2.2.4.19</a> ).
<b>ArrayOfAxis</b>	A collection of axes used in a <b>QueryState</b> object (see section <a href="#">2.2.4.158</a> ).
<b>ArrayOfBpmProperty</b>	The <b>ArrayOfBpmProperty</b> complex type specifies an array of <b>BpmProperty</b> elements (see section <a href="#">2.2.4.62</a> ).
<b>ArrayOfBpmPropertyListItem</b>	The <b>ArrayOfBpmPropertyListItem</b> complex type specifies an array of <b>items</b> in a list property.
<b>ArrayOfChoice1</b>	The <b>ArrayOfChoice1</b> complex type specifies an array of property values. The type of the element in the array MUST be one of <b>decimal</b> , <b>ArrayOfMember</b> (section <a href="#">2.2.4.45</a> ), <b>ArrayOfMemberTransform</b> (section <a href="#">2.2.4.46</a> ), <b>dateTime</b> , <b>string</b> , <b>double</b> , <b>guid</b> , <b>char</b> , or <b>int</b> .
<b>ArrayOfComment</b>	The <b>ArrayOfComment</b> complex type specifies an array of comments.
<b>ArrayOfConfiguredView</b>	The <b>ArrayOfConfiguredView</b> complex type specifies an array of view definitions for a scorecard.

Complex type	Description
<b>ArrayOfDashboardElement</b>	The <b>ArrayOfDashboardElement</b> complex type specifies an array of <b>DashboardElement</b> (see section <a href="#">2.2.4.80</a> ).
<b>ArrayOfDataColumnMapping</b>	The <b>ArrayOfDataColumnMapping</b> complex type specifies an array of <b>DataColumnMapping</b> (see section <a href="#">2.2.4.84</a> ).
<b>ArrayOfDecimal</b>	The <b>ArrayOfDecimal</b> complex type specifies an array of <b>Decimal</b> .
<b>ArrayOfDefaultDimensionSetting</b>	The <b>ArrayOfDefaultDimensionSetting</b> complex type specifies an array of <b>DefaultDimensionSetting</b> (see section <a href="#">2.2.4.87</a> ).
<b>ArrayOfDimension</b>	The <b>ArrayOfDimension</b> complex type specifies an array of dimension (1) elements.
<b>ArrayOfEndPoint</b>	The <b>ArrayOfEndPoint</b> complex type specifies an array of connection termination points for a consumer <b>Web Part</b> such as a report view or a scorecard.
<b>ArrayOfFirstClassElement</b>	The <b>ArrayOfFirstClassElement</b> complex type specifies an array of first-class objects.
<b>ArrayOfGridCell</b>	The <b>ArrayOfGridCell</b> complex type specifies an array of cells used by a grid view such as the scorecard view (section <a href="#">2.2.4.121</a> ).
<b>ArrayOfGridDisplayElement</b>	An array of elements for a scorecard cell.
<b>ArrayOfGridHeaderItem</b>	The <b>ArrayOfGridHeaderItem</b> complex type specifies an array of headers for a scorecard.
<b>ArrayOfGridViewTransformReference</b>	The <b>ArrayOfGridViewTransformReference</b> complex type specifies an array of references to a grid view transform.
<b>ArrayOfHierarchy</b>	The <b>ArrayOfHierarchy</b> complex type specifies an array of hierarchy values for a dimension (1).
<b>ArrayOfIndicatorBand</b>	The <b>ArrayOfIndicatorBand</b> complex type specifies an array of indicator bands.
<b>ArrayOfKpi</b>	The <b>ArrayOfKpi</b> complex type specifies an array of <b>Kpi</b> complex types (section <a href="#">2.2.4.128</a> ) for a scorecard.
<b>ArrayOfKpiMeasure</b>	The <b>ArrayOfKpiMeasure</b> complex type specifies an array of <b>KpiMeasure</b> complex types (section <a href="#">2.2.4.129</a> ).
<b>ArrayOfLevel</b>	The <b>ArrayOfLevel</b> complex type defines an array of <b>Level</b> (section <a href="#">2.2.4.131</a> ) complex type.
<b>ArrayOfMeasure</b>	The <b>ArrayOfMeasure</b> complex type defines an array of <b>Measure</b> (section <a href="#">2.2.4.133</a> ) complex type.
<b>ArrayOfMember</b>	The <b>ArrayOfMember</b> complex type defines an array of <b>Member</b> (section <a href="#">2.2.4.134</a> ) complex type.
<b>ArrayOfMemberTransform</b>	The <b>ArrayOfMemberTransform</b> complex type defines an array of <b>MemberTransform</b> (section <a href="#">2.2.4.146</a> ) complex type.

Complex type	Description
<b>ArrayOfNamedSet</b>	The <b>ArrayOfNamedSet</b> complex type defines an array of <b>NamedSet</b> (section <a href="#">2.2.4.147</a> ) complex type.
<b>ArrayOfNameInfo</b>	The <b>ArrayOfNameInfo</b> complex type<8> defines an array of <b>NameInfo</b> complex types (section <a href="#">2.2.4.149</a> ).
<b>ArrayOfParameter</b>	A collection of parameters used in an analytic <b>query</b> .
<b>ArrayOfParameterDefinition</b>	The <b>ArrayOfParameterDefinition</b> complex type defines an array of ParameterDefinition (section <a href="#">2.2.4.155</a> ) complex type.
<b>ArrayOfParameterMapping</b>	The <b>ArrayOfParameterMapping</b> complex type defines an array of ParameterMapping (section <a href="#">2.2.4.156</a> ) complex type.
<b>ArrayOfPropertyBag</b>	The <b>ArrayOfPropertyBag</b> complex type defines an array of <b>PropertyBag</b> (section <a href="#">2.2.4.158</a> ) elements.
<b>ArrayOfSetOperation</b>	The <b>ArrayOfSetOperation</b> complex type specifies an array of <b>SetOperation</b> elements (see section <a href="#">2.2.4.165</a> )
<b>ArrayOfString</b>	The <b>ArrayOfString</b> complex type specifies an array of string.
<b>ArrayOfTarget</b>	The <b>ArrayOfTarget</b> complex type specifies an array of <b>Target</b> (section <a href="#">2.2.4.170</a> ) complex types.
<b>ArrayOfTimeIntelligenceDataSource</b>	A collection of time intelligence data source reference used in time intelligence parameter definitions.
<b>ArrayOfTimeIntelligenceFormula</b>	A collection of time intelligence parameter formulas.
<b>ArrayOfTimeIntelligenceLevelBinding</b>	The <b>ArrayOfTimeIntelligenceLevelBinding</b> complex type specifies an array of time intelligence binding elements.
<b>Axis</b>	The <b>Axis</b> complex type specifies information about an axis in a query result.
<b>Banding</b>	The <b>Banding</b> complex type represents the <b>banding</b> settings of the KPI <b>target</b> .
<b>BpmException</b>	The <b>BpmException</b> complex type contains the details of a server (2) alert.
<b>BpmProperty</b>	This <b>BpmProperty</b> complex type is the abstract base type for <a href="#">BpmPropertyDate</a> , <a href="#">BpmPropertyDecimal</a> , <a href="#">BpmPropertyHyperlink</a> , <a href="#">BpmPropertyHyperlink2</a> , <a href="#">BpmPropertyLinkBase</a> , <a href="#">BpmPropertyList</a> , <a href="#">BpmPropertyListItem</a> , <a href="#">BpmPropertyLongText</a> , <a href="#">BpmPropertyText</a> and <a href="#">BpmPropertyUser</a> .
<b>BpmPropertyBool</b>	The <b>BpmPropertyBool</b> complex type defines a Boolean property. It extends the <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> ) type.
<b>BpmPropertyDate</b>	The <b>BpmPropertyDate</b> complex type defines a <b>Date</b> property. It extends the <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> )

Complex type	Description
	type.
<b>BpmPropertyDecimal</b>	The <b>BpmPropertyDecimal</b> complex type defines a <b>Decimal</b> property. It extends the <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> ) type.
<b>BpmPropertyHyperlink</b>	This complex type defines a <b>Hyperlink</b> property. This type extends <b>BpmPropertyLinkBase</b> (section <a href="#">2.2.4.68</a> ). This type is used to specify Hyperlinks as custom properties for types that extend <b>FirstClassElement</b> (section <a href="#">2.2.4.99</a> ).
<b>BpmPropertyHyperlink2</b>	The <b>BpmPropertyHyperlink2</b> complex type defines a <b>Hyperlink</b> property. This type extends <b>BpmPropertyLinkBase</b> (section <a href="#">2.2.4.68</a> ). This type is used to specify Hyperlinks as part of annotations for types that extend <b>FirstClassElement</b> complex type (section <a href="#">2.2.4.99</a> ).
<b>BpmPropertyLinkBase</b>	The <b>BpmPropertyLinkBase</b> complex type defines a <b>Hyperlink</b> property. It extends the <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> ) type.
<b>BpmPropertyList</b>	The <b>BpmPropertyList</b> complex type specifies zero, or one item of the <b>ArrayOfBpmPropertyListItem</b> complex type (section <a href="#">2.2.4.24</a> ). It extends the <b>BpmProperty</b> complex type (section <a href="#">2.2.4.62</a> ).
<b>BpmPropertyListItem</b>	The <b>BpmPropertyListItem</b> complex type specifies a name-value pair.
<b>BpmPropertyLongText</b>	This complex type defines a Long Text property. The type extends <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> ).
<b>BpmPropertyText</b>	This complex type defines a <b>Text</b> property. The type extends <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> ).
<b>BpmPropertyUser</b>	This complex type defines a <b>User</b> property. The type extends <b>BpmProperty</b> (section <a href="#">2.2.4.62</a> ).
<b>CalculatedFormulaInfo</b>	This complex type specifies a calculated <b>formula</b> in a <b>KpiMeasure</b> (section <a href="#">2.2.4.129</a> ). This type is used to specify calculations as part of a KPI's calculated metric.
<b>CalculatedMember</b>	Represents an <b>OLAP calculated member</b> in a <b>Dimension</b> complex type (section <a href="#">2.2.4.90</a> ).<9>
<b>Comment</b>	This complex type represents a comment to be associated with a data entity. This class is the base class for <b>AnnotationComment</b> (section <a href="#">2.2.4.19</a> ).
<b>ConfiguredView</b>	This complex type specifies the scorecard view and configuration settings of how the scorecard displays and what end user actions are allowed. The protocol client that renders the scorecard MUST use this configuration when displaying it.
<b>Cube</b>	The <b>Cube</b> complex type specifies the structure of a cube. It extends the complex type <b>NameInfo</b> complex type(section



Complex type	Description
	<a href="#">2.2.4.149</a> ).
<b>Dashboard</b>	The <b>Dashboard</b> 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 <b>Dashboard</b> complex type extends the <b>FirstClassElement</b> type (section <a href="#">2.2.4.99</a> ).
<b>DashboardElement</b>	The <b>DashboardElement</b> complex type specifies the parts of a <b>Dashboard</b> (section <a href="#">2.2.4.79</a> ) that have width and height. The <b>DashboardElement</b> complex type extends the <b>SecondClassElement</b> type (section <a href="#">2.2.4.163</a> ) and is the base type for <b>DashboardElementContainer</b> (section <a href="#">2.2.4.81</a> ) and <b>DashboardItem</b> (section <a href="#">2.2.4.83</a> ).
<b>DashboardElementContainer</b>	The <b>DashboardElementContainer</b> complex type specifies a group of <b>DashboardElement</b> complex types (section <a href="#">2.2.4.80</a> ) that are displayed vertically or horizontally. Each dashboard page is specified by a <b>DashboardElementContainer</b> . Each zone on a dashboard page is specified by a <b>DashboardElementContainer</b> . The <b>DashboardElementContainer</b> complex type extends the <b>DashboardElement</b> .
<b>DashboardElementSize</b>	This complex type specifies the width or height of a <b>DashboardElement</b> (section <a href="#">2.2.4.80</a> ).
<b>DashboardItem</b>	The <b>DashboardItem</b> complex type specifies a single <b>report</b> , scorecard, or filter on a dashboard page. <b>DashboardItem</b> extends the <b>DashboardElement</b> (section <a href="#">2.2.4.80</a> ).
<b>DataColumnMapping</b>	The <b>DataColumnMapping</b> complex type specifies dimensional mapping information for a column of data.
<b>DataSource</b>	The <b>DataSource</b> complex type specifies a connection to an external data provider.
<b>DataTableMapping</b>	The <b>DataTableMapping</b> complex type specifies how data from tabular data sources is mapped to multidimensional data.
<b>DefaultDimensionSetting</b>	Specifies a default set of members in a dimension (1). It extends the Dimension (see section <a href="#">2.2.4.90</a> ) type.
<b>DictionaryWrapperOfStringGridCell</b>	This complex type specifies a collection of <b>ArrayOfGridCells</b> (see section <a href="#">2.2.4.35</a> ) with associated string keys.
<b>DictionaryWrapperOfStringPropertyBag</b>	This complex type specifies a collection of <b>ArrayOfPropertyBags</b> with associated string keys.
<b>Dimension</b>	The <b>Dimension</b> complex type specifies the structure of a dimension (1). It extends the complex type <b>NameInfo</b> (section <a href="#">2.2.4.149</a> ).

Complex type	Description
<b>Element</b>	This abstract class specifies basic metadata about an item. This class is the base class for <b>FirstClassElement</b> and <b>SecondClassElement</b> .
<b>ElementVersion</b>	This complex type specifies the version information used to distinguish different instances of a <b>FirstClassElement</b> .
<b>EliminateDescendantsSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to eliminate descendant members (3), of the member (3) specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), from a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>EliminateMemberSetOp</b>	This complex type extends the <b>SetOperation</b> (section <a href="#">2.2.4.165</a> ) type. It defines an operation to eliminate a member (3), specified by <b>Name</b> (see section <a href="#">2.2.4.165</a> ), from a <b>MemberSet</b> (see section <a href="#">2.2.4.144</a> ).
<b>EndPoint</b>	This complex type defines the receiving end of a connection between a Web Part that provides parameter values such as a filter or a scorecard, and a Web Part that consumes parameter values, such as a report view or a scorecard.
<b>ExcelDataSet</b>	Specifies the Excel <b>workbook</b> ( <a href="#">[MS-XLS]</a> ) data for an <b>ExcelWorkbook</b> data source.
<b>ExcelServicesData</b>	Describes an Excel Services ( <a href="#">[MS-ESP]</a> ) data connection used by Excel Services data sources and Excel Services reports.
<b>Filter</b>	The <b>Filter</b> complex type specifies a filter.
<b>FirstClassElement</b>	The <b>FirstClassElement</b> complex type is an abstract class that represents an object that is versionable. This is the base class for the complex types <b>Dashboard</b> (section <a href="#">2.2.4.79</a> ), <b>DataSource</b> (section <a href="#">2.2.4.85</a> ), <b>Scorecard</b> (section <a href="#">2.2.4.162</a> ), <b>ReportView</b> (section <a href="#">2.2.4.160</a> ), <b>Kpi</b> (section <a href="#">2.2.4.128</a> ) and <b>Indicator</b> (section <a href="#">2.2.4.125</a> ).
<b>GridCell</b>	Specifies a single cell used by the scorecard grid view and the analytic grid view.
<b>GridCellSet</b>	This class specifies the cells used to represent a scorecard or analytic grid. The representation is based on a two dimensional array of <a href="#">GridCell</a> elements indexed by objects of type <a href="#">GridHeaderItem</a> .
<b>GridColor</b>	This class represents the grid color for the <a href="#">GridCell</a> contents.
<b>GridDisplayElement</b>	Specifies an element in a scorecard cell.
<b>GridDisplayElementActual</b>	Specifies the <a href="#">GridDisplayElement</a> of a KPI's actual value in a scorecard cell.
<b>GridDisplayElementAggregation</b>	Specifies the <a href="#">GridDisplayElement</a> of an aggregated value in a scorecard cell.
<b>GridDisplayElementHyperLink</b>	Specifies the <a href="#">GridDisplayElement</a> of a KPI's hyperlink

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

Complex type	Description
<b>Indicator</b>	A set of visualizations that represent how the actual value of a KPI compares against its target value.
<b>IndicatorBand</b>	This is a visualization representing one state of an <b>indicator</b> .
<b>Item</b>	Represents a key-value pair in a <b>SerializableDictionary</b> (section <a href="#">2.2.4.164</a> ).
<b>Kpi</b>	A key performance indicator (KPI) is contained in a scorecard.
<b>KpiMeasure</b>	The <b>KpiMeasure</b> complex type is contained in a KPI.
<b>KpiNumberFormatProperties</b>	Used for custom formatting of KPI <b>measure</b> values.
<b>Level</b>	This complex type specifies a level. It extends the complex type <b>NameInfo</b> (section <a href="#">2.2.4.149</a> ).
<b>MDXParameterDefinition</b>	The <b>MDXParameterDefinition</b> is a complex type that specifies a custom MDX used to retrieve data.
<b>Measure</b>	The <b>Measure</b> complex type specifies a measure. It extends the complex type <b>NameInfo</b> (section <a href="#">2.2.4.149</a> ).
<b>Member</b>	The <b>Member</b> complex type represents an <b>OLAP</b> member in a <b>Dimension</b> complex type (section <a href="#">2.2.4.90</a> ).
<b>MemberList</b>	The <b>MemberList</b> complex type specifies the members (3) of an OLAP hierarchy. This type extends <b>MemberSet</b> complex type (section <a href="#">2.2.4.144</a> ), and can be used with any axis type.
<b>MemberOperation</b>	Represents the basic member operations that can be performed on an OLAP dimension (1) member.
<b>MemberOperationAllDescendants</b>	A <b>MemberOperation</b> complex type (section <a href="#">2.2.4.136</a> ) that represents all descendants of a referred member in the dimension <a href="#">hierarchy</a> . This type extends <b>MemberOperation</b> .
<b>MemberOperationChildren</b>	A <b>MemberOperation</b> that represents all child members of a referred member in a dimension hierarchy. This type extends <b>MemberOperation</b> .
<b>MemberOperationDescendants</b>	A <b>MemberOperation</b> that represents all descendants of a referred member at a specified level in the hierarchy. This type extends <b>MemberOperation</b> .
<b>MemberOperationDrillUp</b>	A <b>MemberOperation</b> that represents the parent of a referred member. This type extends <b>MemberOperation</b> .
<b>MemberOperationHide</b>	A <b>MemberOperation</b> that hides a referred member. This type extends <b>MemberOperation</b> .
<b>MemberOperationLeafDescendants</b>	A <b>MemberOperation</b> that represents all descendants of a referred member that are also leaf members in the dimension hierarchy. This type extends <b>MemberOperation</b> .

Complex type	Description
<b>MemberParameterDefinition</b>	The <b>MemberParameterDefinition</b> is a complex type that represents a group of members (3) used to retrieve data.
<b>MemberSet</b>	Specifies the properties of an OLAP member hierarchy.
<b>MemberSetFormula</b>	Specifies a collection of operations on the members (3) of an OLAP hierarchy. This type extends MemberSet and can be used with any axis type.
<b>MemberTransform</b>	Represents a transform, such as <b>drilldown</b> , applied to a member, hierarchy group or KPI.
<b>NamedSet</b>	An OLAP named set.
<b>NamedSetParameterDefinition</b>	The <b>NamedSetParameterDefinition</b> is a complex type representing a set of members (3) used to retrieve data.
<b>NameInfo</b>	The <b>NameInfo</b> 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 <b>Cube</b> (section <a href="#">2.2.4.78</a> ), <b>Dimension</b> (section <a href="#">2.2.4.90</a> ), <b>Hierarchy</b> (section <a href="#">2.2.4.124</a> ), <b>Level</b> (section <a href="#">2.2.4.131</a> ), and <b>Measure</b> (section <a href="#">2.2.4.133</a> ).
<b>NumericFormat</b>	The <b>NumericFormat</b> is a complex type that represents the numeric format setting for an Analysis Services measure numeric value within an analytic grid report.
<b>NumericFormatsHashtable</b>	An array of <b>NumericFormat</b> objects.
<b>OLAPQueryData</b>	Represents an analytic query.
<b>OLAPReportView</b>	The <b>OLAPReportView</b> complex type contains all the state information for an analytic report.
<b>Parameter</b>	Specifies a logical element of an analytic query whose value can be changed independently of the analytic query.
<b>ParameterDefinition</b>	This class represents the non-visual portion of the metadata to describe a parameter. This class carries the state necessary to generate a parameter list representing possible connections that can be originated from a first-class element.
<b>ParameterMapping</b>	Provides the mapping information between a <b>ParameterDefinition</b> (section <a href="#">2.2.4.155</a> ) and a <b>DashboardItem</b> (section <a href="#">2.2.4.83</a> ).
<b>PasReportViewData</b>	Contains all the state information for a ProClarity Analytics Server report.
<b>PropertyBag</b>	The <b>PropertyBag</b> complex type MUST contain a pairing of keys and values.
<b>QueryState</b>	An alternate representation of a MDX query that includes the member selections of each axis.
<b>ReportView</b>	The <b>ReportView</b> complex type controls the visual display of data in a dashboard and can be coordinated with other

Complex type	Description
	report views using filters. Report views include analytic grids and charts, <b>PivotTable</b> and <b>PivotChart</b> reports, Excel spreadsheets [MS-XLSX], SQL Server Reporting Services reports, <b>strategy maps</b> , trend charts, web pages, and custom reports.
<b>RepositoryLocation</b>	The <b>RepositoryLocation</b> complex type specifies the location of a <b>FirstClassElement</b> (section <a href="#">2.2.4.99</a> ) stored on the server (2).
<b>Scorecard</b>	This complex type represents a scorecard.
<b>SecondClassElement</b>	This abstract class is the base class for ConfiguredView (section <a href="#">2.2.4.77</a> ), DashboardElement (section <a href="#">2.2.4.80</a> ), and KpiMeasure (section <a href="#">2.2.4.129</a> ).
<b>SerializableDictionary</b>	This complex type specifies an ordered collection of elements of complex type <b>MemberSetFormula</b> (section <a href="#">2.2.4.145</a> ), <b>MemberList</b> (section <a href="#">2.2.4.135</a> ), or <b>Member</b> (section <a href="#">2.2.4.134</a> ), with their associated string keys.
<b>SetOperation</b>	This complex type specifies a set operation.
<b>SqlReportViewData</b>	The <b>SqlReportViewData</b> complex type contains all the state information for a SQL Reporting Services report.
<b>StatusFilter</b>	This complex type specifies an <b>indicator</b> to be filtered.
<b>StrategyMapViewData</b>	The <b>StrategyMapViewData</b> complex type class specifies metadata information about a strategy map.
<b>StringCollection</b>	The StringCollection complex type specifies a collection of dimension (1) properties.
<b>Target</b>	The target of a KPI used to measure against actual data.
<b>TimeIntelligenceDataSource</b>	A time intelligence data source reference used in time intelligence parameter definitions.
<b>TimeIntelligenceDefinition</b>	The <b>TimeIntelligenceDefinition</b> complex type specifies time intelligence formulas and data sources. It is used in <b>CustomDefinition</b> of the <b>ParameterDefinition</b> complex type (section <a href="#">2.2.4.155</a> ).
<b>TimeIntelligenceFormula</b>	This complex type specifies a time intelligence parameter formula.
<b>TimeIntelligenceLevelBinding</b>	Specifies the mapping of internal cube dimensions (1) to their time aggregation level.
<b>TimeIntelligenceMdxSettings</b>	Specifies how a dimension (1) in an Analysis Services data source maps to a time intelligence filter when running <b>Simple Time Period Specification (STPS)</b> formulas against the data source.
<b>TimeIntelligencePostFormulaDefinition</b>	This complex type specifies a time intelligence post formula filter definition.
<b>TimeIntelligenceSettings</b>	Specifies additional time intelligence settings for a data

Complex type	Description
	source.
<b>Title</b>	This complex type represents a title for an analytic chart.
<b>ToolbarOptions</b>	Contains the configuration settings of the toolbar of a <b>ConfiguredView</b> (section <a href="#">2.2.4.77</a> ).
<b>Tuple</b>	The <b>Tuple</b> complex type <a href="#">&lt;10&gt;</a> represents an ordered collection of one or more <b>Member</b> complex types (section <a href="#">2.2.4.134</a> ) from different dimensions (1). It contains an instance of <b>SerializableDictionary</b> complex type (section <a href="#">2.2.4.164</a> ).
<b>XmlFont</b>	Specifies a set of attributes that define a font.

### 2.2.4.1 AddAllMembersSetOp

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

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

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

### 2.2.4.2 AddCalcMemberSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add a calculated member (3), specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

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

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

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

### 2.2.4.3 AddChildrenSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add child members (3), of the member (3) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

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

### 2.2.4.4 AddDefaultMemberSetOp

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

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

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

### 2.2.4.5 AddDescendantsLeavesSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add leaf descendant members (3), of the member (3) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

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

### 2.2.4.6 AddDescendantsSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add descendant members (3), at the level specified by **LevelName** to the member (3) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```
<xs:complexType name="AddDescendantsSetOp" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
```



```

<xs:extension base="tns:SetOperation">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelName" type="xs:string"/>
  </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

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

#### 2.2.4.7 AddDescendantsSubtreeSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add descendant members (3), from all levels subordinate to the member specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

```

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

```

#### 2.2.4.8 AddFilterSetOp

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

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

```

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

```

#### 2.2.4.9 AddFilterTopBottomSetOp

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

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

```

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

```

#### 2.2.4.10 AddMemberSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add a member (3), specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

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

#### 2.2.4.11 AddNamedSetSetOp

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

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

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

#### 2.2.4.12 AddParentSiblingsSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to add the parent's siblings (members (3)), of the member (3) specified by **Name** (see section [2.2.4.165](#)), to a **MemberSet** (see section [2.2.4.144](#)).

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

#### 2.2.4.13 AliasInfo

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

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

The format MUST be as follows:

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

```

<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="1" name="AliasCalculationInfo"
type="tns:KpiMeasure"/>
</xs:sequence>
<xs:attribute name="AliasName" type="xs:string"/>
</xs:complexType>

```

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

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

#### 2.2.4.14 AnalyticBaseReportViewData

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

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

```

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

```

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

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

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

- "NamedColor:<name>" where:
  - "<name>" is the name of a predefined color, specified by a string. Values MUST be the same as the names of the elements in Color Table, which follows.
  - Example: "NamedColor:Black".
- "ARGBColor:<A>:<R>:<G>:<B>" where:
  - "<A>" is the alpha component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<R>" is the red component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.

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

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

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

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

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

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



<b>Member name</b>	<b>Description</b>
<b>Plum</b>	A system-defined color.
<b>PowderBlue</b>	A system-defined color.
<b>Purple</b>	A system-defined color.
<b>Red</b>	A system-defined color.
<b>RosyBrown</b>	A system-defined color.
<b>RoyalBlue</b>	A system-defined color.
<b>SaddleBrown</b>	A system-defined color.
<b>Salmon</b>	A system-defined color.
<b>SandyBrown</b>	A system-defined color.
<b>SeaGreen</b>	A system-defined color.
<b>SeaShell</b>	A system-defined color.
<b>Sienna</b>	A system-defined color.
<b>Silver</b>	A system-defined color.
<b>SkyBlue</b>	A system-defined color.
<b>SlateBlue</b>	A system-defined color.
<b>SlateGray</b>	A system-defined color.
<b>Snow</b>	A system-defined color.
<b>SpringGreen</b>	A system-defined color.
<b>SteelBlue</b>	A system-defined color.
<b>Tan</b>	A system-defined color.
<b>Teal</b>	A system-defined color.
<b>Thistle</b>	A system-defined color.
<b>Tomato</b>	A system-defined color.
<b>Turquoise</b>	A system-defined color.
<b>Violet</b>	A system-defined color.
<b>Wheat</b>	A system-defined color.
<b>White</b>	A system-defined color.
<b>WhiteSmoke</b>	A system-defined color.
<b>Yellow</b>	A system-defined color.
<b>YellowGreen</b>	A system-defined color.

Member name	Description
<b>ButtonFace</b>	The system-defined face color of a 3-D element.
<b>ButtonHighlight</b>	The system-defined color that is the highlight color of a 3-D element. This color is applied to parts of a 3-D element that face the light source.
<b>ButtonShadow</b>	The system-defined color that is the shadow color of a 3-D element. This color is applied to parts of a 3-D element that face away from the light source.
<b>GradientActiveCaption</b>	The system-defined color of the lightest color in the color gradient of an active window's title bar.
<b>GradientInactiveCaption</b>	The system-defined color of the lightest color in the color gradient of an inactive window's title bar.
<b>MenuBar</b>	The system-defined color of the background of a menu bar.
<b>MenuHighlight</b>	The system-defined color used to highlight menu items when the menu appears as a flat menu.

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

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

#### 2.2.4.15 AnalyticChartLegend

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

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

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

```
<xs:attribute default="false" name="BorderVisible" type="xs:boolean"/>
<xs:attribute default="Right" name="Location" type="tns:AnalyticLegendLocation"/>
</xs:complexType>
```

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

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

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

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

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

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

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

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

## 2.2.4.16 AnalyticChartReportView

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

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

```
<xs:complexType name="AnalyticChartReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AnalyticBaseReportViewData">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Title" type="tns:Title"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PlotAreaBackColor" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Legend"
type="tns:AnalyticChartLegend"/>
      </xs:sequence>
      <xs:attribute default="Column" name="ChartType" type="tns:AnalyticChartType"/>
      <xs:attribute default="None" name="LineMarkerStyle" type="tns:AnalyticMarkerStyle"/>
      <xs:attribute default="true" name="ChartColorVisible" type="xs:boolean"/>
      <xs:attribute default="false" name="ChartPointersVisible" type="xs:boolean"/>
      <xs:attribute default="2" name="LineWidth" type="xs:int"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

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

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

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

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

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

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

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

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

### 2.2.4.17 AnalyticGridReportView

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

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

```
<xs:complexType name="AnalyticGridReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AnalyticBaseReportViewData">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ReportLayout" type="tns:ReportLayout"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShortenRowLabels" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="MaxRowLabelLength" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShortenColumnLabels"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="MaxColumnLabelLength" type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

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

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

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

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

## 2.2.4.18 Annotation

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

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

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

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

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

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

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

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

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

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

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

**ConfiguredViewID:** Specifies the identity of the **ConfiguredView** complex type (section [2.2.4.77](#)) for this annotation. This element MUST be formatted as a **GUID** and its value MUST NOT be {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 **MD5** hash of the dimension (1) values of all the headers of a cell, sorted by their dimension (1) names. This value MUST NOT be null or empty. The header cells MUST conform to the schema of **GridHeaderItem** complex type (section [2.2.4.116](#)). This value for the checked cell in the following example scorecard is calculated as follows:

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

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

GridHeaderItem	DimensionValue	DimensionName	DisplayText
Row Header Parent	"/PerformancePoint/Lists/PerformancePoint Content/10_.000"	"Scorecard_"	"Internet Order Quantity"
Row Header	"[Product].[Category].&[4]"	"Product.Category"	"Accessories"

<b>GridHeaderItem</b>	<b>DimensionValue</b>	<b>DimensionName</b>	<b>DisplayText</b>
Column Header Parent's Parent	"[Geography].[State-Province].[All Geographies]"	"Geography.State-Province"	"All Geographies"
Column Header Parent	"[Geography].[State-Province].[All Geographies]"	"Geography.State-Province"	""
Column Header	"Actual"	"Scorecard_Measures_"	"Actual"

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

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

### 2.2.4.19 AnnotationComment

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

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

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



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

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

#### 2.2.4.20 ArrayOfAliasInfo

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

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

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

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

#### 2.2.4.21 ArrayOfAnnotationComment

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

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

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

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

#### 2.2.4.22 ArrayOfAxis

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

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

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

**Axis:** An **Axis** object (see section [2.2.4.59](#)).

### 2.2.4.23 ArrayOfBpmProperty

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

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

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

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

### 2.2.4.24 ArrayOfBpmPropertyListItem

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

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

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

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

### 2.2.4.25 ArrayOfChoice1

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

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

```
<xs:complexType name="ArrayOfChoice1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element minOccurs="1" maxOccurs="1" name="char"
xmlns:s1="http://microsoft.com/wsd1/types/" type="s1:char"/>
    <xs:element minOccurs="1" maxOccurs="1" name="int" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="double" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="string" nillable="true" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="dateTime" type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMemberTransform" nillable="true"
type="tns:ArrayOfMemberTransform"/>
    <xs:element minOccurs="1" maxOccurs="1" name="guid"
xmlns:s1="http://microsoft.com/wsd1/types/" type="s1:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfString" nillable="true"
type="tns:ArrayOfString"/>
  </xs:choice>
</xs:complexType>
```

```

    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMember" nillable="true"
type="tns:ArrayOfMember"/>
    <xs:element minOccurs="1" maxOccurs="1" name="decimal" type="xs:decimal"/>
  </xs:choice>
</xs:complexType>

```

**char:** A character value.

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

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

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

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

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

**guid:** An identity value.

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

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

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

#### 2.2.4.26 ArrayOfComment

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

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

```

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

```

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

#### 2.2.4.27 ArrayOfConfiguredView

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

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

```

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

```

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

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

#### 2.2.4.28 ArrayOfDashboardElement

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

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

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

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

#### 2.2.4.29 ArrayOfDataColumnMapping

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

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

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

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

#### 2.2.4.30 ArrayOfDecimal

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

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

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

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

### 2.2.4.31 ArrayOfDefaultDimensionSetting

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

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

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

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

### 2.2.4.32 ArrayOfDimension

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

The **ArrayOfDimension** complex type specifies an array of dimension (1) elements.

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

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

### 2.2.4.33 ArrayOfEndPoint

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

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

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

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

### 2.2.4.34 ArrayOfFirstClassElement

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

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

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

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

### 2.2.4.35 ArrayOfGridCell

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

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

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

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

### 2.2.4.36 ArrayOfGridDisplayElement

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

An array of elements for a scorecard cell.

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

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

### 2.2.4.37 ArrayOfGridHeaderItem

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

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

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

```

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

```

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

### 2.2.4.38 ArrayOfGridViewTransformReference

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

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

```

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

```

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

### 2.2.4.39 ArrayOfHierarchy

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

The **ArrayOfHierarchy** complex type specifies an array of hierarchy values for a dimension (1).

```

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

```

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

### 2.2.4.40 ArrayOfIndicatorBand

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

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

```

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

```

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

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

#### 2.2.4.41 ArrayOfKpi

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

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

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

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

#### 2.2.4.42 ArrayOfKpiMeasure

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

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

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

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

#### 2.2.4.43 ArrayOfLevel

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

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

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

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



#### 2.2.4.44 ArrayOfMeasure

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

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

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

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

#### 2.2.4.45 ArrayOfMember

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

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

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

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

#### 2.2.4.46 ArrayOfMemberTransform

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

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

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

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

#### 2.2.4.47 ArrayOfNamedSet

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

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

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

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

#### 2.2.4.48 ArrayOfNameInfo

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

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

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

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

#### 2.2.4.49 ArrayOfParameter

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

A collection of parameters used in an analytic query.

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

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

#### 2.2.4.50 ArrayOfParameterDefinition

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

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

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

```

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

```

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

### 2.2.4.51 ArrayOfParameterMapping

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

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

```

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

```

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

### 2.2.4.52 ArrayOfPropertyBag

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

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

```

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

```

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

### 2.2.4.53 ArrayOfSetOperation

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

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

```

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

```

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

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

#### 2.2.4.54 ArrayOfString

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

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

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

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

#### 2.2.4.55 ArrayOfTarget

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

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

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

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

#### 2.2.4.56 ArrayOfTimeIntelligenceDataSource

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

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

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

**TimeIntelligenceDataSource:** See **TimeIntelligenceDataSource** (section [2.2.4.171](#)).

## 2.2.4.57 ArrayOfTimeIntelligenceFormula

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

A collection of time intelligence parameter formulas.

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

**TimeIntelligenceFormula:** See **TimeIntelligenceFormula** (section [2.2.4.173](#)).

## 2.2.4.58 ArrayOfTimeIntelligenceLevelBinding

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

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

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

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

## 2.2.4.59 Axis

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

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

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

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

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

**PropertyList:** Specifies a **StringCollection** complex type (section [2.2.4.169](#)) of dimension (1) properties. Each value in this **StringCollection** MUST be a valid intrinsic or custom multidimensional expression (MDX) dimension (1) properties.

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

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

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

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

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

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

## 2.2.4.60 Banding

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

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

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

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

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

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

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

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

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

### 2.2.4.61 BpmException

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

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

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

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

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

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

### 2.2.4.62 BpmProperty

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

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

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

**UniqueName:** The **UniqueName** attribute MUST be set to a string that is distinct from UniqueNames used for other instances of BpmProperty and derived types. It MUST NOT contain any of the following characters: [ ] . ` ~ # % & \* { } | \ : " / ? < > and the string length MUST be less than 1000 characters.

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

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

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

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

### 2.2.4.63 BpmPropertyBool

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

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

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

**Value:** A Boolean value.

### 2.2.4.64 BpmPropertyDate

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

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

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

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

### 2.2.4.65 BpmPropertyDecimal

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

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

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

**Decimal:** A decimal value.



## 2.2.4.66 BpmPropertyHyperlink

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

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

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

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

## 2.2.4.67 BpmPropertyHyperlink2

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

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

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

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

## 2.2.4.68 BpmPropertyLinkBase

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

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

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

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

## 2.2.4.69 BpmPropertyList

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

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

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

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

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

### 2.2.4.70 BpmPropertyListItem

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

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

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

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

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

### 2.2.4.71 BpmPropertyLongText

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

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

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

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

#### 2.2.4.72 BpmPropertyText

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

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

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

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

#### 2.2.4.73 BpmPropertyUser

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

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

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

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

#### 2.2.4.74 CalculatedFormulaInfo

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

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

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

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

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

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

### 2.2.4.75 CalculatedMember

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

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

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

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

### 2.2.4.76 Comment

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

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

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

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

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

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

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

### 2.2.4.77 ConfiguredView

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### 2.2.4.78 Cube

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

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

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

```

        <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 [2.2.4.149](#)) items as defined in **ArrayOfNameInfo** (see section [2.2.4.33](#)). This element MUST be present.

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

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

**Version:** Species the **major version** of the software on the server (2) that hosts the cube. MUST be a non-negative integer. This element MUST be 0 when the dimension (1) 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.
3Rows		A dashboard page with three row zones.
ColumnSplitColumn		A dashboard page a column on the right and two rows zones on the left.

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

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

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

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

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

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

## 2.2.4.80 DashboardElement

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



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

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

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

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

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

### 2.2.4.81 DashboardElementContainer

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

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

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

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

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

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

**DashboardElements:** Specifies the **DashboardElements** in the **DashboardElementContainer**. This is an array of **DashboardElements** (section [2.2.4.14](#)).

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

### 2.2.4.82 DashboardElementSize

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

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

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

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

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

### 2.2.4.83 DashboardItem

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

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

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

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

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

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

**AutoSizeWidth:** Specifies whether the **DashboardItem** width is automatically set by the containing zone or uses a specific width. **true** indicates the **DashboardItem** width is controlled by

the zone. **false** indicates the **DashboardItem** width is set by the **DashboardElement** (section [2.2.4.80](#)) base. This element **MUST** be present.

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

## 2.2.4.84 DataColumnMapping

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

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

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

**UniqueName:** This attribute **MUST** be present. **UniqueName** specifies the unique name of the dimension (1) that a column represents. The value **MUST NOT** be empty.

ColumnType	Content
Ignore	The value <b>MUST</b> be an empty string.
Fact	The value <b>MUST</b> be an empty string.
Dimension	The value <b>MUST</b> be an empty string.
TimeDimension	The value <b>MUST</b> be an empty string.
Key	UniqueName specifies the unique name of the dimension (1) that a column represents. It is used when referenced by another column mapping via the KeyColumnName. The value <b>MUST NOT</b> be empty.

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

ColumnType	Content
Ignore	The attribute <b>MUST</b> be ignored.
Fact	The attribute <b>MUST</b> be ignored.
Dimension	KeyColumnName specifies the name of the tabular column that contains the UniqueName for the dimension (1). If this attribute is not present, the UniqueName of this column is used as the UniqueName for the dimension (1).
TimeDimension	KeyColumnName specifies the name of the tabular column that contains the UniqueName for the dimension (1). If this attribute is not present, the UniqueName of

ColumnType	Content
	this column is used as the UniqueName for the dimension (1).
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>
```

```

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

```

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

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

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

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

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

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

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

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

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

Value	Meaning
ADOMD.NET	An 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 <a href="#">&lt;14&gt;</a> .

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

Type	Contents
ADOMD.NET	<b>ServerName</b> <b>MUST</b> be the host name of the server (2) running Analysis Services.
SqlTabularDataSource	<b>ServerName</b> <b>MUST</b> be the host name of the server (2) instance that hosts the tabular data source.
ExcelServicesWorkbook	<b>ServerName</b> <b>MUST</b> be the URL of the site (2) which hosts the data source.

Type	Contents
ExcelWorkbook	<b>ServerName</b> MUST be an empty string.
SplistDataSource	<b>ServerName</b> 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 designated in the following table.

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

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

Type	Contents
ADOMD.NET	<b>CubeName</b> MUST be the name of the cube used by the data source.
SqlTabularDataSource	<b>CubeName</b> MUST be the name of the table in the database used by the data source. <b>CubeName</b> MUST be in the form <code>[schema].[table]</code> , where <i>schema</i> is the name of the table schema and <i>table</i> is the name of the table.
ExcelServicesWorkbook	<b>CubeName</b> MUST be the path and file name of the Excel Services workbook to be used.
ExcelWorkbook	<b>CubeName</b> MUST be an empty string.
SplistDataSource	<b>CubeName</b> MUST be the 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 designated in the following table.

Type	Contents
ADOMD.NET	<b>CubeDisplayName</b> is the name of the selected cube that is displayed to the user.
SqlTabularDataSource	<b>CubeDisplayName</b> is the name of the selected SQL table that is displayed to the user.

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

**FormattingDimensionName:** Specifies the initial value for the dimension (1) in the cube which contains the numerical formats for analytic grids or charts using the data source. This element is only used for **ADOMD.NET** data sources. It MUST be present for all data source types.

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

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

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

**FormattingDimensionType:** Specifies the **DimensionTypeEnum** simple type (section [2.2.5.13](#)) of the dimension (1) used in **FormattingDimensionName**. This attribute MUST be present for all data source types. For non-**ADOMD.NET** data sources, this element MUST be set to "Other".

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

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

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

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

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

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

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

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

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

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

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

## 2.2.4.86 DataTableMapping

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

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

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

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

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



**MasterTimeColumn:** Specifies the mapped **DateTime** column (section [2.2.5.34](#)) in the tabular data source that is used as the time dimension (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 [2.2.4.134](#)) items. This element **MUST** be present.

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

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

## 2.2.4.88 DictionaryWrapperOfStringGridCell

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

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

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

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

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

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

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

#### 2.2.4.89 DictionaryWrapperOfStringPropertyBag

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

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

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

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

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

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

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

#### 2.2.4.90 Dimension

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

The **Dimension** complex type specifies the structure of a dimension (1). It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```
<xs:complexType name="Dimension" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="MeasureGroupNames"
          type="tns:ArrayOfString"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

        <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 (1) in the form of the simple type **DimensionTypeEnum** (section [2.2.5.13](#)). This element **MUST** be present.

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

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

**IsMeasureDimension:** Specifies if the dimension (1) is a measure dimension (1). This value **MUST** be **TRUE** when the value of **Type** is "Measure"; otherwise, it is **FALSE**. This element **MUST** be present.

**DefaultMemberName:** Specifies the unique name of the default member for the dimension (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 [2.2.4.165](#)) type. It defines an operation to eliminate descendant members (3), of the member (3) specified by **Name** (see section [2.2.4.165](#)), from a **MemberSet** (see section [2.2.4.144](#)).

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

## 2.2.4.94 EliminateMemberSetOp

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

This complex type extends the **SetOperation** (section [2.2.4.165](#)) type. It defines an operation to eliminate a member (3), specified by **Name** (see section [2.2.4.165](#)), from a **MemberSet** (see section [2.2.4.144](#)).

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

## 2.2.4.95 EndPoint

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

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

```

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

```

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

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

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

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

#### 2.2.4.96 ExcelDataSet

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

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

```

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

```

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

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

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

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

#### 2.2.4.97 ExcelServicesData

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

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

```

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

```

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

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

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

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

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

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

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

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

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

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

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

## 2.2.4.98 Filter

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

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

```

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

```

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

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

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

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

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

Value	Content
FixedValues	Specifies a filter that contains selections provided from a tabular data source (1).
MDXQuery	Specifies a filter that contains selections provided by an MDX query.
MemberSelection	Specifies a filter that contains selections provided by selecting members from a data source (1).

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

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

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

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

## 2.2.4.99 FirstClassElement

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

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

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



</xs:complexType>

**Version:** The **ElementVersion** complex type (section [2.2.4.92](#)) information of the object. This value is optional, and has a default value of zero for the major and minor version. The major version will increase when the child classes **Dashboard**, **DataSource**, **Scorecard**, **ReportView**, **Kpi**, and **Indicator** are created and updated.

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

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

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

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

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

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

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

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

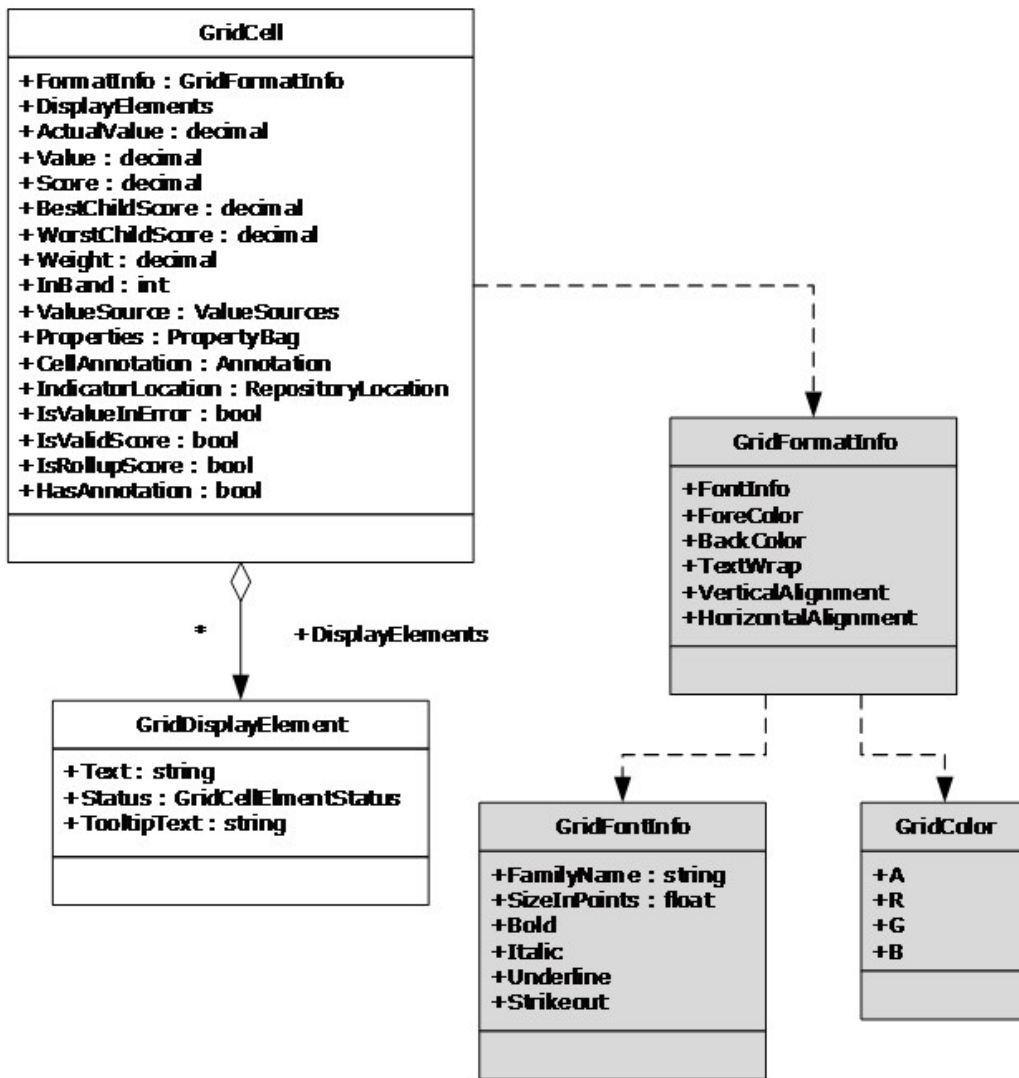
When creating dashboard content in a content store, the dashboard content SHOULD contain at least one **BpmProperty** complex type (section [2.2.4.62](#)). <15> The **BpmProperty's UniqueName** property is "8dd07d4d87794510afdb1f07664359bc\_Element\_Name" which maps to the SharePoint list property "Title", required for a SharePoint list item. The Description property is "8dd07d4d87794510afdb1f07664359bc\_Element\_Description" and maps to the SharePoint list property "Description", which is optional. "8dd07d4d87794510afdb1f07664359bc\_Element\_Owner" maps to the SharePoint list property "Person Responsible", which is also optional.

## 2.2.4.100 GridCell

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

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

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



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

```

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

```

<xs:attribute name="WorstChildScore" type="xs:decimal" use="required"/>
<xs:attribute name="IsValueInError" type="xs:boolean" use="required"/>
<xs:attribute name="HasAnnotation" type="xs:boolean" use="required"/>
<xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
<xs:attribute name="ValueSource" type="tns:ValueSources" use="required"/>
<xs:attribute name="IsValidScore" type="xs:boolean" use="required"/>
</xs:complexType>

```

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

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

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

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

Indicator	ID
Stoplight	0
Stoplight (Centered)	1
2 light – Small	2
2 light - Small (Centered)	3
2 light - Medium	4
2 light - Medium (Centered)	5
2 light – Large	6
2 light - Large (Centered)	7
Stoplight – Small	8
Stoplight - Small (Centered)	9
Stoplight – Medium	10
Stoplight - Medium (Centered)	11
Stoplight – Large	12
Stoplight - Large (Centered)	13
Stoplight E - Small	14
Stoplight E - Small (Centered)	15

<b>Indicator</b>	<b>ID</b>
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
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

<b>Indicator</b>	<b>ID</b>
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
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

<b>Indicator</b>	<b>ID</b>
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
Road Sign	100
Road Sign (Centered)	101
Weather	102
Weather (Centered)	103
Operators	104
Operators (Centered)	105

<b>Indicator</b>	<b>ID</b>
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
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

<b>Indicator</b>	<b>ID</b>
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

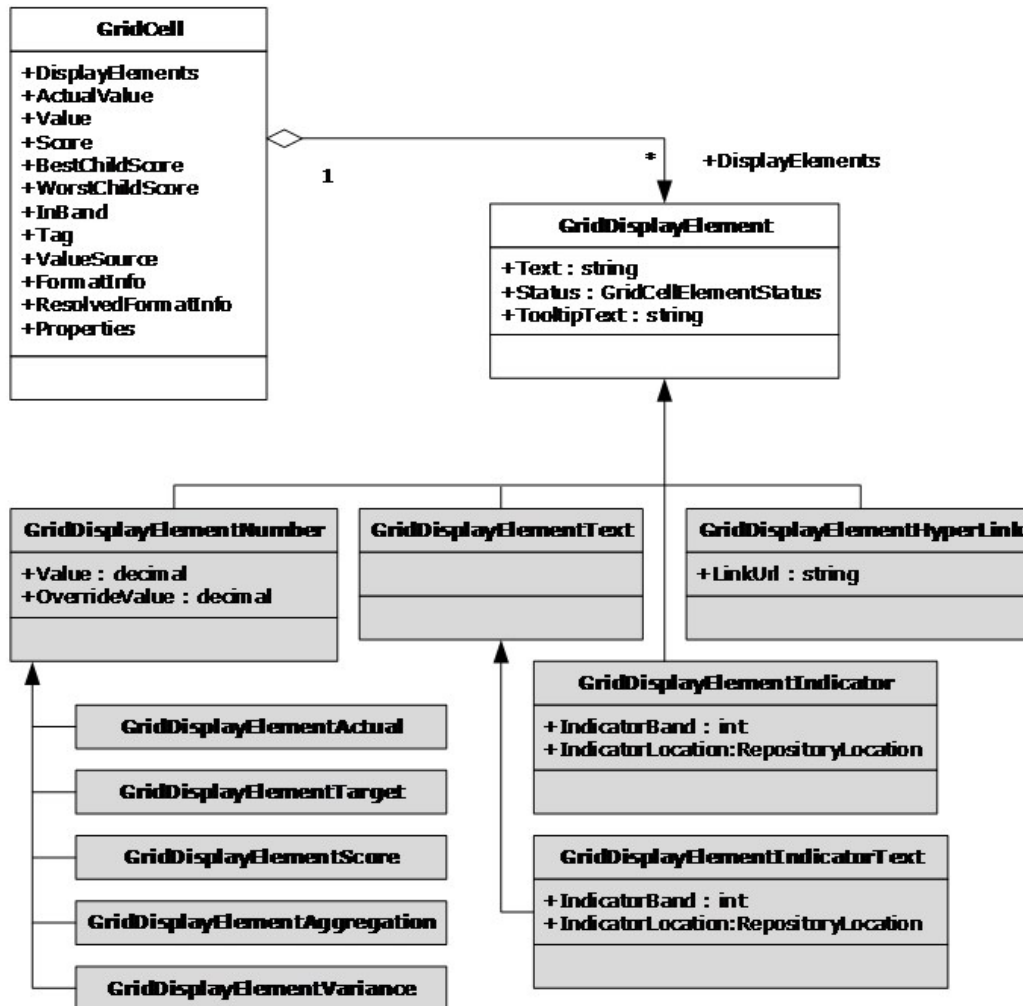
**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

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>

```

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

**LinkUrl:** Hyperlink URL that will appear in the cell. The attribute MUST be a valid [\[RFC1738\]](#) URL.

#### 2.2.4.107 GridDisplayElementIndicator

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

Specifies the image of an **indicator** for the [GridDisplayElement](#) in a scorecard cell.

Inherits from the [GridDisplayElement](#).

```
<xs:complexType name="GridDisplayElementIndicator"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**IndicatorLocation:** Specifies the [RepositoryLocation](#) of the [Indicator](#) object for the scorecard cell. MUST NOT be null and MUST reference an Indicator stored in the server (2). See [RepositoryLocation](#).

**IndicatorBand:** Specifies the one based index of the **IndicatorBand** that is displayed in the scorecard cell. The image defined by the **Indicator** property **NoDataIndicatorBand** is used in the cell if the value is less than one, or if the value is greater than the total number of [IndicatorBands](#).

#### 2.2.4.108 GridDisplayElementIndicatorText

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

Specifies the descriptive name of an **indicator** for the [GridDisplayElement](#) in a scorecard cell. The descriptive name of the **IndicatorBand** is the **ToolTip** property of the [IndicatorBand](#), for example: "off target".

```
<xs:complexType name="GridDisplayElementIndicatorText"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementText">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**IndicatorLocation:** Specifies the [RepositoryLocation](#) of the [Indicator](#) object for the scorecard cell. MUST NOT be null and MUST reference an Indicator stored in the server (2). See [RepositoryLocation](#).

**IndicatorBand:** Specifies the one based index of the indicator band that its descriptive name is displayed in the scorecard cell. The descriptive name defined by the **Indicator** property **NoDataIndicatorBand** is used in the cell if the value is less than one, or if the value is greater than the total number of IndicatorBands.

#### 2.2.4.109 GridDisplayElementNumber

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

Specifies a numeric [GridDisplayElement](#) in a scorecard cell. This is a base class for the following complex types [GridDisplayElementsActual](#), [GridDisplayElementTarget](#), [GridDisplayElementScore](#), [GridDisplayElementVariance](#)

```
<xs:complexType name="GridDisplayElementNumber" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement">
      <xs:attribute name="Value" type="xs:decimal" use="required"/>
      <xs:attribute name="OverrideValue" type="xs:decimal" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Value:** Specifies the decimal value of the cell element.

**OverrideValue:** Specifies the decimal value equivalent to the formatted value of the cell.

Example is shown in following table:

Property	Value
Text	55%
Value	0.5498
OverrideValue	55

#### 2.2.4.110 GridDisplayElementScore

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

Specifies the [GridDisplayElement](#) of the KPI target's score in a scorecard cell. Inherits from the [GridDisplayElementNumber](#).

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

### 2.2.4.111 GridDisplayElementTarget

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

Specifies the [GridDisplayElement](#) of a KPI's target value in a scorecard cell. Inherits from the [GridDisplayElementNumber](#).

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

### 2.2.4.112 GridDisplayElementText

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

Specifies the [GridDisplayElement](#) of a text value in a scorecard cell. Inherits from the [GridDisplayElement](#).

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

### 2.2.4.113 GridDisplayElementVariance

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

Specifies the [GridDisplayElement](#) of a KPI target's variance value in a scorecard cell. Inherits from the [GridDisplayElementNumber](#).

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

### 2.2.4.114 GridFontInfo

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

This class represents the font display options for the [GridCell](#) contents.

```
<xs:complexType name="GridFontInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="FamilyName" type="xs:string"/>
  <xs:attribute name="SizeInPoints" type="xs:float" use="required"/>
  <xs:attribute name="Bold" type="tns:Trinary" use="required"/>
  <xs:attribute name="Italic" type="tns:Trinary" use="required"/>
  <xs:attribute name="Underline" type="tns:Trinary" use="required"/>
  <xs:attribute name="Strikeout" type="tns:Trinary" use="required"/>
</xs:complexType>
```

</xs:complexType>

**FamilyName:** The family name of the font. This value MUST be present.

**SizeInPoints:** The font size in points. This value MUST be present.

**Bold:** Specifies whether the font is bold. This value MUST be set in the form of [Trinary](#) and MUST be present.

**Italic:** Specifies whether the font is italicized. This value MUST be set in the form of Trinary and MUST be present.

**Underline:** Specifies whether the font is underlined. This value MUST be set in the form of Trinary and MUST be present.

**Strikeout:** Specifies whether the font has a strikethrough. This value MUST be set in the form of Trinary and MUST be present.

#### 2.2.4.115 GridFormatInfo

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

This class represents the display format settings for the [GridCell](#) contents.

```
<xs:complexType name="GridFormatInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FontInfo" type="tns:GridFontInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ForeColor" type="tns:GridColor"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="tns:GridColor"/>
  </xs:sequence>
  <xs:attribute name="TextWrap" type="tns:Trinary" use="required"/>
  <xs:attribute name="VerticalAlignment" type="tns:VerticalAlignments" use="required"/>
  <xs:attribute name="HorizontalAlignment" type="tns:HorizontalAlignments" use="required"/>
</xs:complexType>
```

**FontInfo:** The font information of the GridCell contents, as defined in [GridFontInfo](#).

**ForeColor:** The font color of the GridCell contents, as defined in [GridColor](#).

**BackColor:** The background color of the GridCell contents, as defined in [GridColor](#).

**TextWrap:** Specifies whether the contents of a GridCell wraps. This value MUST be set in the form of [Trinary](#) and MUST be present.

**VerticalAlignment:** The vertical alignment of the GridCell contents. This value MUST be set in the form of [VerticalAlignments](#) and MUST be present.

**HorizontalAlignment:** The horizontal alignment of the GridCell contents. This value MUST be set in the form of [HorizontalAlignments](#) and MUST be present.

#### 2.2.4.116 GridHeaderItem

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

The **GridHeaderItem** complex type specifies the header that represents a row or a column node in a scorecard.



```

<xs:complexType name="GridHeaderItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="HeaderFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellFormatInfo" type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Children"
type="tns:ArrayOfGridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SerializeTag"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DimensionMember" type="tns:Member"/>
    <xs:element minOccurs="0" maxOccurs="1" name="OverrideIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LinkedKpiLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BpmProperties"
type="tns:ArrayOfBpmProperty"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TargetSettings"
type="tns:GridTargetSettings"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TrendIndicatorLocation"
type="tns:RepositoryLocation"/>
  </xs:sequence>
  <xs:attribute name="Id" type="xs:int" use="required"/>
  <xs:attribute name="Guid" xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"
use="required"/>
  <xs:attribute name="DefinitionGuid" xmlns:s1="http://microsoft.com/wsdl/types/"
type="s1:guid" use="required"/>
  <xs:attribute name="DisplayText" type="xs:string"/>
  <xs:attribute name="DimensionName" type="xs:string"/>
  <xs:attribute name="DimensionValue" type="xs:string"/>
  <xs:attribute name="HeaderType" type="tns:ScorecardNodeTypes" use="required"/>
  <xs:attribute name="GroupId" type="xs:int" use="required"/>
  <xs:attribute name="Depth" type="xs:int" use="required"/>
  <xs:attribute name="DescendantSpan" type="xs:int" use="required"/>
  <xs:attribute name="LeafSpan" type="xs:int" use="required"/>
  <xs:attribute name="IsCollapsed" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDynamicCellExpansionEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDrillEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDrillDownDisabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDrillUpDisabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDynamicallyExpandedHeader" type="xs:boolean" use="required"/>
  <xs:attribute name="IsCellHidden" type="xs:boolean" use="required"/>
  <xs:attribute name="IsPathHidden" type="xs:boolean" use="required"/>
  <xs:attribute name="IsHiddenBasedOnFilterStatus" type="xs:boolean" use="required"/>
  <xs:attribute name="NamedSetExpression" type="xs:string"/>
  <xs:attribute name="CustomSetFormula" type="xs:string"/>
  <xs:attribute name="IsNamedSetInError" type="xs:boolean" use="required"/>
  <xs:attribute name="IsNamedSetEmpty" type="xs:boolean" use="required"/>
  <xs:attribute name="NamedSetType" type="tns:ScorecardNamedSetType" use="required"/>
  <xs:attribute name="UseLinkedElementDisplayText" type="xs:boolean" use="required"/>
  <xs:attribute name="Hyperlink" type="xs:string"/>
  <xs:attribute name="ShowHyperlinkInNewWindow" type="xs:boolean" use="required"/>
  <xs:attribute name="IsHierarchyHeader" type="xs:boolean" use="required"/>
  <xs:attribute name="IsColumnHeader" type="xs:boolean" use="required"/>
  <xs:attribute name="AppendFilterInfoToHyperlink" type="xs:boolean" use="required"/>
  <xs:attribute name="Weight" type="xs:decimal" use="required"/>
  <xs:attribute name="KpiTargetName" type="xs:string"/>
  <xs:attribute name="AggregationType" type="tns:HeaderAggregationTypes" use="required"/>
</xs:complexType>

```

**HeaderFormatInfo:** This property, as defined in the **GridFormatInfo** complex type (section [2.2.4.115](#)), overrides the format information set for **GridHeaderItem**, under either the **GridViewDefinition** (section [2.2.4.122](#)) or **GridViewData** (section [2.2.4.121](#)) complex types, for **GridHeaderItem**.

**CellFormatInfo:** This property, as defined in **GridFormatInfo**, overrides the format information set under **GridHeaderItem.HeaderFormatInfo** for **GridHeaderItem**.

**Children:** Specifies an array of **GridHeaderItem**, as defined in the **ArrayOfGridHeaderItem** complex type (section [2.2.4.37](#)).

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

**DimensionMember:** **Dimension** member (section [2.2.4.90](#)) associated with this header, as defined in the **Member** complex type (section [2.2.4.134](#)).

**OverrideIndicatorLocation:** The location of the override **Indicator** complex type (section [2.2.4.125](#)) for rollups as defined in the **RepositoryLocation** complex type (section [2.2.4.161](#)). If null, the default rollup indicator location, as mentioned under **GridViewDefinition** or **GridViewData** will be used.

**Banding:** Banding settings, as defined in the **Banding** complex type (section [2.2.4.60](#)). When null, the **BandingType.Type** is **Normalized**.

**LinkedKpiLocation:** Location of the linked **Kpi** complex type (section [2.2.4.128](#)), as defined in **RepositoryLocation**.

**BpmProperties:** Collection of element properties, as defined in the **ArrayOfBpmProperty** complex type (section [2.2.4.23](#)).

**TargetSettings:** Target column settings, as defined in **GridTargetSettings** complex type (section [2.2.4.119](#)).

**TrendIndicatorLocation:** If the header type is aggregate and **TrendIndicatorLocation** points to a valid location as defined in **RepositoryLocation**, this header item represents a trend column. The **TrendIndicatorLocation** MUST point to the location of the indicator used to show the trend.

**Id:** Unique integer identifier for this header.

**Guid:** Global unique identifier for **GridHeaderItem**.

**DefinitionGuid:** Global unique identifier that links a data header back to the definition header.

**DisplayText:** Display text for **GridHeaderItem**.

**DimensionName:** **Dimension** name is set based on the header type. The following table specifies the allowable dimension (1) names for different scorecard header types.

Header type	Dimension name
Member	Member <b>Dimension</b> name.
Kpi	Scorecard__
KpiActual	Scorecard_Measures__
KpiTarget	Scorecard_Measures__

Header type	Dimension name
Aggregate	Scorecard_Aggregates__
ScorecardDetails	Scorecard_Details__
DocumentLinks	Scorecard_DocumentLinks__
NamedSet	null
None	null

**DimensionValue:** **Dimension** value is set based on the header type. The following table specifies the allowable dimension (1) values for different scorecard header types.

Header type	Dimension value
Member	Member unique name.
Kpi	<b>RepositoryLocation</b> of the <b>Kpi</b> .
KpiActual	This value equals the <b>BpmPropertyText.Text</b> value.
KpiTarget	This value equals the <b>BpmPropertyText.Text</b> value.
Aggregate	<b>AggregateType</b> as specified by the <b>AggregateTypeEnum</b> simple type (section <a href="#">2.2.5.1</a> ).
ScorecardDetails	Only the values "Description", "Name", or "Person Responsible" are supported.
DocumentLinks	GUID.
NamedSet	null
None	null

**HeaderType:** The type of **GridHeaderItem** as defined in the **ScorecardNodeTypes** simple type (section [2.2.5.44](#)).

**GroupId:** An integer identifier to identify all members (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 (1) of members). Root headers are an exception to this rule because their **GroupId** value is zero.

**Depth:** Depth of the **GridHeaderItem** in the tree. It starts with value zero for the root level node and keeps incrementing moving towards the leaves.

**DescendantSpan:** Maximum number of header levels for all descendant leaves.

**LeafSpan:** Number of leaves under **GridHeaderItem**.

**IsCollapsed:** This attribute MUST be **TRUE** if the header node is collapsed; otherwise, this attribute is **FALSE**.

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

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

**IsDrillDownDisabled:** This attribute MUST be **TRUE** if the drilldown operation is disabled for **GridHeaderItem**; otherwise, this attribute is **FALSE**. This gets set if it is the leaf node in the **Hierarchy** complex type (section [2.2.4.124](#)).

**IsDrillUpDisabled:** This attribute MUST be **TRUE** if the drill up operation is disabled for this header; otherwise, the attribute is **FALSE**. This attribute gets set if it is the top most node in the **Hierarchy**.

**IsDynamicallyExpandedHeader:** This attribute MUST be **TRUE** if **GridHeaderItem** was created through dynamic expansion (named set expansion); otherwise, this attribute is **FALSE**. The header item can be dynamically expanded only if the **IsDynamicCellExpansionEnabled** attribute and the corresponding **ConfiguredView** (section [2.2.4.77](#)) setting (**AllowDynamicRowMemberExpansion** for rows and **AllowDynamicColumnMemberExpansion** for columns) are set to **TRUE**.

**IsCellHidden:** This attribute MUST be **TRUE** if the header cell is hidden; otherwise, this attribute is **FALSE**.

**IsPathHidden:** This attribute MUST be **TRUE** if the header path is hidden; otherwise, this attribute is **FALSE**.

**IsHiddenBasedOnFilterStatus:** This attribute MUST be **TRUE** if this **GridHeaderItem** is hidden by **Filter** (section [2.2.4.98](#)) status; otherwise, this attribute is **FALSE**.

**NamedSetExpression:** When the **NamedSetType** is **NamedSet**, this MUST conform to a valid MDX set expression. When the type is **CustomFormula**, the **CustomSetFormula** and **NamedSetExpression** properties are equal. For the **TimeFormula** type, this MUST be an empty string.

**CustomSetFormula:** When the **NamedSetType** is **TimeFormula**, this MUST be a valid time intelligence formula. When the type is **CustomFormula**, the **NamedSetExpression** properties are equal.

**IsNamedSetInError:** This attribute MUST be **TRUE** if the named set expression is in an error state; otherwise, this attribute is **FALSE**.

**IsNamedSetEmpty:** This attribute MUST be **TRUE** if the named set expression returned an empty set; otherwise, this attribute is **FALSE**.

**NamedSetType:** It identifies whether it is a named set header, custom formula, time formula, or none, as defined in the **ScorecardNamedSetType** simple type (section [2.2.5.43](#)).

**UseLinkedElementDisplayText:** This attribute MUST be **TRUE** if the linked **Kpi** name is used as the display text for **GridHeaderItem**; otherwise, this attribute is **FALSE**.

**Hyperlink:** Obsolete.

**ShowHyperlinkInNewWindow:** Obsolete.

**IsHierarchyHeader:** This attribute MUST be **TRUE** if the header is part of a **Hierarchy** collection, or **FALSE** if the header is part of a linear list (1).

**IsColumnHeader:** This attribute MUST be **TRUE** if this is a column header, or **FALSE** if this is a row header.

**AppendFilterInfoToHyperlink:** This attribute MUST be **TRUE** if the filter information MUST be appended to the hyperlink; otherwise, this attribute is **FALSE**.

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

**KpiTargetName:** **Kpi** actual or **Target** (section [2.2.4.170](#)) display name for **GridHeaderItem**.

**AggregationType:** Specifies the aggregation types, as defined in the **HeaderAggregationTypes** simple type (section [2.2.5.26](#)).

### 2.2.4.117 GridIndicatorSettings

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

Defines the settings for the [Indicator](#) in the [Target](#) field.

```
<xs:complexType name="GridIndicatorSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Position" type="tns:IndicatorPosition"/>
  </xs:sequence>
  <xs:attribute name="ShowImage" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowText" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowForeColor" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowBackColor" type="xs:boolean" use="required"/>
</xs:complexType>
```

**Position:** Represents the position of the Indicator as defined in [IndicatorPosition](#).

**ShowImage:** This attribute MUST be **true** if the Indicator's image (see [IndicatorBand.ImageData](#)) displays; otherwise, **false**.

**ShowText:** This attribute MUST be **true** if the Indicator's text (see [IndicatorBand.ToolTip](#)) displays; otherwise, **false**.

**ShowForeColor:** This attribute MUST be **true** if the Indicator's foreground color (see [IndicatorBand.Color](#)) is applied; otherwise, **false**.

**ShowBackColor:** This attribute MUST be **true** if the Indicator's background color (see [IndicatorBand.BackColor](#)) is applied; otherwise, **false**.

### 2.2.4.118 GridScoreSettings

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

Defines the settings for the score in the [Target](#) field.

```
<xs:complexType name="GridScoreSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
  <xs:attribute name="ScoreType" type="tns:ScoreTypes" use="required"/>
  <xs:attribute name="RollupType" type="tns:RollupTypes" use="required"/>
  <xs:attribute name="Position" type="tns:DataValuePosition" use="required"/>
</xs:complexType>
```

**ShowValue:** This attribute MUST be **true** if the score is shown for Target column; otherwise, **false**.

**ScoreType:** Represents the score type as defined in [ScoreTypes](#).

**RollupType:** Represents the score rollup type as defined in [RollupTypes](#).

**Position:** Represents the score position as defined in [DataValuePosition](#).

#### 2.2.4.119 GridTargetSettings

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

Defines the display settings for the [Target](#) column.

```
<xs:complexType name="GridTargetSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="VarianceSettings"
type="tns:GridVarianceSettings"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterEmptyRows" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Position" type="tns:DataValuePosition"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PositionActual"
type="tns:DataValuePosition"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScoreSettings"
type="tns:GridScoreSettings"/>
    <xs:element minOccurs="0" maxOccurs="1" name="IndicatorSettings"
type="tns:GridIndicatorSettings"/>
  </xs:sequence>
  <xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowActualAsTarget" type="xs:boolean" use="required"/>
  <xs:attribute name="IgnoreScoreFilter" type="xs:boolean" use="required"/>
</xs:complexType>
```

**VarianceSettings:** Represents the **variance** settings as defined in [GridVarianceSettings](#).

**FilterEmptyRows:** This attribute MUST be **true** if the empty rows are filtered; otherwise, **false**.

**Position:** Represents the position of the Target value in the cell as defined in [DataValuePosition](#).

**PositionActual:** Represents the position of the associated actual value in the cell as defined in [DataValuePosition](#).

**ScoreSettings:** Represents the Target cell's score settings as defined in [GridScoreSettings](#).

**IndicatorSettings:** Represents the Target cell's [Indicator](#) settings as defined in [GridIndicatorSettings](#).

**ShowValue:** This attribute MUST be **true** if the Target value is shown; otherwise, **false**.

**ShowActualAsTarget:** This attribute MUST be **true** if the actual value is shown in place of the Target value; otherwise, **false**.

**IgnoreScoreFilter:** This attribute MUST be **true** if the Target is considered when filtering rows using the score filter; otherwise, **false**.

#### 2.2.4.120 GridVarianceSettings

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

Defines the settings for the **variance** in the [Target](#) column.

```
<xs:complexType name="GridVarianceSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="NumDecimalPlaces" type="xs:int" use="required"/>
  <xs:attribute name="VarianceType" type="tns:VarianceType" use="required"/>
  <xs:attribute name="DisplayType" type="tns:VarianceDisplayType" use="required"/>
  <xs:attribute name="ShowValue" type="xs:boolean" use="required"/>
  <xs:attribute name="Position" type="tns:DataValuePosition" use="required"/>
</xs:complexType>
```

**NumDecimalPlaces:** Represents the number of decimal places to show after the decimal.

**VarianceType:** Represents the **variance** calculation type as defined in [VarianceType](#).

**DisplayType:** Represents the **variance** display type as defined in [VarianceDisplayType](#).

**ShowValue:** This attribute MUST be **true** if the **variance** is displayed in the Target column; otherwise **false**.

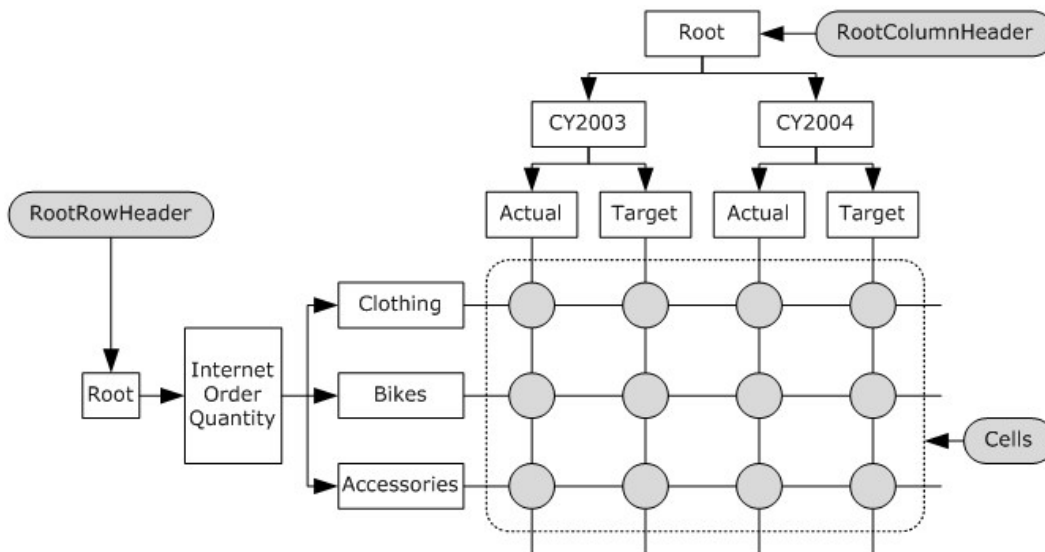
**Position:** Represents the position of the **variance** value as defined in [DataValuePosition](#).

### 2.2.4.121 GridViewData

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

The **GridViewData** complex type specifies the data structure that represents the scorecard view.

The following diagram illustrates the scorecard view representation:



**Figure 4: GridViewData**

The **GridViewData** is mainly composed of two tree data structures representing all the row and column headers and a two dimensional array representing every possible interception between elements of those two trees.

The row and column header trees MUST be accessed by the properties **RootRowHeader** and **RootColumnHeader** respectively. The two dimensional array MUST be accessed by the **Cells** property.

```
<xs:complexType name="GridViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Cells" type="tns:GridCellSet"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader" type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PostQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreRenderTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PerUserTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PageFilters" type="tns:ArrayOfMember"/>
  </xs:sequence>
  <xs:attribute name="ScorecardViewId" xmlns:s1="http://microsoft.com/wsd/types/"
type="s1:guid" use="required"/>
  <xs:attribute name="Cached" type="xs:boolean" use="required"/>
  <xs:attribute name="CacheExpiration" type="xs:dateTime" use="required"/>
  <xs:attribute name="DefaultRollupIndicatorId" xmlns:s1="http://microsoft.com/wsd/types/"
type="s1:guid" use="required"/>
  <xs:attribute name="EmptyCell" type="xs:string"/>
  <xs:attribute name="InvalidCell" type="xs:string"/>
  <xs:attribute name="TIFormula" type="xs:string"/>
  <xs:attribute name="TICurrentDateTime" type="xs:string"/>
</xs:complexType>
```

**Cells:** This is a two dimensional array as defined in the complex type **GridCellSet** (section [2.2.4.101](#)). The array is indexed by two **GridHeaderItem** complex type objects (section [2.2.4.116](#)). One representing a row header and one representing a column header. This element MUST contain one **GridCell** complex type object (section [2.2.4.100](#)) for each possible intersection of a row header and a leaf column header.

**RootRowHeader:** Specifies the root element for the row header tree, as defined in **GridHeaderItem**.

**RootColumnHeader:** Specifies the root element for the column header tree, as defined in **GridHeaderItem**.

**ScorecardLocation:** Points to the scorecard object for which the **GridViewData** was created, as defined in the **RepositoryLocation** complex type (section [2.2.4.161](#)).

**DefaultRollupIndicatorLocation:** Points to the default **indicator** for rollup calculated cells, as defined in **RepositoryLocation**.

**PreQueryTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** just before getting data from the data sources (1) (see **GridViewTransformReference** section [2.2.4.123](#)).



**PostQueryTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** after getting data from the data sources(1) (see **GridViewTransformReference**).

**PreRenderTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** prior to rendering the scorecard (see **GridviewTransformReference**). While all the other types of transform operations are applied once when the **GridViewData** is generated, the pre-render and per-user transforms are applied every time the scorecard is rendered, even if the **GridViewData** object is not new.

**PerUserTransforms:** This element is deprecated and MUST NOT be used.

**PageFilters:** Specifies a collection of members used to slice the scorecard values, as defined in **ArrayOfMember** (section [2.2.4.45](#)).

**ScorecardViewId:** GUID that identifies the **ConfiguredView** complex type (section [2.2.4.77](#)) instance associated with the scorecard pointed to by **ScorecardLocation**.

**Cached:** This attribute MUST be **FALSE** if the **GridViewData** is new, or **TRUE** if it was retrieved from a caching mechanism.

**CacheExpiration:** Specifies when the **GridViewData** object becomes invalid.

**DefaultRollupIndicatorId:** GUID used as the identifier for the **indicator** that is used by default for rollup calculated cells.

**EmptyCell:** Specifies the default text used as the display test for empty cells.

**InvalidCell:** Specifies the default text used as the display test for invalid cells.

**TIFormula:** Specifies the value passed from an external time intelligence filter connected to the scorecard TI Formula endpoint (see **Scorecard.EndPoints** section [2.2.4.162](#)). If set, it represents the Simple Time Period Specification formula that is used by the scorecard query engine to filter **KpiMeasure** complex types (section [2.2.4.129](#)) uniformly independent of data source. If it is null or empty, the default time intelligence filter of the KPI is applied, if one is defined.

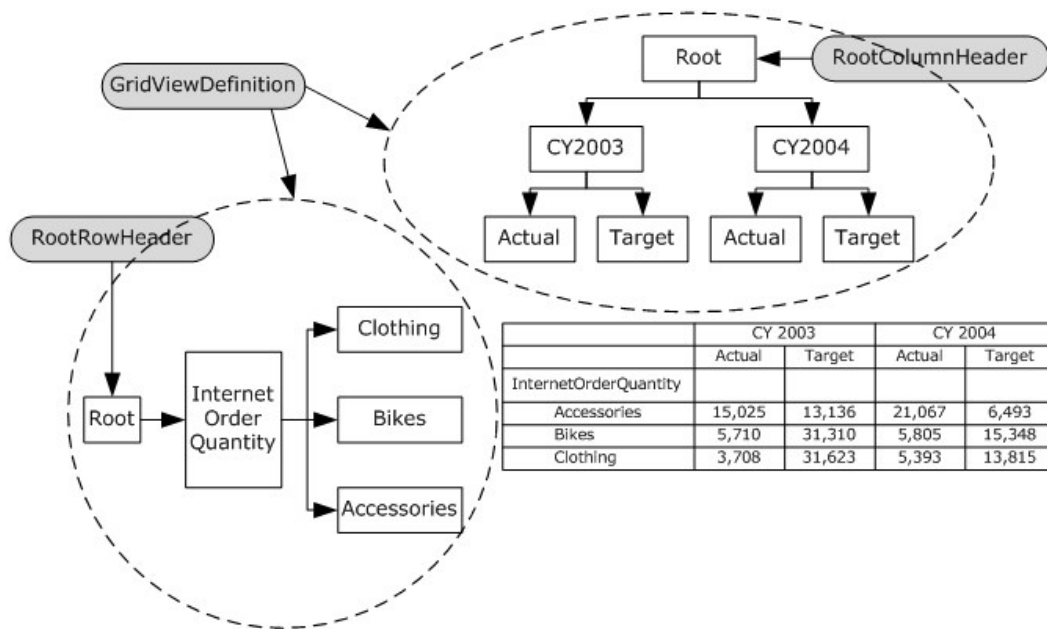
**TICurrentDateTime:** Specifies the value passed from an external time intelligence filter connected to the scorecard Current Date Time endpoint (see **Scorecard.EndPoints**). If set, it represents the Simple Time Period Specification (STPS) **dateTime** that is used by the scorecard query engine to evaluate **KpiMeasures** that contain a time intelligence filter. If not set, the current date time of the server (2) is used by the scorecard query engine to evaluate **KpiMeasures** if a time intelligence filter is defined.

### 2.2.4.122 GridViewDefinition

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

The **GridViewDefinition** complex type specifies the definition of a grid-based scorecard view.

The following picture illustrates the role of a **GridViewDefinition** in a scorecard.



**Figure 5: GridViewDefinition**

The **GridViewDefinition** contains the tree data structures representing all the row and column headers. The row and column header trees MUST be accessed by the properties **RootRowHeader** and **RootColumnHeader** respectively.

```

<xs:complexType name="GridViewDefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CornerCellFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader" type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DefaultRollupIndicatorId"
xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreQueryTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PostQueryTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreRenderTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PerUserTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellBorderColor" type="tns:GridColor"/>
  </xs:sequence>
  <xs:attribute name="EmptyCell" type="xs:string"/>
  <xs:attribute name="InvalidCell" type="xs:string"/>
  <xs:attribute name="ShowGridLines" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowHiddenHeaders" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowMetricHeaders" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowPlusMinus" type="xs:boolean" use="required"/>
</xs:complexType>

```

**CornerCellFormatInfo:** Specifies the format applied to the top left cell of the scorecard as defined in the **GridFormatInfo** complex type (section [2.2.4.115](#)).

**RootRowHeader:** Specifies the root element of the row header tree, as defined in the **GridHeaderItem** complex type (section [2.2.4.116](#)).

**RootColumnHeader:** Specifies the root element of the column header tree, as defined in **GridHeaderItem**.

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

**DefaultRollupIndicatorLocation:** Points to the default **indicator** for rollup calculated cells, as defined in the **RepositoryLocation** complex type (section [2.2.4.161](#)).

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

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

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

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

**CellBorderColor:** Specifies the border color applied to scorecard cells, as defined in the **GridColor** complex type (section [2.2.4.102](#)).

**EmptyCell:** Specifies the string that needs to be displayed in empty scorecard cells. The cells are left empty when this property is **null** or empty.

**InvalidCell:** Specifies the string that needs to be displayed in invalid scorecard cells. The default value for this property is "Error".

**ShowGridLines:** This attribute MUST be **TRUE** if the scorecard grid lines are displayed; otherwise, this attribute is **FALSE**.

**ShowHiddenHeaders:** This attribute MUST be **TRUE** if the hidden headers (see **GridHeaderItem.IsHidden**) are displayed; otherwise, this attribute is **FALSE**.

**ShowMetricHeaders:** This attribute MUST be **TRUE** if the metric headers are displayed; otherwise, this attribute is **FALSE**.

**ShowPlusMinus:** This attribute MUST be **TRUE** if the expand/collapse signs are displayed; otherwise, this attribute is **FALSE**.

### 2.2.4.123 GridViewTransformReference

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

The **GridViewTransformReference** complex type specifies one transform operation to be applied to a **GridViewData** complex type (section [2.2.4.121](#)) instance.

```
<xs:complexType name="GridViewTransformReference"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:PropertyBag"/>
  </xs:sequence>
  <xs:attribute name="Id" type="xs:string"/>
</xs:complexType>
```

**Parameters:** Represents a general property bag, as defined in the **PropertyBag** complex type (section [2.2.4.158](#)). The **Parameters** property MAY be null or empty. If the transformation associated with the **GridViewTransformReference** complex type (section [2.2.4.123](#)) requires any specific information, the **Parameters** property MUST contain that information.

**Id:** Specifies the transformation associated with the **GridViewTransformReference**. It MUST NOT be null or empty. It MUST be one of the transformations registered on the server (2). [<16>](#)

## 2.2.4.124 Hierarchy

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

The **Hierarchy** complex type specifies a hierarchy. It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```
<xs:complexType name="Hierarchy" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
      </xs:sequence>
      <xs:attribute name="DefaultMemberName" type="xs:string"/>
      <xs:attribute name="DimensionUniqueName" type="xs:string"/>
      <xs:attribute name="DisplayFolder" type="xs:string"/>
      <xs:attribute name="HierarchyOrigin" type="tns:HierarchyOrigin" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Levels:** An array of **Level** complex type objects (section [2.2.4.131](#)) in the hierarchy.

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

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

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

**HierarchyOrigin:** The hierarchy structure, as defined by the **HierarchyOrigin** simple type (section [2.2.5.27](#)).

## 2.2.4.125 Indicator

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

A set of visualizations that represent how the actual value of a KPI compares against its target value.

```
<xs:complexType name="Indicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="NoDataIndicatorBand"
          type="tns:IndicatorBand"/>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorBands"
          type="tns:ArrayOfIndicatorBand"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

    </xs:sequence>
    <xs:attribute name="IndicatorType" type="tns:IndicatorType" use="required"/>
    <xs:attribute name="IsBuiltIn" type="xs:boolean" use="required"/>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

**NoDataIndicatorBand:** The [IndicatorBand](#) element that is used when the KPI contains no data. It MUST exist.

**IndicatorBands:** An array of IndicatorBand elements that represent different ranges of values for a KPI.

- The array MUST exist.
- If **IndicatorType** is set to "Standard", there MUST be at least two and no more than ten indicator bands.
- If **IndicatorType** is set to "Centered", there MUST be an even number of indicator bands that counts at least four and no more than 20.

**IndicatorType:** The type of **indicator** as specified by [IndicatorType](#).

**IsBuiltIn:** A Boolean that specifies whether the **indicator** was shipped with the product or not. A value of **true** means the **indicator** was shipped with the product. A value of **false** means that it is a custom **indicator** created by a user.

#### 2.2.4.126 IndicatorBand

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

This is a visualization representing one state of an **indicator**.

```

<xs:complexType name="IndicatorBand" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ImageData" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Color" type="xs:string"/>
  <xs:attribute name="BackColor" type="xs:string"/>
  <xs:attribute name="ToolTip" type="xs:string"/>
</xs:complexType>

```

**ImageData:** A base-64 encoded string converted from a stream of the **Portable Network Graphics (PNG)** image file representing this indicator state.

- The PNG file stream that **ImageData** originates from MUST NOT exceed 512,000 bytes in length.
- Both the height and the width of the PNG image MUST NOT exceed 256 pixels.

**Color:** A string converted from a 24-bit color that represents this **indicator** state when it is shown as text. The string MUST be formatted as "#RRGGBB".

- **RR** – A two-digit hexadecimal value that indicates the amount of red light in the color. For example, #FF0000 defines the color red.

- **GG** – A two-digit hexadecimal value that indicates the amount of green light in the color. For example, #00FF00 defines the color green.
- **BB** – A two-digit hexadecimal value that indicates the amount of blue light in the color. For example, #0000FF defines the color blue.

**BackColor:** A string converted from a 24-bit color that represents this indicator state in visualizations where images or text cannot be displayed, such as in strategy maps. The string MUST be formatted as "#RRGGBB".

- **RR** – A two-digit hexadecimal value that indicates the amount of red light in the color. For example, #FF0000 defines the color red.
- **GG** – A two-digit hexadecimal value that indicates the amount of green light in the color. For example, #00FF00 defines the color green.
- **BB** – A two-digit hexadecimal value that indicates the amount of blue light in the color. For example, #0000FF defines the color blue.

**ToolTip:** A string containing the ToolTip for this **IndicatorBand**. The length MUST NOT exceed 1000 characters.

### 2.2.4.127 Item

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

Represents a key-value pair in a **SerializableDictionary** (section [2.2.4.164](#)).

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

**Key:** Specifies the string key used for addressing the **Value** element content.

**Value:** Specifies the element associated with the **Key**. It MUST be of complex type **MemberSetFormula** (section [2.2.4.145](#)), **MemberList** (section [2.2.4.135](#)), or **Member** (section [2.2.4.134](#)).

The **Key** and **Value** elements MUST conform to the following:

- For each **Key**, there MUST be an associated **Value**.
- Each **Key** MUST be unique and MUST NOT be **null**.

Each **Value** MUST NOT be **null**.

### 2.2.4.128 Kpi

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

A key performance indicator (KPI) is contained in a scorecard.

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

```

<xs:complexContent mixed="false">
  <xs:extension base="tns:FirstClassElement">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Actuals" type="tns:ArrayOfKpiMeasure"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Targets" type="tns:ArrayOfTarget"/>
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

**Actuals:** An array of **KpiMeasure** (see section [2.2.4.129](#)) elements. The array **MUST** exist and **MUST** contain at least one **KpiMeasure**.

**Targets:** An array of **Target** (see section [2.2.4.170](#)) elements.

## 2.2.4.129 KpiMeasure

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

The **KpiMeasure** complex type is contained in a KPI.

```

<xs:complexType name="KpiMeasure" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SecondClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="OwnerKpiLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DefaultDimensionSettings"
type="tns:ArrayOfDefaultDimensionSetting"/>
        <xs:element minOccurs="0" maxOccurs="1" name="OverrideFormatProperties"
type="tns:KpiNumberFormatProperties"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CalcFormulaInfo"
type="tns:CalculatedFormulaInfo"/>
      </xs:sequence>
      <xs:attribute name="AggregateBy" type="tns:AggregateTypeEnum" use="required"/>
      <xs:attribute name="DisableScorecardFilters" type="xs:boolean" use="required"/>
      <xs:attribute name="ModelCurrent" type="xs:decimal" use="required"/>
      <xs:attribute name="Pattern" type="tns:KpiPattern" use="required"/>
      <xs:attribute name="CurrentFormula" type="xs:string"/>
      <xs:attribute name="IsCustomCurrentFormula" type="xs:boolean" use="required"/>
      <xs:attribute name="OdbcQuery" type="xs:string"/>
      <xs:attribute name="OverrideHoverText" type="xs:string"/>
      <xs:attribute name="TimeFilterFormula" type="xs:string"/>
      <xs:attribute name="ValueSource" type="tns:ValueSources" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**OwnerKpiLocation:** The location of the parent **Kpi** complex type (section [2.2.4.128](#)), as specified by the **RepositoryLocation** complex type (see section [2.2.4.161](#)). Upon successful **Kpi** creation, the server (2) **MUST** set this value to a **RepositoryLocation**, whose **ItemUrl** field matches the location of the parent **Kpi**.

**DataSourceLocation:** The location of the **DataSource** complex type (section [2.2.4.85](#)), as specified by **RepositoryLocation**. For **CalcFormulaInfo** to apply to the measure query, **DataSourceLocation.ItemUrl** MUST be empty.

**DefaultDimensionSettings:** An array of **DefaultDimensionSetting** complex types (section [2.2.4.87](#)) which represent the dimension (1) slices to apply to the measure query.

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

**CalcFormulaInfo:** A calculated formula to apply to the measure query, as specified by **CalculatedFormulaInfo** (section [2.2.4.74](#)). For this formula to apply, **DataSourceLocation.ItemUrl** MUST be empty.

**AggregateBy:** The aggregation method to apply to the measure query, as specified by **AggregateTypeEnum** (section [2.2.5.1](#)).

**DisableScorecardFilters:** A value of **TRUE** indicates that scorecard filters are disabled for the measure query; a value of **FALSE** indicates that scorecard filters are enabled for the measure query.

**ModelCurrent:** The fixed value of the **KpiMeasure**.

- **DataSourceLocation.ItemUrl** MUST equal `"/%%fixedvalues%%"` for **ModelCurrent** to be used.

**Pattern:** The pattern this **KpiMeasure** follows, as specified by the **KpiPattern** simple type (section [2.2.5.32](#)). Banding and scoring behave differently with different patterns.

**CurrentFormula:** The MDX formula or **tuple** used to retrieve the current value.

- If **IsCustomCurrentFormula** is set to **TRUE**, the value MUST have one or more non-whitespace characters.
- If **IsCustomCurrentFormula** is set to **FALSE**, the value is ignored.
- MUST be a valid MDX formula or tuple if **DataSource.SourceName** (see section [2.2.4.85](#)) equals "ADOMD.NET".
- The length MUST NOT exceed 4,000 characters.

**IsCustomCurrentFormula:** A value of **TRUE** indicates that **CurrentFormula** is used to compute the current value; a value of **FALSE** indicates that **CurrentFormula** is ignored.

- **DataSource.SourceName** MUST equal "ADOMD.NET" for **IsCustomCurrentFormula** to be used.

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

**OverrideHoverText:** A descriptive string meant for the user. The length MUST NOT exceed 256 characters.

**TimeFilterFormula:** The time intelligence formula to apply to the measure query. The length MUST NOT exceed 4,000 characters.

**ValueSource:** The rollup method to apply to the source data, as specified by the **ValueSources** simple type (section [2.2.5.51](#)).



## 2.2.4.130 KpiNumberFormatProperties

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

Used for custom formatting of KPI measure values.

```
<xs:complexType name="KpiNumberFormatProperties" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="Multiplier" type="xs:decimal" use="required"/>
  <xs:attribute name="FormatType" type="tns:FormatType" use="required"/>
  <xs:attribute name="CurrencySymbol" type="xs:string"/>
  <xs:attribute name="DecimalPlaces" type="xs:int" use="required"/>
  <xs:attribute name="NegativeSymbol" type="tns:FormatNegativeSymbol" use="required"/>
  <xs:attribute name="ShowZeroAs" type="xs:string"/>
  <xs:attribute name="UseThousandsSeparator" type="xs:boolean" use="required"/>
  <xs:attribute name="AdditionalTextLeft" type="xs:string"/>
  <xs:attribute name="AdditionalTextRight" type="xs:string"/>
</xs:complexType>
```

**Multiplier:** The multiplier value used to convert the original value to a different scale.

**FormatType:** The formatting pattern used for number formatting, as specified by **FormatType** (see section [2.2.5.23](#)).

**CurrencySymbol:** The currency symbol used for number formatting.

**DecimalPlaces:** The number of decimal places used for number formatting. The value MUST NOT be less than 0 and MUST NOT be greater than 28.

**NegativeSymbol:** The representation of negative values used for number formatting, as specified by **FormatNegativeSymbol** (see section [2.2.5.22](#)).

**ShowZeroAs:** The string used, if its length is greater than 0 characters, to express a value of 0; otherwise, 0 will be formatted as a number, as specified in **FormatType** (section [2.2.5.23](#)). The length MUST NOT exceed 8 characters.

**UseThousandsSeparator:** A value of **true** indicates that a thousands separator is enabled for number formatting; a value of **false** indicates it is disabled.

**AdditionalTextLeft:** The string added to the left of the formatted number. The length MUST NOT exceed 8 characters.

**AdditionalTextRight:** The string added to the right of the formatted number. The length MUST NOT exceed 8 characters.

## 2.2.4.131 Level

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

This complex type specifies a level. It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```
<xs:complexType name="Level" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:attribute name="DimensionUniqueName" type="xs:string"/>
      <xs:attribute name="HierarchyUniqueName" type="xs:string"/>
      <xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
      <xs:attribute name="LevelNumber" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

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

```

**DimensionUniqueName:** The unique name of the dimension (1) 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 (1) or hierarchy into one element at the top of the dimension (1) or hierarchy; otherwise, **false**.

**LevelNumber:** The numeric representation of the level depth in the dimension (1) 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 (1) or hierarchy. If set to 1, this member is at the first level of the dimension (1) or hierarchy, 2 indicates that the member is at the second level of the dimension (1) or hierarchy, and so on.

### 2.2.4.132 MDXParameterDefinition

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

The **MDXParameterDefinition** is a complex type that specifies a custom MDX used to retrieve data.

```

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

```

**Expression:** A string representing an MDX.

### 2.2.4.133 Measure

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

The **Measure** complex type specifies a measure. It extends the complex type **NameInfo** (section [2.2.4.149](#)).

```

<xs:complexType name="Measure" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:attribute name="AggregatorValue" type="xs:int" use="required"/>
      <xs:attribute name="MeasureGroup" type="xs:string"/>
      <xs:attribute name="DisplayFolder" type="xs:string"/>
      <xs:attribute name="HierarchyName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**AggregatorValue:** The numeric value representing the aggregation type for this measure as defined in the MEASURE\_AGGREGATOR column of the MDSHEMA\_MEASURES rowset in [\[MS-SSAS\]](#) section 3.1.4.2.2.1.3.9.1.

**MeasureGroup:** The name of the measure group which contains this measure.

**DisplayFolder:** The name of the display folder for this measure.

**HierarchyName:** The unique name of the hierarchy of this measure.

#### 2.2.4.134 Member

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

The **Member** complex type represents an OLAP member in a **Dimension** complex type (section [2.2.4.90](#)).

```
<xs:complexType name="Member" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberOperation"
type="tns:MemberOperation"/>
  </xs:sequence>
  <xs:attribute name="Caption" type="xs:string"/>
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="HierarchyPath" type="xs:string"/>
  <xs:attribute name="LevelName" type="xs:string"/>
  <xs:attribute name="DimensionName" type="xs:string"/>
  <xs:attribute name="LevelDepth" type="xs:int" use="required"/>
  <xs:attribute name="ChildCount" type="xs:long" use="required"/>
  <xs:attribute name="IsChildCountReal" type="xs:boolean" use="required"/>
  <xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
  <xs:attribute name="DimensionUniqueName" type="xs:string"/>
  <xs:attribute name="MemberType" type="tns:MemberType" use="required"/>
</xs:complexType>
```

**MemberOperation:** The **MemberOperation** complex type (section [2.2.4.136](#)) for this member (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 for this member (3).

**DimensionName:** The unique name of the dimension (1) that this member (3) belongs to.

**LevelDepth:** The numeric value of the level depth in the **Hierarchy** (section [2.2.4.124](#)) that this member belongs to. Zero indicates that this member is at the root level in the hierarchy. If set to 1, this member is at the first level of the hierarchy, 2 indicates that the member is at the second level of the hierarchy, and so on.

**ChildCount:** The number of child members (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, this attribute is **FALSE**.

**DimensionUniqueName:** The unique name of the **Dimension** for this member (3).

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

### 2.2.4.135 MemberList

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

The **MemberList** complex type specifies the members (3) of an OLAP hierarchy. This type extends **MemberSet** complex type (section [2.2.4.144](#)), and can be used with any axis type.

```
<xs:complexType name="MemberList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberSet">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="memberList" type="tns:ArrayOfString"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**memberList:** An array of strings representing the members of an OLAP hierarchy. This MUST conform to the schema of complex type **ArrayOfString** complex type (section [2.2.4.54](#)). Each string in the list represents the **UniqueName** string property of an OLAP **Member** complex type (section [2.2.4.134](#)).

### 2.2.4.136 MemberOperation

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

Represents the basic [member](#) operations that can be performed on an OLAP dimension (1) member.

MemberOperation abstract type is the base class for [MemberOperationAllDescendants](#), [MemberOperationChildren](#), [MemberOperationDescendants](#), [MemberOperationDrillUp](#), [MemberOperationHide](#) and [MemberOperationLeafDescendants](#).

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

### 2.2.4.137 MemberOperationAllDescendants

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

A **MemberOperation** complex type (section [2.2.4.136](#)) that represents all descendants of a referred [member](#) in the [dimension hierarchy](#). This type extends **MemberOperation**.

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

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

#### 2.2.4.138 MemberOperationChildren

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

A [MemberOperation](#) that represents all child members of a referred [member](#) in a [dimension hierarchy](#). This type extends MemberOperation.

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

#### 2.2.4.139 MemberOperationDescendants

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

A [MemberOperation](#) that represents all descendants of a referred [member](#) at a specified level in the [hierarchy](#). This type extends MemberOperation.

```
<xs:complexType name="MemberOperationDescendants"  
  xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexContent mixed="false">  
    <xs:extension base="tns:MemberOperation">  
      <xs:attribute name="LevelUniqueName" type="xs:string"/>  
      <xs:attribute name="LevelDisplayName" type="xs:string"/>  
    </xs:extension>  
  </xs:complexContent>  
</xs:complexType>
```

**LevelUniqueName:** The unique name of a [level](#) in the [dimension](#) hierarchy.

**LevelDisplayName:** The display name of a level (see section [2.2.4.131](#)) in a dimension (see section [2.2.4.90](#)) hierarchy (see section [2.2.4.124](#)).

#### 2.2.4.140 MemberOperationDrillUp

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

A [MemberOperation](#) that represents the parent of a referred [member](#). This type extends MemberOperation.

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

#### 2.2.4.141 MemberOperationHide

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

A [MemberOperation](#) that hides a referred [member](#). This type extends MemberOperation.

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

#### 2.2.4.142 MemberOperationLeafDescendants

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

A [MemberOperation](#) that represents all descendants of a referred [member](#) that are also leaf members in the [dimension hierarchy](#). This type extends MemberOperation.

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

#### 2.2.4.143 MemberParameterDefinition

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

The **MemberParameterDefinition** is a complex type that represents a group of members (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 [2.2.4.45](#)) object representing the list (1) of default members (3) for a specified dimension (1).

#### 2.2.4.144 MemberSet

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

Specifies the properties of an OLAP member hierarchy.

```

<xs:complexType name="MemberSet" abstract="true" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="FilterEmpty" type="xs:boolean" use="required"/>
  <xs:attribute name="HierarchyType" type="tns:HierarchyType" use="required"/>
  <xs:attribute name="Hierarchize" type="xs:boolean" use="required"/>
  <xs:attribute name="Distinct" type="xs:boolean" use="required"/>
  <xs:attribute name="HierarchyName" type="xs:string"/>
</xs:complexType>

```

**FilterEmpty:** This attribute MUST be present and MUST be **true** if the FILTER function MUST be used in the MDX query; otherwise, **false**.

**HierarchyType:** This attribute MUST be present. It specifies the type of the hierarchy that the members belong to. It MUST conform to the schema of **HierarchyType** (section [2.2.5.28](#)) simple type.

**Hierarchize:** This attribute MUST be present and MUST be **true** if the HIERARCHIZE function MUST be used in the MDX query; otherwise, **false**.

**Distinct:** This attribute MUST be present and MUST be **true** if the DISTINCT function MUST be used in the MDX query; otherwise, **false**.

**HierarchyName:** This attribute MUST NOT be **null**. It specifies the unique name of the hierarchy.

#### 2.2.4.145 MemberSetFormula

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

Specifies a collection of operations on the members (3) of an OLAP hierarchy. This type extends [MemberSet](#) and can be used with any axis type.

```

<xs:complexType name="MemberSetFormula" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberSet">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Operations"
          type="tns:ArrayOfSetOperation"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**Operations:** This element MUST NOT be **null**. It contains a collection of elements of complex type **SetOperation** (section [2.2.4.165](#)) that specify the operations on the members of the hierarchy.

#### 2.2.4.146 MemberTransform

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

Represents a transform, such as drilldown, applied to a [member](#), [hierarchy](#) group or [KPI](#).

```

<xs:complexType name="MemberTransform" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="GroupId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellPath" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:MemberTransformType"/>
  </xs:sequence>
</xs:complexType>

```

```

    <xs:element minOccurs="1" maxOccurs="1" name="Operation"
type="tns:MemberTransformOperation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**GroupId:** The string representing a hierarchy group identifier.

**CellPath:** The location of the member inside the hierarchy group.

**Type:** The [MemberTransformType](#) of the **MemberTransform**.

**Operation:** The [MemberTransformOperation](#) of the **MemberTransform**.

**CustomData:** Specifies additional data related to the **MemberTransform**. This element MUST be present. This element MUST NOT be empty. The content of **CustomData** is dependent on the Operation of the **MemberTransform** as designated in the following table.

Operation	Content
Replace	CustomData MUST be an instance of <a href="#">ArrayOfMember</a> .
DrillUp, DrillDown, or Expand	CustomData MUST be an instance of <a href="#">DataSource</a> .

#### 2.2.4.147 NamedSet

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

An OLAP named set.

```

<xs:complexType name="NamedSet" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Dimensions" type="tns:ArrayOfString"/>
  </xs:sequence>
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="Expression" type="xs:string"/>
  <xs:attribute name="DisplayFolder" type="xs:string"/>
</xs:complexType>

```

**Dimensions:** The list (1) of dimensions (section [2.2.4.90](#)) used in the named set, using the Dimension.UniqueName property. It MUST conform to the schema of the **ArrayOfString** (section [2.2.4.54](#)) complex type.

**Name:** The display name for the named set.

**Expression:** The MDX for this named set.

**DisplayFolder:** Where the named set appears in a hierarchical view of named sets.

#### 2.2.4.148 NamedSetParameterDefinition

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

The **NamedSetParameterDefinition** is a complex type representing a set of members (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.

### 2.2.4.149 NameInfo

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

The **NameInfo** 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 [2.2.4.133](#)).

```

<xs:complexType name="NameInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="DisplayName" type="xs:string"/>
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
</xs:complexType>

```

**DisplayName:** The display name of the cube, dimension, hierarchy, level, or measure.

**UniqueName:** The unique name of the cube, dimension, hierarchy, level, or measure.

**Description:** The description of the cube, dimension, hierarchy, level, or measure.

### 2.2.4.150 NumericFormat

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

The **NumericFormat** is a complex type that represents the numeric format setting for an Analysis Services measure numeric value within an analytic grid report.

```

<xs:complexType name="NumericFormat" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FormatType" type="tns:FormatType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CurrencySymbol" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DecimalPlaces" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NegativeSymbol"
type="tns:FormatNegativeSymbol"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ShowZeroAs" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UseThousandsSeparator" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextLeft" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextRight" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**MemberName:** The Analysis Services measure name to which this numeric formatting is being applied.

**FormatType:** The formatting pattern used for number formatting, as specified by **FormatType** (see section [2.2.5.23](#)).

**CurrencySymbol:** The currency symbol for number formatting.

**DecimalPlaces:** The number of trailing decimal places used for number formatting. The value MUST NOT be less than 0 and MUST NOT be greater than 30.

**NegativeSymbol:** The representation of negative values used for number formatting.

**ShowZeroAs:** The string used, if its length is greater than 0 characters, to express the value of 0; otherwise formatted as a number.

**UseThousandsSeparator:** A value of **true** indicates that a thousands separator is enabled for number formatting; a value of **false** indicates it is disabled.

**AdditionalTextLeft:** The text added to the left of the formatted number.

**AdditionalTextRight:** The text added to the right of the formatted number.

#### 2.2.4.151 NumericFormatsHashtable

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

An array of **NumericFormat** objects.

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

**NumericFormat:** This element MUST NOT be null and MUST conform to the schema of the **NumericFormat** (see section [2.2.4.150](#)) complex type.

#### 2.2.4.152 OLAPQueryData

**Namespace:** <http://performancepoint.microsoft.com/OLAPQueryData>

Represents an analytic query.

```
<xs:complexType name="OLAPQueryData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:ArrayOfParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
      type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MDX" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**Parameters:** An **ArrayOfParameters** collection (see section [2.2.4.54](#)) containing all the user-defined parameters for the current query as well as their default values. It MUST NOT be null. If there are no user-defined parameters, it MUST be empty.

**DataSourceLocation:** A **RepositoryLocation** object (see section [2.2.4.163](#)) that specifies the location on the server (2) of the data source object associated with this query. It MUST NOT be null.

**MDX:** The MDX query used to generate data for the analytic report. It MUST NOT be null or empty. Any parameters from the **Parameters** collection used in this query MUST be denoted using left and right angle brackets. For example, a parameter named *ParameterName* MUST be included as `<<ParameterName>>`.

### 2.2.4.153 OLAPReportView

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

The **OLAPReportView** complex type contains all the state information for an analytic report.

```
<xs:complexType name="OLAPReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryData" type="qdata:OLAPQueryData"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ReportViewData" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentReportViewLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowInformationBar" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryState" type="query:QueryState"/>
  </xs:sequence>
  <xs:attribute name="MeasureGroupName" type="xs:string"/>
  <xs:attribute name="Caption" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
  <xs:attribute name="FormatDimensionUniqueName" type="xs:string"/>
</xs:complexType>
```

**QueryData:** An **OLAPQueryData** complex type object (section [2.2.4.152](#)) that specifies data source information and user-defined parameters. It MUST NOT be null. Either this object or the **QueryState** complex type object (section [2.2.4.159](#)) MUST be populated to represent the query for the report.

**ReportViewData:** Specifies view data for the current report. It MUST be XML that can **deserialize** into an object that inherits from the **AnalyticBaseReportViewData** complex type (section [2.2.4.14](#)). It MUST NOT be null or empty. See also the complex types **AnalyticChartReportView** (section [2.2.4.16](#)) and **AnalyticGridReportView** (section [2.2.4.17](#)), which both inherit from **AnalyticBaseReportViewData**.

**ParentReportViewLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the parent report on the server (2). It MUST NOT be null. It SHOULD be empty to indicate that there is no parent report. It MUST contain the location of a report on the server (2) if the method **SaveTemporaryAnalyticReport** is being called (section [3.1.4.65](#)).

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

**QueryState:** A **QueryState** object that specifies the current data query. It MUST NOT be null. Either this object or the **QueryData** object MUST be populated to represent the query for the report. If this object is used, the **IsEnabled** property MUST be set to **TRUE**. If both **QueryData** and **QueryState** are populated and **QueryState.IsEnabled** is **TRUE**, the **QueryState** object will be

used to run the query. If **QueryState.IsEnabled** is **FALSE**, the **QueryData** object will be used to run the query.

**MeasureGroupName:** Specifies the measure group that was selected when the report was last modified.

**Caption:** Specifies the text that is displayed in the caption for the report.

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

**FormatDimensionUniqueName:** Specifies a text name that uniquely identifies the dimension (1) to use to obtain data formatting information for this report.

#### 2.2.4.154 Parameter

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

Specifies a logical element of an analytic query whose value can be changed independently of the analytic query.

```
<xs:complexType name="Parameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultValue" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Name" type="xs:string"/>
</xs:complexType>
```

**DefaultValue:** The string value that the parameter will use by default.

**Name:** A string that uniquely identifies the parameter within its parent, `ArrayOfParameter` (see section [2.2.4.49](#)). It MUST NOT contain a left-angle bracket (<) or a right-angle bracket (>).

#### 2.2.4.155 ParameterDefinition

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

This class represents the non-visual portion of the metadata to describe a parameter. This class carries the state necessary to generate a parameter list representing possible connections that can be originated from a first-class element.

```
<xs:complexType name="ParameterDefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ParameterUniqueName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayValues">
      <xs:complexType>
        <xs:sequence>
          <xs:any minOccurs="0" maxOccurs="unbounded"
            namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
          <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
            processContents="lax"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element minOccurs="0" maxOccurs="1" name="CustomDefinition" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParameterProviderId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

```

    <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 <a href="#">MdxParameterDefinition</a> object.
MemberParameterDataProvider	A <a href="#">MemberParameterDefinition</a> object.
NamedSetParameterDataProvider	A <a href="#">NamedSetParameterDefinition</a> object.
ParameterScorecardCellProvider	"BeginPoint_ScorecardCell"
ParameterScorecardColumnMemberProvider	"BeginPoint_ScorecardColumnMember"
ParameterScorecardKpiProvider	"BeginPoint_Kpi"
ParameterScorecardRowMemberProvider	"BeginPoint_ScorecardRowMember"
TimeIntelligencePostFormulaProvider	A <a href="#">TimeIntelligencePostFormulaDefinition</a> object.
TimeIntelligenceProvider	A <a href="#">TimeIntelligenceDefinition</a> object.

**DisplayName:** The display name of the parameter.

**EmitterType:** A [BeginPointEmitterType](#) object that specifies the type of information the parameter emits.

**KeyColumn:** The column name containing the key identifier for the parameter values.

**ParentKeyColumn:** The column name containing the parent key column.

**DisplayColumn:** The column name containing the display name of the parameter values.

**IsDefaultColumn:** The column name containing the Boolean value that indicates the row is a default selection of the parameter values.

**DefaultPostFormula:** The default post formula for this parameter as defined in [\[MSFT-ConnectionFormula\]](#).

#### 2.2.4.156 ParameterMapping

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

Provides the mapping information between a **ParameterDefinition** (section [2.2.4.155](#)) and a **DashboardItem** (section [2.2.4.83](#)).

```
<xs:complexType name="ParameterMapping" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ConditionalData">
      <xs:complexType>
        <xs:sequence>
          <xs:any minOccurs="0" maxOccurs="unbounded"
            namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
          <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
            processContents="lax"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="EndPointUniqueName" type="xs:string"/>
  <xs:attribute name="Id" xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"
    use="required"/>
  <xs:attribute name="SourceColumnName" type="xs:string"/>
  <xs:attribute name="DashboardItemId" xmlns:s1="http://microsoft.com/wsdl/types/"
    type="s1:guid" use="required"/>
  <xs:attribute name="ParameterUniqueName" type="xs:string"/>
  <xs:attribute name="PostFormula" type="xs:string"/>
  <xs:attribute name="IsConditionalDataEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDefaultVisibility" type="xs:boolean" use="required"/>
</xs:complexType>
```

**ConditionalData:** The **DataTable** (as described in [\[DataTable\]](#)) containing visibility values that indicate a connected Web Part is visible. The **DataTable** MUST contain a **DataColumn** with name equal to the **KeyColumn** defined in **ParameterDefinition** (section [2.2.4.155](#)) that contains key values. The **DataTable** MUST contain a **DataColumn** with name equal to the **DisplayColumn** defined in **ParameterDefinition** (section [2.2.4.155](#)) that contains display values; otherwise, the first column in the **DataTable** will be used for display values.

**EndPointUniqueName:** Specifies the unique name of the endpoint for the **DashboardItem** (section [2.2.4.83](#)).

**Id:** A GUID that marks the mapping relationship.

**SourceColumnName:** A column name that appears in the return of the query that pulls selected values for the parameter associated with the element identified by **DashboardItemId**.

**DashboardItemId:** Identifies the **DashboardItem** that is the source of the parameter.

**ParameterUniqueName:** This attribute MUST equal the **ParameterUniqueName** defined in **ParameterDefinition** (section [2.2.4.155](#)).

**PostFormula:** A **PostFormula** is a transformation expression that is applied to the selected values passed from a filter or scorecard to consuming report or scorecard as defined in [\[MSFT-ConnectionFormula\]](#).

**IsConditionalDataEnabled:** This attribute MUST be set to **true** if **ConditionalData** is not null; otherwise, **false**.

**IsDefaultVisibility:** This attribute MUST be set to **true** if the Web Part is shown as a default, when the provider does not enable any consumers via configured visible values; otherwise, **false**.

### 2.2.4.157 PasReportViewData

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

Contains all the state information for a ProClarity Analytics Server report.

```
<xs:complexType name="PasReportViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ServerUrl" type="xs:string"/>
  <xs:attribute xmlns:s1="http://microsoft.com/wsd1/types/" name="PageId" type="s1:guid"
  use="required"/>
  <xs:attribute name="PagePath" type="xs:string"/>
  <xs:attribute name="ConfigOptions" type="xs:string"/>
</xs:complexType>
```

**ServerUrl:** The URL identifies the ProClarity Analytics Server of the report view.

**PageId:** The ProClarity Analytics Server report view GUID identifier.

**PagePath:** The ProClarity Analytics Server report URL path that is relative to the server (2) URL. The absolute URL is the combination of the **ServerUrl** and **PagePath** parts.

**ConfigOptions:** A list (1) of ProClarity Analytics Server report view configuration options that is included as the "uiConfig" URL parameter query string.

### 2.2.4.158 PropertyBag

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

The **PropertyBag** complex type MUST contain a pairing of keys and values.

```
<xs:complexType name="PropertyBag" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfChoice1"/>
  </xs:sequence>
</xs:complexType>
```

**Keys:** Key names of type string.

**Values:** A property chosen from a list (1) of various data types; see [ArrayOfChoice1](#).

## 2.2.4.159 QueryState

**Namespace:** http://schemas.microsoft.com/performancepoint/2007/03/query

An alternate representation of a MDX query that includes the member selections of each axis.

```
<xs:complexType name="QueryState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Axes" type="tns:ArrayOfAxis"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsEnabled" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UnknownFilterParameter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowDatasourceFormatting"
type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
  </xs:sequence>
</xs:complexType>
```

**Axes:** An **ArrayOfAxis** (see section [2.2.4.25](#)) collection that contains the member selections for each axis. It MUST NOT be null.

**IsEnabled:** Specifies whether the **QueryState** object represents the query for the report. A value of **true** indicates that the **QueryState** object will be used. A value of **false** indicates that the **QueryState** object will not be used.

**UnknownFilterParameter:** Specifies whether or not an aggregation of multiple members are selected on one of the filter axes. A value of **true** indicates that multiple members are selected on a filter axis. A value of **false** indicates that they are not.

**ShowDatasourceFormatting:** Specifies whether or not formatting information from the data source is used to determine how to display data. A value of **true** indicates that formatting information from the data source is to be used. A value of **false** indicates that it is not.

**DataSourceLocation:** A **RepositoryLocation** object (see section [2.2.4.163](#)) that specifies the location on the server (2) of the data source object associated with this query state. It MUST NOT be null.

## 2.2.4.160 ReportView

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

The **ReportView** complex type controls the visual display of data in a dashboard and can be coordinated with other report views using filters. Report views include analytic grids and charts, PivotTable and PivotChart reports, Excel spreadsheets [\[MS-XLSX\]](#), SQL Server Reporting Services reports, strategy maps, trend charts, web pages, and custom reports.

```
<xs:complexType name="ReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="EndPoints" type="tns:ArrayOfEndPoint"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```



```

<xs:attribute name="TypeName" type="xs:string"/>
<xs:attribute name="RenderClientSide" type="xs:boolean" use="required"/>
<xs:attribute name="ConfiguredViewId" xmlns:s1="http://microsoft.com/wsdl/types/"
type="s1:guid" use="required"/>
<xs:attribute name="SubTypeId" type="xs:string"/>
<xs:attribute name="RendererClassName" type="xs:string"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

**ScorecardLocation:** This property is only used for strategy map **ReportViews**. It stores the **RepositoryLocation** complex type (section [2.2.4.161](#)) of the Scorecard associated with the strategy map.

**CustomData:** Specifies custom data for the report view. This element **MUST** be present. The content of **CustomData** is determined by the **TypeName** of the report view as designated in the following table.

TypeName	Content
AnalyticChart	<b>CustomData</b> MUST contain an <b>OlapReportView</b> complex type object (section <a href="#">2.2.4.153</a> ) serialized as an XML document and XML encoded. The value of the <b>OlapReportView ReportViewData</b> property MUST be an <b>AnalyticChartReportView</b> complex type (section <a href="#">2.2.4.16</a> ) serialized as an XML document.
DecompositionTree	<b>CustomData</b> MUST be ignored.
ExcelService	<b>CustomData</b> MUST contain an <b>ExcelServicesData</b> complex type object (section <a href="#">2.2.4.97</a> ) serialized as an XML document and XML encoded.
Implementation-specific custom string	<b>CustomData</b> MAY be used depending on the implementation of the third-party report view. The specific content required is defined by the implementer of the custom report view.
KpiDetails	<b>CustomData</b> MUST be ignored.
OLAPDrillThrough	<b>CustomData</b> MUST be ignored.
OLAPGrid	<b>CustomData</b> MUST contain an <b>OlapReportView</b> object serialized as an XML document and XML encoded. The value of the <b>OlapReportView ReportViewData</b> property MUST be an <b>AnalyticGridReportView</b> complex type (section <a href="#">2.2.4.17</a> ) serialized as an XML document.
PasPage	<b>CustomData</b> MUST contain a <b>PasReportViewData</b> complex type (section <a href="#">2.2.4.157</a> ) serialized as an XML document and XML encoded.
PivotChart	<b>CustomData</b> MUST be ignored.
PivotTable	<b>CustomData</b> MUST be ignored.
Spreadsheet	<b>CustomData</b> MUST be ignored.
StrategyMap	<b>CustomData</b> MUST contain a <b>StrategyMapViewData</b> complex type (section <a href="#">2.2.4.168</a> ) serialized as an XML document and XML encoded.
SqlReport	<b>CustomData</b> MUST contain a <b>SqlReportViewData</b> complex type (section <a href="#">2.2.4.166</a> ) serialized as an XML document and XML encoded.

TypeName	Content
TrendAnalysisChart	<b>CustomData</b> MUST be ignored.
Url	<b>CustomData</b> MUST NOT be null and MUST be a valid <a href="#">RFC1738</a> URL or a string constant: "about:blank".

**EndPoint:** Specifies the available connection destinations to filter and control the display of this report view. This element MUST be present. If the **SubTypeId** is not custom and there are no connection destinations, two **EndPoint** complex type (section [2.2.4.95](#)) items will be present for row and column with a category of None. This element MUST conform to the schema of the **ArrayOfEndPoint** complex type (section [2.2.4.33](#)).

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

**TypeName:** Specifies the name of the report view type. This attribute MUST be present. The content of **TypeName** is determined by the type of the report view as designated in the following table. If the report view is a custom report view, **TypeName** MUST NOT be empty. It MUST NOT be longer than 60 characters. It MUST NOT contain the characters ', ', or \. It MUST NOT be the same as one of the predefined report view types already listed in the following table.

Type	Content
URL	<b>TypeName</b> MUST be "Url".
SQL Report	<b>TypeName</b> MUST be "SqlReport".
Spreadsheet	<b>TypeName</b> MUST be "Spreadsheet".
PivotTable	<b>TypeName</b> MUST be "PivotTable".
PivotChart	<b>TypeName</b> MUST be "PivotChart".
Strategy Map	<b>TypeName</b> MUST be "StrategyMap".
Trend Analysis Chart	<b>TypeName</b> MUST be "TrendAnalysisChart".
Analytic Grid	<b>TypeName</b> MUST be "OLAPGrid".
Analytic Chart	<b>TypeName</b> MUST be "AnalyticChart".
Decomposition Tree Report	<b>TypeName</b> MUST be "DecompositionTree".
Analytic Drill Through report	<b>TypeName</b> MUST be "OLAPDrillThrough".
Excel Services Workbook	<b>TypeName</b> MUST be "ExcelServices".
PAS Page	<b>TypeName</b> MUST be "PasPage".
KPI Detail Page	<b>TypeName</b> MUST be "KpiDetails".

**RenderClientSide:** If **TRUE**, the report view is rendered on the client. If **FALSE**, the report view is rendered on the server (2).

**ConfiguredViewId:** Specifies the identity of the **ConfiguredView** complex type (section [2.2.4.77](#)) for this **ReportView**. This element MUST be present.

**SubTypeId:** Specifies the identifier for the type of the report view. This attribute **MUST** be present. The content of **SubTypeId** is determined by the type of the report view, as designated in the following table. If the report view is a custom report view, **SubTypeId** **MUST NOT** be empty. It **MUST NOT** be longer than 60 characters. It **MUST NOT** contain the characters ', ", or \. It **MUST NOT** be the same as one of the predefined report view type's **SubTypeId** already listed in the following table.

Type	Content
URL	<b>SubTypeId</b> MUST be "Url".
SQL Report	<b>SubTypeId</b> MUST be "SqlReport".
Spreadsheet	<b>SubTypeId</b> MUST be "Spreadsheet".
PivotTable	<b>SubTypeId</b> MUST be "PivotTable".
PivotChart	<b>SubTypeId</b> MUST be "PivotChart".
Strategy Map	<b>SubTypeId</b> MUST be "StrategyMap".
Trend Analysis Chart	<b>SubTypeId</b> MUST be "TrendAnalysisChart".
Analytic Grid	<b>SubTypeId</b> MUST be "OLAPGrid".
Analytic Chart	<b>SubTypeId</b> MUST be "AnalyticChart".
Decomposition Tree Report	<b>SubTypeId</b> MUST be "DecompositionTree".
Analytic Drill Through report	<b>SubTypeId</b> MUST be "OLAPDrillThrough".
Excel Services Workbook	<b>SubTypeId</b> MUST be "ExcelServices".
PAS Page	<b>SubTypeId</b> MUST be "PasPage".
KPI Detail Page	<b>SubTypeId</b> MUST be "KpiDetails".

**RendererClassName:** Specifies the fully qualified name for the assembly class that provides the rendering for the report view. This attribute **MUST** be present. If **SubTypeId** is not one of the predefined report view types listed in the table for **SubTypeId**, **RendererClassName** **MUST** be the assembly-qualified name of the custom type; otherwise, the value **MUST** be empty.

### 2.2.4.161 RepositoryLocation

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

The **RepositoryLocation** complex type specifies the location of a **FirstClassElement** (section [2.2.4.99](#)) stored on the server (2).

```
<xs:complexType name="RepositoryLocation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ItemUrl" type="xs:string" use="required"/>
  <xs:attribute default="None" name="ItemType" type="tns:FirstClassObjectType"
  use="optional"/>
  <xs:attribute default="00000000-0000-0000-0000-000000000000" name="ItemGuid"
  use="optional"/>
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
    </xs:restriction>
  </xs:simpleType>
</xs:complexType>
```

```

        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
<xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteCollectionGuid"
use="optional">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-
fA-F]{12}"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
<xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteGuid"
use="optional">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-
fA-F]{12}"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
<xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpListGuid"
use="optional">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-
fA-F]{12}"/>
        </xs:restriction>
    </xs:simpleType>
</xs:attribute>
</xs:complexType>

```

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

- If the **FirstClassElement** was created by **SaveTemporaryAnalyticReport** (section [3.1.4.65](#)), this value **MUST** be empty.
- When creating a new **FirstClassElement**, this value **MUST** be empty.
- In all other cases, this value **MUST** contain a valid URL.

**ItemType:** The type of **FirstClassElement** as specified by **FirstClassObjectType** (section [2.2.5.20](#)).

**ItemGuid:** The GUID assigned to the **FirstClassElement** by the server (2).

**SpSiteCollectionGuid:** The GUID of the **site collection** to which the **FirstClassElement** belongs. This value is assigned by the server (2).

**SpSiteGuid:** The GUID of the site (2) to which the **FirstClassElement** belongs. This value is assigned by the server (2).

**SpListGuid:** The GUID of the list (2) to which the **FirstClassElement** belongs. This value is assigned by the server (2).

## 2.2.4.162 Scorecard

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

This complex type represents a scorecard.

```
<xs:complexType name="Scorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ConfiguredViews"
type="tns:ArrayOfConfiguredView"/>
        <xs:element minOccurs="0" maxOccurs="1" name="EndPoints" type="tns:ArrayOfEndPoint"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
      </xs:sequence>
      <xs:attribute name="RendererClassName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**ConfiguredViews:** Settings for display, behavior, and other purposes, as specified by **ArrayOfConfiguredView** (section [2.2.4.27](#)). MUST be present and MUST contain at least one **ConfiguredView** (section [2.2.4.77](#)).

**EndPoints:** Specifies the available connection destinations to filter and control the display of this scorecard. This element MUST be present. This element MUST conform to the schema of the **ArrayOfEndPoint** (section [2.2.4.33](#)) complex type.

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

**RendererClassName:** Specifies the fully qualified name for the assembly class that provides the rendering for the scorecard. This attribute MUST be present. If the scorecard is a custom type, **RendererClassName** MUST be the assembly-qualified name of the custom type; otherwise, the value MUST be empty.

## 2.2.4.163 SecondClassElement

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

This abstract class is the base class for **ConfiguredView** (section [2.2.4.77](#)), **DashboardElement** (section [2.2.4.80](#)), and **KpiMeasure** (section [2.2.4.129](#)).

```
<xs:complexType name="SecondClassElement" abstract="true"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Element">
      <xs:attribute name="Guid" xmlns:s1="http://microsoft.com/wsd1/types/" type="s1:guid"
use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Guid:** The element's unique identifier.

## 2.2.4.164 SerializableDictionary

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

This complex type specifies an ordered collection of elements of complex type **MemberSetFormula** (section [2.2.4.145](#)), **MemberList** (section [2.2.4.135](#)), or **Member** (section [2.2.4.134](#)), with their associated string keys.

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

**Item:** Represents a key-value pair (section [2.2.4.127](#)).

## 2.2.4.165 SetOperation

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

This complex type specifies a set operation.

It is the abstract base type for [AddAllMembersSetOp](#), [AddCalcMemberSetOp](#), [AddChildrenSetOp](#), [AddDefaultMemberSetOp](#), [AddDescendantsLeavesSetOp](#), [AddDescendantsSetOp](#), [AddDescendantsSubtreeSetOp](#), [AddFilterSetOp](#), [AddFilterTopBottomSetOp](#), [AddMemberSetOp](#), [AddNamedSetSetOp](#), [AddParentSiblingsSetOp](#), [EliminateDescendantsSetOp](#) and [EliminateMemberSetOp](#).

```
<xs:complexType name="SetOperation" abstract="true"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue1" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue2" type="xs:double"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TupleSet" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TupleCaption" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterHierarchy" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterMeasure" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultMeasure" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Level" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelDepth" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberDefinition" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**Name:** Specifies the name of a set operation.

**FilterValue1:** This contains the first filter value for those filter operations that need two filter values (for example, filtering a set such that the result is between a given minimum and maximum values). This is also used for filter operations that only require one filter value.

**FilterValue2:** For filter operations that need two filter values, this contains the second filter value. This is ignored for filter operations that only need one filter value.

**TupleSet:** This is the string representation of the tuple set used in filter operation to specify what to filter. The tuple set definition MUST be a valid MDX expression.

**TupleCaption:** This contains the tuple caption that will be displayed on the information bar.

**FilterHierarchy:** This contains the hierarchy unique name in a valid MDX that is used on the filter operation.

**FilterMeasure:** This contains the measure display name in that is used on the filter operation.

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

**Level:** This is used in filter set operation. This contains the level display name where the filter is being applied.

**LevelDepth:** This is used in filter set operation. This contains the level number where the filter is being applied.

**FilterType:** Specifies the type of filter. This MUST be one of the following values

Value	Meaning
0	No filter specified
1	Specifies top count.
2	Specifies top percent.
3	Specifies top sum.
4	Specifies bottom count.
5	Specifies bottom percent.
6	Specifies bottom sum.
7	Specifies equal.
8	Specifies not equals.
9	Specifies greater than.
10	Specifies greater than or equals.
11	Specifies less than.
12	Specifies less than or equals.
13	Specifies between.
14	Specifies not between.

**MemberDefinition:** This defines a calculated member in a valid MDX being added to a **MemberSet** (see section [2.2.4.144](#)).

#### 2.2.4.166 SqlReportViewData

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

The **SqlReportViewData** complex type contains all the state information for a SQL Reporting Services report.

```
<xs:complexType name="SqlReportViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ReportName" type="xs:string"/>
  <xs:attribute name="ServerAddress" type="xs:string"/>
  <xs:attribute name="ServerUrl" type="xs:string"/>
  <xs:attribute name="ReportPath" type="xs:string"/>
  <xs:attribute name="ReportUrl" type="xs:string"/>
  <xs:attribute name="ReportMode" type="tns:SqlReportViewDataServerMode" use="required"/>
  <xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowParameters" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowDocMap" type="xs:boolean" use="required"/>
  <xs:attribute name="DocMapId" type="xs:string"/>
  <xs:attribute name="Zoom" type="xs:string"/>
  <xs:attribute name="Section" type="xs:string"/>
  <xs:attribute name="Format" type="xs:string"/>
</xs:complexType>
```

**ReportName:** The SQL Reporting Services report name.

**ServerAddress:** The SQL Reporting Services URL. The URL is the path to the Report Server of the SQL Server Reporting Service.

**ServerUrl:** The SQL Report URL, when in "SharePoint Integrated" mode. The URL is the path to the Report Server of the SQL Server Reporting Service.

**ReportPath:** The server-relative SQL Report URL, when in "Report Center" mode. The report path is the actual path in the SQL Server Reporting Service reports list to the report desired.

**ReportUrl:** In "SharePoint Integrated" mode, it defines the path of the SQL Report RDL including the RDL extension.

**ReportMode:** Indicates whether the report is in "SharePoint Integrated" or "Report Center" mode.

**ShowToolbar:** When **TRUE**, the SQL Report toolbar is shown.

**ShowParameters:** When **TRUE**, the SQL Report parameter toolbar is shown.

**ShowDocMap:** When **TRUE**, the SQL Report document map toolbar is shown.

**DocMapId:** The SQL Report document map identifier.

**Zoom:** The SQL Report zoom property.

**Section:** The SQL Report section property.

**Format:** The SQL Report format property.

#### 2.2.4.167 StatusFilter

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

This complex type specifies an **indicator** to be filtered.

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



```

    <xs:attribute name="IndicatorLocationGuid" xmlns:s1="http://microsoft.com/wsdl/types/"
type="s1:guid" use="required"/>
    <xs:attribute name="BandIndex" type="xs:int" use="required"/>
</xs:complexType>

```

**IndicatorLocationGuid:** The unique identifier for the filtered **indicator**. [<17>](#)

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

#### 2.2.4.168 StrategyMapViewData

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

The **StrategyMapViewData** complex type class specifies metadata information about a strategy map.

```

<xs:complexType name="StrategyMapViewData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" default="None" name="ToolbarOptions"
type="tns:StrategyMapToolbarOptions"/>
    <xs:element minOccurs="0" maxOccurs="1" name="VDX" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Version" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ParentType"
type="tns:FirstClassObjectType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**ToolbarOptions:** Specifies the toolbar configuration, as defined in the **StrategyMapToolbarOptions** simple type (section [2.2.5.49](#)).

**VDX:** Specifies a base64-bit representation of the compressed VDX [\[MS-VGSFF\]](#) file that represents the strategy map.

**Version:** Specifies the version of the protocol client where the strategy map was created. The version MUST be a number displayed as "major number.minor number.build number.private part number". A product version MUST represent a 64-bit number that holds the version number according to the following format:

- The first 16 bits are the product major part number.
- The next 16 bits are the product minor part number.
- The third set of 16 bits are the product build part number.
- The last 16 bits are the product private part number.

**ParentLocation:** Specifies the **FirstClassElement** complex type (section [2.2.4.99](#)) that represents the parent location of the strategy map. This element MUST be present. It MUST conform to the schema of the **RepositoryLocation** complex type (section [2.2.4.161](#)), and the **ItemUrl** attribute MUST NOT be **null**.

**ParentType:** The **ItemType** attribute for the parent **FirstClassElement**, as specified in **FirstClassObjectType** (section [2.2.5.20](#)).

**Parameters:** This value MUST be an empty string.

### 2.2.4.169 StringCollection

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

The StringCollection complex type specifies a collection of dimension (1) 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 (1) property.

### 2.2.4.170 Target

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

The target of a [KPI](#) used to measure against actual data.

```
<xs:complexType name="Target" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:KpiMeasure">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="StatedScore" type="tns:KpiMeasure"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RelatedActualId"
xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
      </xs:sequence>
      <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**IndicatorLocation:** The [RepositoryLocation](#) of the [Indicator](#).

**StatedScore:** The **KpiMeasure** complex type (section [2.2.4.129](#)) that the Target uses when the type of the **Banding** complex type (section [2.2.4.60](#)) is "StatedScore". This value MUST NOT be **null**, if the type of **Banding** is "StatedScore".

**Banding:** The **Banding** data that correspond to the target.

**RelatedActualId:** The GUID of the corresponding **Actuals** property of the **Kpi** complex type (section [2.2.4.128](#)). This element MUST be present.

**IsRollupScore:** This attribute MUST be **true** if the score of this target is computed by rolling up the child scores, or MUST be **false** if the score is computed from the source data.

### 2.2.4.171 TimeIntelligenceDataSource

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

A time intelligence data source reference used in time intelligence parameter definitions.

```
<xs:complexType name="TimeIntelligenceDataSource"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**DataSourceLocation:** The [RepositoryLocation](#) of the data source.

**DisplayName:** The display name of the data source.

### 2.2.4.172 TimeIntelligenceDefinition

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

The **TimeIntelligenceDefinition** complex type specifies time intelligence formulas and data sources. It is used in **CustomDefinition** of the **ParameterDefinition** complex type (section [2.2.4.155](#)).

```
<xs:complexType name="TimeIntelligenceDefinition"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Formulas"
type="tns:ArrayOfTimeIntelligenceFormula"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource"
type="tns:TimeIntelligenceDataSource"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSources"
type="tns:ArrayOfTimeIntelligenceDataSource"/>
  </xs:sequence>
</xs:complexType>
```

**Formulas:** See complex type **ArrayOfTimeIntelligenceFormula** (section [2.2.4.57](#)).

**MasterDataSource:** The **TimeIntelligenceDataSource** (section [2.2.4.171](#)) that is queried to populate the parameter display values.

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

### 2.2.4.173 TimeIntelligenceFormula

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

This complex type specifies a time intelligence parameter formula.

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

```

    <xs:element minOccurs="0" maxOccurs="1" name="Formula" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**DisplayName:** The display name of the formula.

**Formula:** The time intelligence formula. MUST NOT be **null**.

#### 2.2.4.174 TimeIntelligenceLevelBinding

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

Specifies the mapping of internal cube dimensions (1) 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 (1) in the cube that is mapped to the DateAggregationType indicated in Level. This element MUST be present.

#### 2.2.4.175 TimeIntelligenceMdxSettings

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

Specifies how a dimension (1) in an Analysis Services data source maps to a time intelligence filter when running Simple Time Period Specification (STPS) formulas against the data source.

```

<xs:complexType name="TimeIntelligenceMdxSettings"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:TimeIntelligenceSettings">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ReferenceDimension"
type="tns:Dimension"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ReferenceLevel"
type="tns:DateAggregationTypes"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ReferenceMember" type="tns:Member"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ReferenceDateTime" type="xs:dateTime"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelBindings"
type="tns:ArrayOfTimeIntelligenceLevelBinding"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**ReferenceDimension:** Specifies the time dimension (1) in the cube that is used when the STPS formula is run. See **Dimension** (section [2.2.4.90](#)). This element MUST be present.

**ReferenceLevel:** Specifies the lowest hierarchy level in the **ReferenceDimension** that will be available for STPS formulas run against the data source. See **DataAggregationTypes** (section [2.2.5.12](#)).

**ReferenceMember:** Specifies the date **Member** (see section [2.2.4.134](#)) in the dimension (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 STPS 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.

## 2.2.4.176 TimeIntelligencePostFormulaDefinition

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

This complex type specifies a time intelligence post formula filter definition.

```
<xs:complexType name="TimeIntelligencePostFormulaDefinition"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource" type="tns:DataSource"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataSources" type="tns:ArrayOfDataSource"/>
  </xs:sequence>
</xs:complexType>
```

**MasterDataSource:** The DataSource (see section [2.2.4.85](#)) that is queried to populate the parameter display values (see section [2.2.4.155](#)).

**DataSources:** The data sources (see section [2.2.4.18](#)) that are queried to populate the parameter message values (See section [2.2.4.155](#)).

## 2.2.4.177 TimeIntelligenceSettings

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

Specifies additional time intelligence settings for a data source.

```
<xs:complexType name="TimeIntelligenceSettings" abstract="true"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Enabled" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

**Enabled:** This value **MUST** be **true** if the time intelligence setting is enabled; otherwise, **false**.

## 2.2.4.178 Title

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

This complex type represents a title for an analytic chart.

```
<xs:complexType name="Title" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string"/>
  </xs:sequence>
  <xs:attribute default="" name="Text" type="xs:string"/>
  <xs:attribute default="Center" name="Alignment" type="tns:AlignmentType"/>
</xs:complexType>
```

**Font:** The font, specified by **XmlFont** (see section [2.2.4.181](#)). This MUST be present.

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

- "NamedColor:<name>" where:
  - "<name>" is the name of a predefined color, specified by a case-insensitive string. Values MUST be the same as the names of the elements in the Color Table (see section [2.2.4.14](#)).
  - Example: "NamedColor:Black".
- "ARGBColor:<A>:<R>:<G>:<B>" where:
  - "<A>" is the alpha component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<R>" is the red component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<G>" is the green component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - "<B>" is the blue component, specified by a string. Values MUST NOT be less than 0 and MUST NOT be greater than 255.
  - Example: "ARGBColor:255:255:255:255".

**Text:** The title text, specified by a string.

**Alignment:** The alignment, specified by **AlignmentType** (see section [2.2.5.2](#)).

### 2.2.4.179 ToolbarOptions

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

Contains the configuration settings of the toolbar of a **ConfiguredView** (section [2.2.4.77](#)).

```
<xs:complexType name="ToolbarOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="ShowInlineText" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowStatusFilter" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolTips" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowCollapse" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowMode" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowExpand" type="xs:boolean" use="required"/>
</xs:complexType>
```

```

<xs:attribute name="ShowToolBarItemsLabel" type="xs:boolean" use="required"/>
<xs:attribute name="ShowDefaultRollup" type="xs:boolean" use="required"/>
<xs:attribute name="ShowWorstChildRollup" type="xs:boolean" use="required"/>
<xs:attribute name="ShowIndicatorCount" type="xs:boolean" use="required"/>
</xs:complexType>

```

**ShowInlineText:** This attribute MUST be **true** if the inline text button MUST be shown; **false** if not.

**ShowToolBar:** Specifies whether the toolbar is shown or not.

1. If set to **true**, toolbar MUST be shown following the toolbar configuration settings.
2. If set to **false**, toolbar MUST NOT be shown, and toolbar configuration settings MUST be ignored.

**ShowStatusFilter:** This attribute MUST be **true** if the status filtering options (see [StatusFilter](#), section [2.2.4.167](#)) MUST be shown; **false** if not. MUST be ignored if the **AllowStatusFilter** of the related **ConfiguredView** (section [2.2.4.77](#)) is set to **false**, in which case the filtering options MUST NOT be shown.

**ShowToolTips:** This attribute MUST be **true** if ToolTips MUST display in the toolbar buttons and options; **false** if not.

**ShowCollapse:** This attribute MUST be **true** if the collapse all button MUST be shown; **false** if not.

**ShowMode:** This attribute MUST be **true** if the button to switch between tree and flat mode MUST be shown; **false** if not.

**ShowExpand:** This attribute MUST be **true** if the expand all button MUST be shown; **false** if not.

**ShowToolBarItemsLabel:** Specifies whether the toolbar buttons are rendered with text label or not

1. If set to **true**, toolbar options and buttons MUST include both icon and text label.
2. If set to **false**, toolbar options and buttons MUST NOT include the text labels and MUST only include icon.

**ShowDefaultRollup:** This attribute MUST be **true** if the default rollup button MUST be shown; **false** if not.

**ShowWorstChildRollup:** This attribute MUST be **true** if the worst child rollup button MUST be shown; **false** if not.

**ShowIndicatorCount:** This attribute MUST be **true** if the indicator count rollup button MUST be shown; **false** if not.

### 2.2.4.180 Tuple

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

The **Tuple** complex type [<18>](#) represents an ordered collection of one or more **Member** complex types (section [2.2.4.134](#)) from different dimensions (1). It contains an instance of **SerializableDictionary** complex type (section [2.2.4.164](#)).

```

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

```

```

    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="memberDictionary"
type="tns:SerializableDictionary"/>
    </xs:sequence>
  </xs:complexType>

```

**memberDictionary:** This element MUST NOT be null.

### 2.2.4.181 XmlFont

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

Specifies a set of attributes that define a font.

```

<xs:complexType name="XmlFont" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FontFamily" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GraphicsUnit" type="tns:GraphicsUnit"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:float"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Style" type="tns:FontStyle"/>
  </xs:sequence>
</xs:complexType>

```

**FontFamily:** Specifies a group of typefaces having a similar basic design and style, such as "Arial" or "Courier". It SHOULD be set to a font family name that the server (2) can recognize. If the server (2) cannot recognize the font family name, it MUST instead use a font family name it does recognize.

**GraphicsUnit:** Specifies the unit of measure for the font as specified by **GraphicsUnit** (section [2.2.5.24](#)).

**Size:** Specifies the em-size of the font in the units specified by the **GraphicsUnit** attribute.

**Style:** Specifies style information applied to the font as specified by **FontStyle** (section [2.2.5.21](#)).

### 2.2.5 Simple Types

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

Simple type	Description
<b>AggregateTypeEnum</b>	The <b>AggregateTypeEnum</b> simple type specifies the method by which a KpiMeasure will be aggregated.
<b>AlignmentType</b>	Specifies the alignment of a text string relative to its layout rectangle.
<b>AnalyticChartType</b>	Type of chart to display.
<b>AnalyticLegendLocation</b>	The location of the analytic chart legend.
<b>AnalyticMarkerStyle</b>	The <b>AnalyticMarkerStyle</b> simple type specifies a Data Point marker shape for a line-type series of the report view.



Simple type	Description
<b>AnnotationVersions</b>	Specifies the product version that was used to create the annotation.
<b>AxisType</b>	The <b>AxisType</b> simple type specifies the type of an axis (as described in <a href="#">[MSDN-Axis]</a> ) in a query result.
<b>BandType</b>	Specifies the type of the banding for the <b>Target</b> (see section <a href="#">2.2.4.170</a> ).
<b>BeginPointEmitterType</b>	The <b>BeginPointEmitterType</b> simple type specifies the type of information the parameter emits.
<b>ConnectionContext</b>	The <b>ConnectionContext</b> simple type specifies what identity is used to connect to the data source.
<b>DataValuePosition</b>	Specifies the display positioning for a data value.
<b>DateAggregationTypes</b>	This simple type represents a category of time intervals and MUST contain an item from the enumerated list.
<b>DimensionTypeEnum</b>	Specifies the type of information in a dimension (1).
<b>EndPointCategory</b>	The category specifying sort and filter <b>EndPoints</b> when connecting provider Web Parts to consumer Web Parts on the Dashboard.
<b>ExcelServicesToolbarOptions</b>	Specifies the toolbar options for an Excel Services ( <a href="#">[MS-ESP]</a> ) report.
<b>ExcelServicesToolbarType</b>	Specifies which type of toolbar is shown on the Excel Services ([MS-ESP]) report.
<b>ExcelServicesViewOptions</b>	The <b>ExcelServicesViewOptions</b> simple type specifies how a user is allowed to interact with an Excel Services report ([MS-ESP]).
<b>FactAggregations</b>	This simple type specifies the type of aggregation to be performed on a numeric fact column in a tabular data set. The values are exclusive; that is, exactly one MUST be present in any field that uses this type.
<b>FilterSelectionMode</b>	Specifies the manner in which the items in a Filter (see section <a href="#">2.2.4.98</a> ) can be selected.
<b>FirstClassObjectType</b>	Specifies the type of a first-class object.
<b>FontStyle</b>	Specifies style information applied to the font. It MUST equal <b>Regular</b> or any combination of the other values.
<b>FormatNegativeSymbol</b>	This simple type specifies the formatting pattern for negative numbers when custom formatting is used. Positive values are not affected. See KpiNumberFormatProperties (section <a href="#">2.2.4.130</a> ).
<b>FormatType</b>	Defines the formatting pattern for numeric values. See KpiNumberFormatProperties (section <a href="#">2.2.4.130</a> ).
<b>GraphicsUnit</b>	Specifies the unit of measure for the font.
<b>GridCellElementStatus</b>	The <b>GridCellElementStatus</b> simple type specifies the status of a display element of a scorecard cell. It MUST be zero, one or two.

Simple type	Description
<b>HeaderAggregationTypes</b>	This simple type specifies the type of aggregation used by the Scorecard.
<b>HierarchyOrigin</b>	This simple type specifies the overall structure of a hierarchy.
<b>HierarchyType</b>	This simple type specifies the type of an OLAP hierarchy.
<b>HorizontalAlignments</b>	This simple type specifies how an object or text in a control is horizontally aligned relative to the control element.
<b>IndicatorPosition</b>	The <b>IndicatorPosition</b> simple type specifies the position of the indicator within the target value cell.
<b>IndicatorType</b>	This simple type specifies whether the <b>indicator bands</b> indicate a better or worse status as values move lower or higher, or whether the <b>indicator bands</b> indicate a better or worse status as values move closer to the center.
<b>KpiPattern</b>	This simple type specifies how banding and scoring change in appearance according to the setting of the KPI pattern.
<b>LayoutOrientation</b>	This simple type defines the layout of items within a <b>DashboardElementContainer</b> (see section <a href="#">2.2.4.81</a> ).
<b>MappedColumnDataTypes</b>	This simple type specifies the data type of the mapped columns in <b>DataColumnMapping</b> (see section <a href="#">2.2.4.84</a> ).
<b>MappedColumnTypes</b>	This simple type specifies the classification of a mapped column in <b>DataColumnMapping</b> (see section <a href="#">2.2.4.84</a> ).
<b>MemberRelationship</b>	This simple type specifies the relationship among dimension (1) members (see section <a href="#">2.2.4.90</a> ). Member (see section <a href="#">2.2.4.134</a> ) relationships are used in the context of a referred member.
<b>MemberTransformOperation</b>	This simple type specifies the transform action that the <b>MemberTransform</b> (section <a href="#">2.2.4.146</a> ) will use.
<b>MemberTransformType</b>	This simple type specifies the classification of the <b>MemberTransform</b> (section <a href="#">2.2.4.146</a> ).
<b>MemberType</b>	This simple type specifies the type represented by the member (section <a href="#">2.2.4.134</a> ) object.
<b>ReportLayout</b>	Specifies the way that row and column headers are displayed in a grid report.
<b>RollupTypes</b>	This simple type enumeration specifies the types of rollup behavior that can be exhibited by a target column in a scorecard.
<b>ScorecardEmptyRowsFilterMode</b>	This simple type enumeration specifies whether to display scorecard rows with empty cells. A scorecard <b>GridCell</b> (section <a href="#">2.2.4.100</a> ) is considered empty if <b>DisplayElements</b> does not contain any <b>GridDisplayElements</b> (section <a href="#">2.2.4.103</a> ) with a <b>Status</b> of 0, as specified in <b>GridCellElementStatus</b> (section <a href="#">2.2.5.25</a> ).
<b>ScorecardNamedSetType</b>	This simple type enumeration specifies how to define a set of dimension (1) members (3). It is used by <b>GridHeaderItem</b> (section <a href="#">2.2.4.116</a> ) when the attribute <b>HeaderType</b> is set to "NamedSet", as specified in <b>ScorecardNodeTypes</b> (section

Simple type	Description
	<a href="#">2.2.5.44</a> ).
<b>ScorecardNodeTypes</b>	This simple type enumeration specifies the type of scorecard node header. This is used in the GridHeaderItem (section <a href="#">2.2.4.116</a> ).
<b>ScoreTypes</b>	This simple type enumeration specifies the type of score to be used when rolling up the target column in a scorecard.
<b>SizeType</b>	This simple type enumeration specifies the size unit in <b>DashboardElementSize</b> (section <a href="#">2.2.4.82</a> ).
<b>SortType</b>	The <b>SortType</b> simple type specifies the manner in which the values in a query result are sorted.
<b>SqlReportViewDataServerMode</b>	The SqlReportViewDataServerMode simple type indicates when SQL Server Reporting Services integrated into a SharePoint server (1).
<b>StrategyMapToolbarOptions</b>	The <b>StrategyMapToolbarOptions</b> simple type specifies the view options for a strategy map report.
<b>Trinary</b>	This simple type specifies an enumeration type that has three possible values.
<b>ValueSources</b>	This simple type enumeration specifies how rollup values are computed. The enumeration determines how values for parent scorecard row items will be computed from the values of child scorecard row items within the same scorecard column.
<b>VarianceDisplayType</b>	This simple type enumeration specifies how a <b>variance</b> value is calculated and presented.
<b>VarianceType</b>	This simple type enumeration specifies how a <b>variance</b> calculation uses <b>indicator status band</b> and target values.
<b>VerticalAlignments</b>	This simply 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 the **AggregateTypeEnum** simple type.

Value	Meaning
Default	Query using the default KpiMeasure aggregation.
Sum	Query the total value of the KpiMeasure.
Minimum	Query the minimum value of the KpiMeasure.
Maximum	Query the maximum value of the KpiMeasure.
Count	Query the count of values in the KpiMeasure.
Average	Query the average value of the KpiMeasure.

### 2.2.5.2 AlignmentType

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

Specifies the alignment of a text string relative to its layout rectangle.

```
<xs:simpleType name="AlignmentType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="Center"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AlignmentType** simple type.

Value	Meaning
Left	Specifies that the text be aligned left of the layout rectangle.
Right	Specifies that the text be aligned right of the layout rectangle.
Center	Specifies that the text be aligned center of the layout rectangle.

### 2.2.5.3 AnalyticChartType

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

Type of chart to display.

```
<xs:simpleType name="AnalyticChartType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Column"/>
    <xs:enumeration value="ColumnStacked"/>
    <xs:enumeration value="ColumnStacked100"/>
    <xs:enumeration value="Line"/>
    <xs:enumeration value="Pie"/>
    <xs:enumeration value="Bar"/>
    <xs:enumeration value="BarStacked"/>
    <xs:enumeration value="BarStacked100"/>
  </xs:restriction>
</xs:simpleType>
```

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

The following table specifies the allowable values for the **AnalyticChartType** simple type.

Value	Meaning
None	The type of chart has not been set.
Column	Displays a vertical bar chart.
ColumnStacked	Displays a stacked vertical bar chart.
ColumnStacked100	Displays a stacked vertical bar chart with bars sized as a percentage of the total.
Line	Displays a line chart.
Pie	Displays a pie chart.
Bar	Displays a horizontal bar chart.
BarStacked	Displays a stacked horizontal bar chart.
BarStacked100	Displays a stacked horizontal bar chart with bars sized as a percentage of the total.

#### 2.2.5.4 AnalyticLegendLocation

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

The location of the analytic chart legend.

```
<xs:simpleType name="AnalyticLegendLocation" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="None"/>  
    <xs:enumeration value="Right"/>  
    <xs:enumeration value="Top"/>  
    <xs:enumeration value="Bottom"/>  
    <xs:enumeration value="Left"/>  
  </xs:restriction>  
</xs:simpleType>
```

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

Value	Meaning
None	The legend is not displayed.
Right	The legend is displayed to the right of the analytic chart.
Top	The legend is displayed on top of the analytic chart.
Bottom	The legend is displayed on the bottom of the analytic chart.
Left	The legend is displayed to the left of the analytic chart.

## 2.2.5.5 AnalyticMarkerStyle

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

The **AnalyticMarkerStyle** simple type specifies a Data Point marker shape for a line-type series of the report view.

```
<xs:simpleType name="AnalyticMarkerStyle" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Square"/>
    <xs:enumeration value="Circle"/>
    <xs:enumeration value="Diamond"/>
    <xs:enumeration value="Triangle"/>
    <xs:enumeration value="Cross"/>
    <xs:enumeration value="Star4"/>
    <xs:enumeration value="Star5"/>
    <xs:enumeration value="Star6"/>
    <xs:enumeration value="Star10"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **AnalyticMarkerStyle** simple type.

Value	Meaning
None	No marker is displayed for the series/ <b>data point</b> (1).
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.
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>
```

```

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

```

The following table specifies the allowable values for the **AnnotationVersions** simple type.

Value	Meaning
Office14Beta2	Annotation was created with a Beta2 or RTM version <a href="#">&lt;19&gt;</a> .
Office14Beta1	Annotation was created with a Beta1 version <a href="#">&lt;20&gt;</a> .
Pps2007	Annotation was created with a prior production version. <a href="#">&lt;21&gt;</a>

### 2.2.5.7 AxisType

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

The **AxisType** simple type specifies the type of an axis (as described in [\[MSDN-Axis\]](#)) in a query result.

```

<xs:simpleType name="AxisType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Filter"/>
    <xs:enumeration value="Columns"/>
    <xs:enumeration value="Rows"/>
    <xs:enumeration value="Pages"/>
    <xs:enumeration value="Sections"/>
    <xs:enumeration value="Chapters"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **AxisType** simple type.

Value	Meaning
Filter	Specifies a FILTER axis type or the <b> slicer </b> axis of the query.
Columns	Specifies a COLUMNS axis type that contains the column definition of the query.
Rows	Specifies a ROWS axis type that contains the row definition of the query.
Pages	Specifies a PAGES axis type that contains the page definition of the query. This axis type is unused.
Sections	Specifies a SECTIONS axis type that contains the section definition of the query. This axis type is unused.
Chapters	Specifies a CHAPTERS axis type that contains the chapter definition of the query. This axis type is unused.

### 2.2.5.8 BandType

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

Specifies the type of the banding for the **Target** (see section [2.2.4.170](#)).

```

<xs:simpleType name="BandType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Normalized"/>
    <xs:enumeration value="Actual"/>
    <xs:enumeration value="StatedScore"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **BandType** simple type.

Value	Meaning
Normalized	The value will be <b>normalized</b> .
Actual	The actual value will be used.
StatedScore	The selected Target value will be used. See Target.StatedScore (section <a href="#">2.2.4.170</a> ).

### 2.2.5.9 BeginPointEmitterType

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

The **BeginPointEmitterType** simple type specifies the type of information the parameter emits.

```

<xs:simpleType name="BeginPointEmitterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="BothAConditionalVisibilityAndParameterEmitter"/>
    <xs:enumeration value="ConditionalVisibilityEmitter"/>
    <xs:enumeration value="ParameterEmitter"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **BeginPointEmitterType** simple type.

Value	Meaning
BothAConditionalVisibilityAndParameterEmitter	Emits information that is used for setting conditional visibility values that indicate a connected 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 the **ConnectionContext** simple type.

Value	Meaning
ConnectAsUser	Connects to the data source using the user credentials.
ConnectAsSharedUser	Connects to the data source using the shared account credentials.
SecureStoreCredentials	Connects to the data source using credentials obtained from the Secure Store ( <a href="#">[MS-SSWPS]</a> ).

### 2.2.5.11 DataValuePosition

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

Specifies the display positioning for a data value.

```

<xs:simpleType name="DataValuePosition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="NotDisplayed"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **DataValuePosition** simple type.

Value	Meaning
Left	Specifies that the data value will be displayed on the left.
Right	Specifies that the data value will be displayed on the right.
NotDisplayed	Specifies that the data value will not be displayed.

### 2.2.5.12 DateAggregationTypes

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

This simple type represents a category of time intervals and **MUST** contain an item from the enumerated list.

```

<xs:simpleType name="DateAggregationTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Second"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

```

    <xs:enumeration value="Minute"/>
    <xs:enumeration value="Hour"/>
    <xs:enumeration value="Day"/>
    <xs:enumeration value="Week"/>
    <xs:enumeration value="Month"/>
    <xs:enumeration value="Quarter"/>
    <xs:enumeration value="Year"/>
    <xs:enumeration value="Semester"/>
  </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **DateAggregationTypes** simple type.

Value	Meaning
None	No time interval is defined.
Second	Intervals are seconds.
Minute	Intervals are minutes.
Hour	Intervals are hours.
Day	Intervals are days.
Week	Intervals are weeks.
Month	Intervals are months.
Quarter	Intervals are quarters.
Year	Intervals are years.
Semester	Intervals are half years or semesters.

### 2.2.5.13 DimensionTypeEnum

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

Specifies the type of information in a dimension (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:restriction>
</xs:simpleType>

```

```

<xs:enumeration value="Rates"/>
<xs:enumeration value="Scenario"/>
<xs:enumeration value="Time"/>
<xs:enumeration value="Unknown"/>
<xs:enumeration value="Utility"/>
</xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **DimensionTypeEnum** simple type.

Value	Meaning
Accounts	The dimension (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 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 the **EndPointCategory** simple type.

Value	Meaning
None	EndPoint has no category
Axis	EndPoint is a Scorecard Axis
ColumnHierarchy	EndPoint is a Scorecard Column Hierarchy
RowHierarchy	EndPoint is a Scorecard Row Hierarchy

### 2.2.5.15 ExcelServicesToolbarOptions

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

Specifies the toolbar options for an Excel Services ([\[MS-ESP\]](#)) report.

```

<xs:simpleType name="ExcelServicesToolbarOptions"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="AllowInExcelOperations"/>
        <xs:enumeration value="AllowRefreshConnections"/>
        <xs:enumeration value="AllowRecalculation"/>
        <xs:enumeration value="ShowVisibleItemButton"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

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

Value	Meaning
AllowInExcelOperations	Allows operations that open the Excel workbook ( <a href="#">[MS-XLSJ]</a> ).
AllowRefreshConnections	Allows data connections in the Excel workbook to refresh.
AllowRecalculation	Allows users to recalculate the Excel workbook.
ShowVisibleItemButton	Shows the view menu to enable users to change the currently displayed 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 the **ExcelServicesToolbarType** simple type.

Value	Meaning
None	No toolbar is displayed.
FullToolbar	The full toolbar is displayed.
SummaryToolbar	The summary toolbar is displayed.

### 2.2.5.17 ExcelServicesViewOptions

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

The **ExcelServicesViewOptions** simple type specifies how a user is allowed to interact with an Excel Services report ([\[MS-ESP\]](#)).

```
<xs:simpleType name="ExcelServicesViewOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="AllowInteractivity"/>
        <xs:enumeration value="AllowParameterModification"/>
        <xs:enumeration value="ShowWorkbookParameters"/>
        <xs:enumeration value="AllowSorting"/>
        <xs:enumeration value="AllowFiltering"/>
        <xs:enumeration value="AllowHyperlinks"/>
        <xs:enumeration value="AllowPivotSpecificOperations"/>
        <xs:enumeration value="AllowPeriodicRefresh"/>
        <xs:enumeration value="CloseWorkbookSessions"/>
        <xs:enumeration value="AllowScratchPadMode"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

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

Value	Meaning
AllowInteractivity	Allows users to interact with the workbook.

Value	Meaning
AllowParameterModification	Allows users to change workbook parameters.
ShowWorkbookParameters	Allows users to view and edit workbook parameters.
AllowSorting	Allows users to sort when using <b>AutoFilter</b> , 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:enumeration value="Variance"/>
    <xs:enumeration value="FirstOccurance"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Average	Calculate the average of numeric fact values.
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.

Value	Meaning
StDev	Calculate the variance of the numeric fact values.
Sum	Calculate the sum of the numeric fact values.
Variance	Calculate the statistical variance of the numeric fact values.
FirstOccurance	Determine the first fact value that occurs for each unique column member.

### 2.2.5.19 FilterSelectionMode

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

Specifies the manner in which the items in a Filter (see section [2.2.4.98](#)) can be selected.

```
<xs:simpleType name="FilterSelectionMode" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SingleSelect"/>
    <xs:enumeration value="MultiSelect"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **FilterSelectionMode** simple type.

Value	Meaning
SingleSelect	Single select parameter selection. Only one item can be selected for the filter at one time.
MultiSelect	Multi select parameter selection. Multiple items can be selected for the filter at one time.

### 2.2.5.20 FirstClassObjectType

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

Specifies the type of a first-class object.

```
<xs:simpleType name="FirstClassObjectType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Kpi"/>
    <xs:enumeration value="Scorecard"/>
    <xs:enumeration value="ReportView"/>
    <xs:enumeration value="Indicator"/>
    <xs:enumeration value="DataSource"/>
    <xs:enumeration value="Dashboard"/>
    <xs:enumeration value="TempReportView"/>
    <xs:enumeration value="Filter"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
None	Indicates the object type is undefined
Kpi	Indicates the object is a Kpi (see section <a href="#">2.2.4.128</a> ).
Scorecard	Indicates the object is a Scorecard (see section <a href="#">2.2.4.162</a> )
ReportView	Indicates the object is a ReportView (see section <a href="#">2.2.4.160</a> )
Indicator	Indicates the object is an Indicator (see section <a href="#">2.2.4.125</a> )
DataSource	Indicates the object is a DataSource (see section <a href="#">2.2.4.85</a> )
Dashboard	Indicates the object is a Dashboard (see section <a href="#">2.2.4.79</a> )
TempReportView	Indicates the object is a temporary ReportView (see section <a href="#">2.2.4.160</a> ) as created by <a href="#">SaveTemporaryAnalyticReport</a>
Filter	Indicates the object is a Filter (see section <a href="#">2.2.4.98</a> )

### 2.2.5.21 FontStyle

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

Specifies style information applied to the font. It MUST equal **Regular** or any combination of the other values.

```
<xs:simpleType name="FontStyle" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="Regular"/>
        <xs:enumeration value="Bold"/>
        <xs:enumeration value="Italic"/>
        <xs:enumeration value="Underline"/>
        <xs:enumeration value="Strikeout"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **FontStyle** simple type.

Value	Meaning
Regular	Normal text.
Bold	Bold text.
Italic	Italic text.
Underline	Underlined text.
Strikeout	Text with a line through the middle.



## 2.2.5.22 FormatNegativeSymbol

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

This simple type specifies the formatting pattern for negative numbers when custom formatting is used. Positive values are not affected. See KpiNumberFormatProperties (section [2.2.4.130](#)).

```
<xs:simpleType name="FormatNegativeSymbol" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NegativeSign"/>
    <xs:enumeration value="Parenthesis"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **FormatNegativeSymbol** simple type.

Value	Meaning
NegativeSign	Show minus sign preceding to the number. 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 the **FormatType** simple type.

Value	Meaning
Default	No formatting. Formatting of the data source is used.
Number	General numeric formatting—for example, 12,222.003
Currency	Currency formatting—for example, \$25.00
Percentage	Percentage formatting—for example, 25%
Unknown	Null or undetermined formatting

## 2.2.5.24 GraphicsUnit

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

Specifies the unit of measure for the font.

```
<xs:simpleType name="GraphicsUnit" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="World"/>
    <xs:enumeration value="Display"/>
    <xs:enumeration value="Pixel"/>
    <xs:enumeration value="Point"/>
    <xs:enumeration value="Inch"/>
    <xs:enumeration value="Document"/>
    <xs:enumeration value="Millimeter"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **GraphicsUnit** simple type.

Value	Meaning
World	Specifies the world coordinate system unit as the unit of measure.
Display	Specifies the unit of measure of the display device. Typically 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

The **GridCellElementStatus** simple type specifies the status of a display element of a scorecard cell. It MUST be zero, one or two.

```
<xs:simpleType name="GridCellElementStatus" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="0"/>
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
0	OK: Specifies that element is displayed correctly
1	Error: Specifies that element is in error: error state is displayed. See the <b>InvalidCell</b> property of the <b>GridViewDefinition</b> complex type (section <a href="#">2.2.4.122</a> )
2	Null: Specifies that element is empty: empty state is displayed. See the <b>EmptyCell</b> property of <b>GridViewDefinition</b>

### 2.2.5.26 HeaderAggregationTypes

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

This simple type specifies the type of aggregation used by the Scorecard.

```
<xs:simpleType name="HeaderAggregationTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="Average"/>
    <xs:enumeration value="Min"/>
    <xs:enumeration value="Max"/>
    <xs:enumeration value="Trend"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **HeaderAggregationTypes** simple type.

Value	Meaning
None	No aggregation
Sum	Aggregate the sum value
Average	Aggregate the average value
Min	Aggregate the minimum value
Max	Aggregate the maximum value
Trend	Aggregate the trend of the last two sibling values

### 2.2.5.27 HierarchyOrigin

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

This simple type specifies the overall structure of a hierarchy.

```
<xs:simpleType name="HierarchyOrigin" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AttributeHierarchy"/>
    <xs:enumeration value="ParentChildHierarchy"/>
    <xs:enumeration value="UserHierarchy"/>
  </xs:restriction>
</xs:simpleType>
```

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

The following table specifies the allowable values for the **HierarchyOrigin** simple type.

Value	Meaning
None	The hierarchy has no structure.
AttributeHierarchy	The hierarchy is an <b>attribute hierarchy</b> .
ParentChildHierarchy	The hierarchy is a parent-child hierarchy.
UserHierarchy	The hierarchy is a user-defined hierarchy.

### 2.2.5.28 HierarchyType

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

This simple type specifies the type of an OLAP hierarchy.

```
<xs:simpleType name="HierarchyType" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="Standard"/>  
    <xs:enumeration value="Measure"/>  
    <xs:enumeration value="Time"/>  
  </xs:restriction>  
</xs:simpleType>
```

The following table specifies the allowable values for the **HierarchyType** simple type.

Value	Meaning
Standard	Indicates a Standard OLAP hierarchy.
Measure	Indicates a Measured OLAP hierarchy.
Time	Indicates a Time OLAP hierarchy.

### 2.2.5.29 HorizontalAlignments

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

This simple type specifies how an object or text in a control is horizontally aligned relative to the control element.

```
<xs:simpleType name="HorizontalAlignments" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="Undefined"/>  
    <xs:enumeration value="Left"/>  
    <xs:enumeration value="Center"/>  
    <xs:enumeration value="Right"/>  
  </xs:restriction>  
</xs:simpleType>
```

The following table specifies the allowable values for the **HorizontalAlignments** simple type.

Value	Meaning
Undefined	No horizontal alignment is applied to the object or text.
Left	The object or text is aligned on the left of the control element.
Center	The object or text is aligned in the center of the control element.
Right	The object or text is aligned on the right of the control element.

### 2.2.5.30 IndicatorPosition

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

The **IndicatorPosition** simple type specifies the position of the indicator within the target value cell.

```
<xs:simpleType name="IndicatorPosition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
    <xs:enumeration value="Center"/>
    <xs:enumeration value="NotDisplayed"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **IndicatorPosition** simple type.

Value	Meaning
Left	Display the indicator against the left edge of the cell.
Right	Display the indicator against the right edge of the cell.
Center	Display the indicator in the center of the cell between the two numeric values.
NotDisplayed	Do not display the indicator.

### 2.2.5.31 IndicatorType

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

This simple type specifies whether the **indicator bands** indicate a better or worse status as values move lower or higher, or whether the **indicator bands** indicate a better or worse status as values move closer to the center.

```
<xs:simpleType name="IndicatorType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Standard"/>
    <xs:enumeration value="Centered"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **IndicatorType** simple type.

Value	Meaning
Standard	<b>Indicator bands</b> go from best to worst as values increase (or decrease).
Centered	<b>Indicator bands</b> go from best to worst as values get further away from the center.

### 2.2.5.32 KpiPattern

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

This simple type specifies how banding and scoring change in appearance according to the setting of the KPI pattern.

```
<xs:simpleType name="KpiPattern" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="IncreasingIsBetter"/>
    <xs:enumeration value="DecreasingIsBetter"/>
    <xs:enumeration value="CloserToTargetIsBetter"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **KpiPattern** simple type.

Value	Meaning
IncreasingIsBetter	For banding and scoring, data that increases is better.
DecreasingIsBetter	For banding and scoring, data that decreases is better.
CloserToTargetIsBetter	For banding and scoring, data that is closer to the target is better.

### 2.2.5.33 LayoutOrientation

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

This simple type defines the layout of items within a DashboardElementContainer (see section [2.2.4.81](#)).

```
<xs:simpleType name="LayoutOrientation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="HorizontalLeftJustified"/>
    <xs:enumeration value="HorizontalRightJustified"/>
    <xs:enumeration value="VerticalBottomJustified"/>
    <xs:enumeration value="VerticalTopJustified"/>
    <xs:enumeration value="Stacked"/>
    <xs:enumeration value="Hidden"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
HorizontalLeftJustified	Horizontal layout where adjacent items are left-justified.

Value	Meaning
HorizontalRightJustified	Horizontal layout where adjacent items are right-justified.
VerticalBottomJustified	Vertical layout where adjacent items are bottom-justified.
VerticalTopJustified	Vertical layout where adjacent items are top-justified.
Stacked	Items are stacked so that only one item is visible at a time.
Hidden	Items are not displayed.

### 2.2.5.34 MappedColumnDataTypes

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

This simple type specifies the data type of the mapped columns in `DataColumnMapping` (see section [2.2.4.84](#)).

```
<xs:simpleType name="MappedColumnDataTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NotSupported"/>
    <xs:enumeration value="Number"/>
    <xs:enumeration value="String"/>
    <xs:enumeration value="DateTime"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MappedColumnDataTypes** simple type.

Value	Meaning
NotSupported	Used when <a href="#">MappedColumnTypes</a> is set to Ignore in <code>DataColumnMapping</code> .
Number	The mapped column values are numeric. Valid numeric values are short, integer, long, decimal and float.
String	The mapped column values are <a href="#">UNICODE</a> characters.
DateTime	The mapped column values are date-time values.

### 2.2.5.35 MappedColumnTypes

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

This simple type specifies the classification of a mapped column in `DataColumnMapping` (see section [2.2.4.84](#)).

```
<xs:simpleType name="MappedColumnTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Ignore"/>
    <xs:enumeration value="Fact"/>
    <xs:enumeration value="Dimension"/>
    <xs:enumeration value="TimeDimension"/>
    <xs:enumeration value="Key"/>
  </xs:restriction>
</xs:simpleType>
```

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

The following table specifies the allowable values for the **MappedColumnTypes** simple type.

Value	Meaning
Ignore	The ignore type indicates that the mapped column in DataColumnMapping MUST be ignored.
Fact	The mapped column contains <b>fact</b> data. A fact column type MUST have an associated FactAggregations (see section <a href="#">2.2.5.18</a> ).
Dimension	The mapped column contains dimension (1) (see section <a href="#">2.2.4.90</a> ) members.
TimeDimension	The mapped column contains time-based dimension (1) members.
Key	The mapped column is the key column for columns mapped as Dimension (see section <a href="#">2.2.4.90</a> ).

### 2.2.5.36 MemberRelationship

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

This simple type specifies the relationship among dimension (1) members (see section [2.2.4.90](#)). Member (see section [2.2.4.134](#)) relationships are used in the context of a referred member.

```
<xs:simpleType name="MemberRelationship" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Parent"/>
    <xs:enumeration value="FirstSibling"/>
    <xs:enumeration value="PrevMember"/>
    <xs:enumeration value="NextMember"/>
    <xs:enumeration value="LastSibling"/>
    <xs:enumeration value="FirstChild"/>
    <xs:enumeration value="LastChild"/>
    <xs:enumeration value="CurrentMember"/>
    <xs:enumeration value="Children"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MemberRelationship** simple type.

Value	Meaning
Parent	Parent of the referred dimension (1) (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.134</a> ).
FirstSibling	First child of the parent of the referred (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.134</a> ).
PrevMember	Previous member (3) at the same level that contains the referred dimension (1) (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.134</a> ).
NextMember	Next member (3) at the same level that contains the referred dimension (1) (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.134</a> ).
LastSibling	Last child of the parent of the referred dimension (1) (section <a href="#">2.2.4.90</a> ) member (3)



Value	Meaning
	(section <a href="#">2.2.4.134</a> ).
FirstChild	First child of the parent of the referred dimension (1) (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.134</a> ).
LastChild	Last child of the referred dimension (1) (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.134</a> ).
CurrentMember	Current member (3) (section <a href="#">2.2.4.134</a> ) along a specified dimension (1) (section <a href="#">2.2.4.90</a> ) or hierarchy (section <a href="#">2.2.4.124</a> ) 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 (1) (section <a href="#">2.2.4.90</a> ) member (section <a href="#">2.2.4.134</a> ).

### 2.2.5.37 MemberTransformOperation

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

This simple type specifies the transform action that the **MemberTransform** (section [2.2.4.146](#)) will use.

```
<xs:simpleType name="MemberTransformOperation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Replace"/>
    <xs:enumeration value="DrillUp"/>
    <xs:enumeration value="DrillDown"/>
    <xs:enumeration value="Expand"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **MemberTransformOperation** simple type.

Value	Meaning
Replace	Replaces a single hierarchy (section <a href="#">2.2.4.124</a> ) group or all members (3) (section <a href="#">2.2.4.134</a> ) from a KPI (section <a href="#">2.2.4.128</a> ) with members (3) (section <a href="#">2.2.4.134</a> ) provided by filters (section <a href="#">2.2.4.98</a> ).
DrillUp	Drills up on a referred member (3) (section <a href="#">2.2.4.134</a> ).
DrillDown	Drills down on a referred member (3) (section <a href="#">2.2.4.134</a> ).
Expand	Dynamically expands the child members (3) of a referred member (3) (section <a href="#">2.2.4.134</a> ).

### 2.2.5.38 MemberTransformType

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

This simple type specifies the classification of the **MemberTransform** (section [2.2.4.146](#)).

```
<xs:simpleType name="MemberTransformType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
```

```

    <xs:enumeration value="Row"/>
    <xs:enumeration value="Column"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **MemberTransformType** simple type.

Value	Meaning
Row	The MemberTransform (section <a href="#">2.2.4.146</a> ) will be applied to rows.
Column	The MemberTransform (section <a href="#">2.2.4.146</a> ) will be applied to columns.

### 2.2.5.39 MemberType

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

This simple type specifies the type represented by the member (section [2.2.4.134](#)) object.

```

<xs:simpleType name="MemberType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Regular"/>
    <xs:enumeration value="Operation"/>
    <xs:enumeration value="Default"/>
    <xs:enumeration value="Formula"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **MemberType** simple type.

Value	Meaning
Regular	A regular member (3) (section <a href="#">2.2.4.134</a> ).
Operation	The member object represents a member operation (section <a href="#">2.2.4.136</a> ).
Default	The member object represents the default member (section <a href="#">2.2.4.134</a> ).
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 the **ReportLayout** simple type.

Value	Meaning
TabularForm	Row and column headers are flattened so that data is displayed in a space-efficient manner.
CompactForm	Row and column headers are displayed in an indented manner that reflects their hierarchical relationship.

### 2.2.5.41 RollupTypes

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

This simple type enumeration specifies the types of rollup behavior that can be exhibited by a target column in a scorecard.

```
<xs:simpleType name="RollupTypes" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AverageWeighted"/>
    <xs:enumeration value="WorstChild"/>
    <xs:enumeration value="IndicatorCount"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **RollupTypes** simple type.

Value	Meaning
None	Do not perform rollups.
AverageWeighted	Rollup a weighted average of the scores of the direct 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 <b>objective KPIs</b> .

### 2.2.5.42 ScorecardEmptyRowsFilterMode

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

This simple type enumeration specifies whether to display scorecard rows with empty cells. A scorecard **GridCell** (section [2.2.4.100](#)) is considered empty if **DisplayElements** does not contain any **GridDisplayElements** (section [2.2.4.103](#)) with a **Status** of 0, as specified in **GridCellElementStatus** (section [2.2.5.25](#)).

```
<xs:simpleType name="ScorecardEmptyRowsFilterMode"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AllValuesAreEmpty"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
None	Do not filter rows.
AllValuesAreEmpty	Filter out rows where all non-header cells are empty.

### 2.2.5.43 ScorecardNamedSetType

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

This simple type enumeration specifies how to define a set of dimension (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 the **ScorecardNamedSetType** simple type.

Value	Meaning
None	<b>GridHeaderItem</b> (section <a href="#">2.2.4.116</a> ) does not contain any dimension (1) members (3) specified by a named set, a custom formula, or a time intelligence formula. A <b>GridHeaderItem</b> MUST NOT use this value if the <b>HeaderType</b> attribute is set to "NamedSet", as specified in <b>ScorecardNodeTypes</b> (section <a href="#">2.2.5.44</a> ).
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 the **ScorecardNodeTypes** simple type.

Value	Meaning
None	An unknown node type. This value SHOULD NOT be used except for the row and column root nodes. The behavior for this node type is unspecified.
Member	A dimension (1) 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>

```

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

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 the **SizeType** simple type.

Value	Meaning
AutoSize	Auto sized based on internal content. Any related measurement value MUST be ignored if specified.
Absolute	Absolute value in 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 the **SortType** simple type.

Value	Meaning
Off	No sort is applied.
ByIndex	Sort by column index.

Value	Meaning
ByTuple	Sort by value, which is specified by the measure in the tuple.

### 2.2.5.48 SqlReportViewDataServerMode

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

The **SqlReportViewDataServerMode** simple type indicates when SQL Server Reporting Services integrated into a SharePoint server (1).

```
<xs:simpleType name="SqlReportViewDataServerMode"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SharepointIntegrated"/>
    <xs:enumeration value="ReportCenter"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **SqlReportViewDataServerMode** simple type.

Value	Meaning
SharepointIntegrated	The SQL Reporting Services server (1) is integrated into SharePoint, allowing reports to be stored and rendered using SharePoint server (1).
ReportCenter	SQL Reports are stored and rendered using a SQL Server Reporting Services server (1).

### 2.2.5.49 StrategyMapToolBarOptions

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

The **StrategyMapToolBarOptions** simple type specifies the view options for a strategy map report.

```
<xs:simpleType name="StrategyMapToolBarOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="ShowToolBar"/>
        <xs:enumeration value="ShowPage"/>
        <xs:enumeration value="ShowScrollbars"/>
        <xs:enumeration value="ShowPageTabs"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **StrategyMapToolBarOptions** simple type.

Value	Meaning
None	No options are specified.
ShowToolBar	The toolbar is displayed.
ShowPage	The drawing page is displayed.
ShowScrollbars	The scrollbars are displayed.
ShowPageTabs	The page tabs are displayed.

### 2.2.5.50 Trinary

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

This simple type specifies an enumeration type that has three possible values.

```
<xs:simpleType name="Trinary" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Undefined"/>
    <xs:enumeration value="False"/>
    <xs:enumeration value="True"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **Trinary** simple type.

Value	Meaning
Undefined	Not Defined.
False	Specified as False.
True	Specified as True.

### 2.2.5.51 ValueSources

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

This simple type enumeration specifies how rollup values are computed. The enumeration determines how values for parent scorecard row items will be computed from the values of child scorecard row items within the same scorecard column.

```
<xs:simpleType name="ValueSources" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default"/>
    <xs:enumeration value="NoValue"/>
    <xs:enumeration value="SourceData"/>
    <xs:enumeration value="Text"/>
    <xs:enumeration value="AverageRollup"/>
    <xs:enumeration value="MinRollup"/>
    <xs:enumeration value="MaxRollup"/>
    <xs:enumeration value="TotalRollup"/>
  </xs:restriction>
</xs:simpleType>
```



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

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

Value	Meaning
Default	Use default settings: If there are child members (3), the <b>average weighted value</b> of child objects MUST be used; otherwise, when there are no child objects, SourceData value MUST be used.
NoValue	Don't compute or show values.
SourceData	No rollup, query source data.
Text	Text value of source data.
AverageRollup	Mathematical average value of child objects.
MinRollup	Minimum value of child objects.
MaxRollup	Maximum value of child objects.
TotalRollup	Total, summed, value of child objects.

### 2.2.5.52 VarianceDisplayType

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

This simple type enumeration specifies how a **variance** value is calculated and presented.

```
<xs:simpleType name="VarianceDisplayType" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="ShowPercent"/>  
    <xs:enumeration value="ShowValue"/>  
    <xs:enumeration value="ShowInvertedPercent"/>  
  </xs:restriction>  
</xs:simpleType>
```

The following table specifies the allowable values for the **VarianceDisplayType** simple type.

Value	Meaning
ShowPercent	Show <b>variance</b> value as the percentage variance between a target (section <a href="#">2.2.4.170</a> ) value and its associated actual value.
ShowValue	Show the <b>variance</b> value as the difference between a target (section <a href="#">2.2.4.170</a> ) value and its associated actual value.
ShowInvertedPercent	Show the <b>variance</b> value as the inverted percentage variance between a target (section <a href="#">2.2.4.170</a> ) value and its associated actual value.

### 2.2.5.53 VarianceType

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

This simple type enumeration specifies how a **variance** calculation uses **indicator status band** and target values.

```
<xs:simpleType name="VarianceType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="VarianceToTarget"/>
    <xs:enumeration value="VarianceToBestTarget"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **VarianceType** simple type.

Value	Meaning
VarianceToTarget	Show the <b>variance</b> value as the inverted percentage variance between a target (section <a href="#">2.2.4.170</a> ) value and its associated actual value.
VarianceToBestTarget	Calculate value as the <b>variance</b> between the actual value and a computed target (section <a href="#">2.2.4.170</a> ) value. The computed target (section <a href="#">2.2.4.170</a> ) value takes into account the nearest threshold of the best <b>indicator status band</b> . See the <b>Banding</b> complex type (section <a href="#">2.2.4.60</a> ) for more information about bands.

### 2.2.5.54 VerticalAlignments

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

This simply type enumeration specifies a vertical alignment of content within a grid cell or display element.

```
<xs:simpleType name="VerticalAlignments" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Undefined"/>
    <xs:enumeration value="Top"/>
    <xs:enumeration value="Middle"/>
    <xs:enumeration value="Bottom"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **VerticalAlignments** simple type.

Value	Meaning
Undefined	Vertical alignment is undefined.
Top	Align at the top.
Middle	Align at the middle.
Bottom	Align at the bottom.

### 2.2.6 Attributes

This specification does not define any common XML schema attribute definitions.

### **2.2.7 Groups**

This specification does not define any common XML schema group definitions.

### **2.2.8 Attribute Groups**

This specification does not define any common XML schema attribute group definitions.

### **2.2.9 Common Data Structures**

This specification does not define any common XML schema data structures.

## 3 Protocol Details

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

Except where specified, protocol clients SHOULD interpret HTTP status codes returned by the server (2) as specified in [\[RFC2616\]](#) section 10, Status Code Definitions).

This protocol allows servers (2) to notify protocol clients of application-level faults using SOAP faults. Except where specified, these SOAP faults are not significant for interoperability, and protocol clients can interpret them in an implementation-specific manner.

This protocol allows servers (2) to perform implementation-specific authorization checks and notify protocol clients of authorization faults either using HTTP status codes or using SOAP faults as specified previously in this section.

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

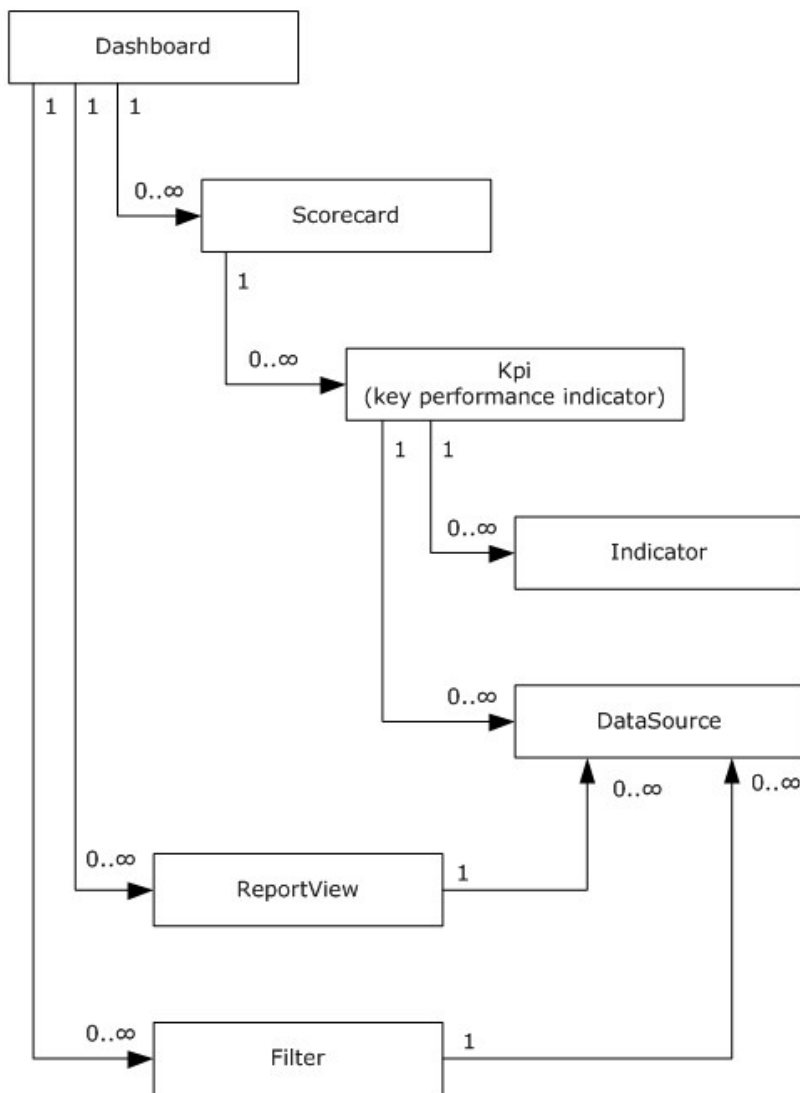
In cases where an argument is optional and the WSDL specifies both `"minOccurs=0"` and `"Nillable=true"`, treat the argument as only `"minOccurs=0"`.

### 3.1 Server Details

#### 3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

The server (2) maintains a collection of first-class elements indexed by unique repository locations. Each first-class element can be independently published to and read from the server (2). Each first-class element references its dependents by their unique repository locations. The following UML diagram describes how the first-class elements are related:



**Figure 6: Overview of first-class elements**

A first-class element's dependents are published prior to that first-class element being consumed on the server (2). For example, all the first-class elements that a dashboard is dependent on are published prior to that dashboard being deployed or viewed.

The following classes are defined as first-class elements:

**Dashboard:** A customizable landing page for a business application or workspace that uses Web Parts to display selected information. It can provide a comprehensive look at the information inside the application or workspace by consolidating lists (1), libraries, text, images and other data into a dynamic, customizable information portal.

Each Web Part on a dashboard displays the information specified by a single first-class element.

The Filters, Reports, and Scorecards in a Dashboard can be connected together so that changes in the state of one first-class element will change the information displayed by other first-class

elements. For example, a Filter can be connected to Report Views or Scorecards so that changes to the selections made in the Filter are reflected in the information shown by those Report Views and Scorecards.

When Filters, Reports, and Scorecards are connected in a Dashboard, each connection has an explicit source and a destination. State information in a dashboard always flows from a connection source or begin point in one first-class element to a connection destination or endpoint in another first-class element. Filters, Reports, and Scorecards can each have multiple begin points and endpoints. A connection is fully defined by a source element, a begin point on that element, a destination element and an endpoint on that element. For example, the member name begin point on a Filter could be connected to the row endpoint on a Scorecard.

There are limitations on the way different first-class element can be connected in a Dashboard:

First-class element	Can be a source?	Can be a destination?
Filter	Yes	No
Report View	No	Yes
Scorecard	Yes	Yes

- The connection cannot create a circular reference; a user cannot connect a scorecard to a filter that is already linked to the scorecard.
- A begin point is available if:
  - It is not already connected to another begin point or it is connected but its `AcceptMultipleFilterLinks` property is set to true.
  - It is not already connected to the begin point. If the dashboard item is a scorecard it can accept multiple connections from the same begin point.
- Unless the target item is a scorecard a user cannot make multiple connections from a begin point to a target.
- Although a scorecard can accept multiple connections from the same begin point, those connections cannot be to the same end point on the scorecard. In other words, a user can connect a filter to a scorecard's Row end point and its Column end point, but a user cannot connect a begin point to a scorecard's Row end point twice.

**Scorecard:** A report type that depicts organizational performance by displaying a collection of key performance indicators (KPIs) together with performance targets for those KPIs. A scorecard can be organized hierarchically.

**ReportView:** A visual display of data in a dashboard that can be coordinated with other report views by using filters.

**Filter:** A feature that enables users to modify dashboard views by changing the subset of data that is displayed in reports or scorecards.

**KPI (key performance indicator):** A predefined measure that is used to track performance of a strategic goal, objective, plan, initiative, or business process. A KPI is evaluated against a target. An explicit and measurable value taken directly from a data source.

**Indicator:** A set of graphics, text, and colors for defining different levels of performance when comparing an actual value and a target value within a KPI.

**DataSource:** A reference to a disk, file, document, or other collection of information from which data is taken or moved.

The server (2) also maintains a collection of annotations.

**Annotation:** One of possibly several notations associated with a comment. Each comment is associated with a single cell in a scorecard and meant to provide related information about the value in that scorecard cell.

### 3.1.2 Timers

If a request exceeds a query timeout period, the server (2) MUST return a SOAP fault response, which MUST contain the **Query Timeout** <22> **ErrorCode** as specified in section [2.2.2.1](#).

### 3.1.3 Initialization

None.

### 3.1.4 Message Processing Events and Sequencing Rules

This section specifies the server (2) operations.

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

Operation	Description
<b>CreateAnnotation</b>	The <b>CreateAnnotation</b> operation is used to create an <b>Annotation</b> complex type (section <a href="#">2.2.4.18</a> ) on the server (2).
<b>CreateDashboard</b>	The <b>CreateDashboard</b> operation is used to create a <b>Dashboard</b> complex type (section <a href="#">2.2.4.79</a> ) on the server (2).
<b>CreateDataSource</b>	The <b>CreateDataSource</b> operation is used to create a <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ) on the server (2).
<b>CreateFilter</b>	The <b>CreateFilter</b> operation is used to create a <b>Filter</b> complex type (section <a href="#">2.2.4.98</a> ) on the server (2).
<b>CreateIndicator</b>	The <b>CreateIndicator</b> operation is used to create an <b>Indicator</b> complex type (section <a href="#">2.2.4.125</a> ) on the server (2).
<b>CreateKpi</b>	The <b>CreateKpi</b> operation is used to create a <b>Kpi</b> complex type (section <a href="#">2.2.4.128</a> ) on the server (2).
<b>CreateReportView</b>	The <b>CreateReportView</b> operation creates a <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ) on the server (2).
<b>CreateScorecard</b>	The <b>CreateScorecard</b> operation creates a <b>Scorecard</b> complex type (section <a href="#">2.2.4.162</a> ) on the server (2).
<b>DeleteAnnotation</b>	The <b>DeleteAnnotation</b> operation deletes an <b>Annotation</b> complex type (section <a href="#">2.2.4.18</a> ) from

Operation	Description
	the server (2).
<b>DeleteDashboard</b>	The <b>DeleteDashboard</b> operation deletes a <b>Dashboard</b> complex type (section <a href="#">2.2.4.79</a> ) from the server (2).
<b>DeleteDataSource</b>	The <b>DeleteDataSource</b> operation deletes a <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ) from the server (2).
<b>DeleteFilter</b>	The <b>DeleteFilter</b> operation deletes a <b>Filter</b> complex type (section <a href="#">2.2.4.98</a> ) from the server (2).
<b>DeleteIndicator</b>	The <b>DeleteIndicator</b> operation deletes an <b>Indicator</b> complex type (section <a href="#">2.2.4.125</a> ) from the server (2).
<b>DeleteKpi</b>	The <b>DeleteKpi</b> operation deletes a <b>Kpi</b> complex type (section <a href="#">2.2.4.128</a> ) from the server (2).
<b>DeleteReportView</b>	The <b>DeleteReportView</b> operation deletes a <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ) from the server (2).
<b>DeleteScorecard</b>	The <b>DeleteScorecard</b> operation deletes a <b>Scorecard</b> complex type (section <a href="#">2.2.4.162</a> ) from the server (2).
<b>ExportDashboard</b>	The <b>ExportDashboard</b> operation <a href="#">&lt;23&gt;</a> is used to export dashboard pages and their associated content from the server (2) into a specified Deployment Package ( <a href="#">[MS-PRIMEPF]</a> ).
<b>GenerateView</b>	The <b>GenerateView</b> operation generates the data structure that represents a scorecard grid view, the <b>GridViewData</b> complex type (section <a href="#">2.2.4.121</a> ), based on information stored on the server (2).
<b>GenerateViewDirect</b>	The <b>GenerateViewDirect</b> operation generates the data structure that represents a scorecard grid view (see <b>GridViewData</b> complex type, section <a href="#">2.2.4.121</a> ), using information sent from the client.
<b>GetAllAnnotationsByScorecardLocation</b>	The <b>GetAllAnnotationsByScorecardLocation</b> operation retrieves an array of <b>Annotation</b> complex type elements (section <a href="#">2.2.4.18</a> ) associated with a scorecard.
<b>GetAnalyticReportView</b>	The <b>GetAnalyticReportView</b> operation retrieves a report view from the server (2) that has been created through the <b>SaveTemporaryAnalyticReport</b> (section <a href="#">3.1.4.65</a> ) or <b>CreateReportView</b> (section <a href="#">3.1.4.7</a> ) operation.
<b>GetAnnotation</b>	The <b>GetAnnotation</b> operation retrieves an <b>Annotation</b> complex type (section <a href="#">2.2.4.18</a> ) associated with a scorecard cell from the server (2).
<b>GetAnnotationByID</b>	The <b>GetAnnotationByID</b> operation retrieves an <b>Annotation</b> complex type (section <a href="#">2.2.4.18</a> ) from a



Operation	Description
	specified GUID from the server (2).
<b>GetAnnotationSetting</b>	The <b>Attribute Groups</b> operation retrieves an <b>AnnotationSetting</b> complex type object (section <a href="#">3.1.4.24.3.1</a> ) that contains the annotation settings for the server (2).
<b>GetAsKpis</b>	The <b>GetAsKpis</b> operation takes in an Analysis Services data source along with a server-relative URL to a <b>Kpi</b> complex type (section <a href="#">2.2.4.128</a> ) list (1), and returns a collection of <b>Kpis</b> as defined in the <b>ArrayOfKpi</b> complex type (see section <a href="#">2.2.4.41</a> ).
<b>GetCube</b>	The <b>GetCube</b> operation takes in a <b>RepositoryLocation</b> complex type object (section <a href="#">2.2.4.161</a> ), and returns the associated <b>Cube</b> complex type object (section <a href="#">2.2.4.78</a> ).
<b>GetCubeFromDataSource</b>	The <b>GetCubeFromDataSource</b> operation takes in a data source object and returns the associated <b>Cube</b> complex type object section <a href="#">2.2.4.78</a> ().
<b>GetCubeMetaData</b>	The <b>GetCubeMetaData</b> operation takes in an Analysis Services <b>RepositoryLocation</b> complex type object (section <a href="#">2.2.4.161</a> ) and returns the associated <b>Cube</b> complex type object (section <a href="#">2.2.4.78</a> ).
<b>GetCubeMetaDataForDataSource</b>	The <b>GetCubeMetaDataForDataSource</b> operation takes in an Analysis Services data source object and returns the associated <b>Cube</b> complex type object (section <a href="#">2.2.4.78</a> ). This operation is valid for Analysis Services data sources only.
<b>GetCubeNameInfos</b>	The <b>GetCubeNameInfos</b> operation retrieves an <b>ArrayOfNameInfo</b> complex type (section <a href="#">2.2.4.48</a> ) that describes the cubes of the data source (1).
<b>GetCurrentCultureLcid</b>	The <b>GetCurrentCulturLcid</b> operation retrieves the current culture locale identifier.
<b>GetCurrentUserInfo</b>	The <b>GetCurrentUserInfo</b> operation retrieves the user name and display name information of the current user.
<b>GetDashboard</b>	The <b>GetDashboard</b> operation retrieves a dashboard.
<b>GetDatabaseNamesFromDataSource</b>	The <b>GetDatabaseNamesFromDataSource</b> operation retrieves an array of database names associated with the data source (1).
<b>GetDataSource</b>	The <b>GetDataSource</b> operation retrieves a data source (1).
<b>GetDependentElements</b>	The <b>GetDependentElements</b> operation retrieves from the server (2) all <b>FirstClassElement</b> complex types (section <a href="#">2.2.4.99</a> ) associated with a list (1) of repository locations. In addition, all <b>FirstClassElements</b> that are related by reference are also included in the response. For example, for a requested scorecard, all <b>Kpis</b> , <b>Indicators</b> , and

Operation	Description
	<b>DataSources</b> that the scorecard depends on will also be retrieved.
<b>GetDimensions</b>	The <b>GetDimensions</b> operation retrieves an array of dimension (1) objects.
<b>GetDimensionsFromDataSource</b>	The <b>GetDimensionsFromDataSource</b> operation retrieves an array of dimension (1) objects (see section <a href="#">2.2.4.90</a> ).
<b>GetFilter</b>	The <b>GetFilter</b> operation retrieves a <b>Filter</b> complex type (section <a href="#">2.2.4.98</a> ).
<b>GetIndicator</b>	The <b>GetIndicator</b> operation retrieves an <b>Indicator</b> complex type (section <a href="#">2.2.4.125</a> ) from the server (2).
<b>GetKpi</b>	The <b>GetKpi</b> operation retrieves a <b>Kpi</b> complex type object (section <a href="#">2.2.4.128</a> ).
<b>GetKpisFromScorecard</b>	The <b>GetKpisFromScorecard</b> operation retrieves an array of <b>Kpi</b> complex type objects (section <a href="#">2.2.4.128</a> ) associated with a scorecard.
<b>GetLatestAnalyticReportVersion</b>	The <b>GetLatestAnalyticReportVersion</b> operation retrieves from the server (2) the version number for a report view that has been created through <b>SaveTemporaryAnalyticReport</b> operation (section <a href="#">3.1.4.65</a> ).
<b>GetListItems</b>	The <b>GetListItems</b> operation retrieves all <b>FirstClassElements</b> complex types (section <a href="#">2.2.4.99</a> ) associated with a given repository list (1) from the server (2).
<b>GetMdx</b>	The <b>GetMdx</b> operation retrieves an MDX that can be used to query data sources for the given analytic report. The Analytic Chart and Analytic Grid report view types contain custom data that is used to generate MDX queries. See the <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ) for more detail.
<b>GetParameterDisplayData</b>	The <b>GetParameterDisplayData</b> operation builds a template data table containing only the columns produced by a specific parameter type. The referred parameter represents a specific kind of connection between two Web Parts. The resulting <b>DataTable</b> (as described in <a href="#">[DataTable]</a> ) represents an empty sample of the information that gets passed on that connection.
<b>GetPreviewDataSet</b>	The <b>GetPreviewDataSet</b> method retrieves a data set from a data source, which is suitable for previewing results.
<b>GetQueryResultMembers</b>	The <b>GetQueryResultMembers</b> operation retrieves an array of members (3) associated with the specified report.

Operation	Description
<b>GetRegisteredCustomFCOs</b>	The <b>GetRegisteredCustomFCOs</b> operation retrieves custom object definitions registered on the server (2).
<b>GetReportView</b>	The <b>GetReportView</b> operation retrieves a <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ) from the server (2).
<b>GetScorecard</b>	The <b>GetScorecard</b> operation retrieves a <b>Scorecard</b> complex type (section <a href="#">2.2.4.162</a> ).
<b>ImportDashboard</b>	The <b>ImportDashboard</b> operation <a href="#">&lt;24&gt;</a> is used to import content from a specified Deployment Package ([MS-PRIMEPF]) to the server (2).
<b>QueryChildMembers</b>	The <b>QueryChildMembers</b> operation uses a data source for the specified member, and returns a collection of members.
<b>QueryChildMembersByRangeFromDataSource</b>	The <b>QueryChildMembersByRangeFromDataSource</b> operation queries the <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ), and returns a collection of child members.
<b>QueryChildMembersFromDataSource</b>	The <b>QueryChildMembersFromDataSource</b> operation uses the data source to retrieve a collection of child members for the specified member name.
<b>QueryDimensionRootMembers</b>	The <b>QueryDimensionRootMembers</b> operation uses a data source (1) from the repository location for the specified member, and returns a collection of root members.
<b>QueryDimensionRootMembersFromDataSource</b>	The <b>QueryDimensionRootMembersFromDataSource</b> method uses the data source to retrieve a collection of root members for the specified member name.
<b>QueryNamedSets</b>	The <b>QueryNamedSets</b> operation is used to retrieve the named sets that are defined by a data source (1) when given the <b>RepositoryLocation</b> complex type (section <a href="#">2.2.4.161</a> ) of the data source (1).
<b>QueryNamedSetsFromDataSource</b>	The <b>QueryNamedSetsFromDataSource</b> operation is used to retrieve the named sets that are defined by the given data source (1).
<b>QueryRelatedMember</b>	The <b>QueryRelatedMember</b> operation is used to retrieve a member (3) having the specified relationship to the specified member from the data source (1) at the given <b>RepositoryLocation</b> complex type (section <a href="#">2.2.4.161</a> ).
<b>QueryRelatedMemberFromDataSource</b>	The <b>QueryRelatedMemberFromDataSource</b> operation queries the given data source (1) for the member (3) having the specified relationship to the specified member.

Operation	Description
<b>QueryTimeIntelligence</b>	The <b>QueryTimeIntelligence</b> operation queries a data source (1) location for the members (3) that are specified by a time intelligence formula.
<b>QueryTimeIntelligenceDirect</b>	The <b>QueryTimeIntelligenceDirect</b> operation queries the provided data source (1) for the members (3) that are specified by a time intelligence formula.
<b>QueryTransformMembers</b>	The <b>QueryTransformMembers</b> method transforms any collection of <b>Member</b> complex types (section <a href="#">2.2.4.134</a> ) into a new member collection based on the operation passed on the <b>transformType</b> parameter of the <b>QueryTransformMembers</b> element (section <a href="#">3.1.4.64.2.1</a> ) as specified in section <a href="#">3.1.4.64.4.1</a> .
<b>SaveTemporaryAnalyticReport</b>	The <b>SaveTemporaryAnalyticReport</b> operation stores a temporary copy of a <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ) to the server (2).
<b>TestConnection</b>	The <b>TestConnection</b> operation is used to determine whether a connection as specified by the <b>dataSource</b> element can be established.
<b>TrimAnnotationByOwner</b>	The <b>TrimAnnotationByOwner</b> operation removes all the <b>Annotation</b> complex types (section <a href="#">2.2.4.18</a> ) that are owned by a specific user.
<b>TrimAnnotationByScorecardLocation</b>	The <b>TrimAnnotationByScorecardLocation</b> operation removes all the annotations that belong to a scorecard at a specific location.
<b>TrimAnnotationUntouchedSince</b>	The <b>TrimAnnotationUntouchedSince</b> operation removes all the <b>Annotation</b> complex types (section <a href="#">2.2.4.18</a> ) that haven't been updated since the specified date.
<b>UpdateAnnotation</b>	The <b>UpdateAnnotation</b> operation updates an existing <b>Annotation</b> complex type (section <a href="#">2.2.4.18</a> ).
<b>UpdateDashboard</b>	The <b>UpdateDashboard</b> operation updates an existing <b>Dashboard</b> complex type (section <a href="#">2.2.4.79</a> ).
<b>UpdateDataSource</b>	The <b>UpdateDataSource</b> operation updates an existing <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ).
<b>UpdateFilter</b>	The <b>UpdateFilter</b> operation is used to update the existing filter as specified by the <b>Filter</b> complex type object (section <a href="#">2.2.4.98</a> ) in the <b>UpdateFilter</b> input element (section <a href="#">3.1.4.73.2.1</a> ).
<b>UpdateIndicator</b>	The <b>UpdateIndicator</b> operation is used to update the existing <b>Indicator</b> as specified by the <b>Indicator</b> complex type object (section <a href="#">2.2.4.125</a> ) in the <b>UpdateIndicator</b> input element (section

Operation	Description
	<a href="#">3.1.4.74.2.1</a> ).
<b>UpdateKpi</b>	The <b>UpdateKpi</b> operation is used to update the existing KPI as specified by the <b>Kpi</b> complex type object (section <a href="#">2.2.4.128</a> ) in the <b>UpdateKpi</b> input element (section <a href="#">3.1.4.75.2.1</a> ).
<b>UpdateReportView</b>	The <b>UpdateReportView</b> operation is used to update the existing report view as specified by the <b>ReportView</b> complex type object (section <a href="#">2.2.4.160</a> ) in the <b>UpdateReportView</b> input element (section <a href="#">3.1.4.76.2.1</a> ).
<b>UpdateScorecard</b>	The <b>UpdateScorecard</b> operation is used to update the existing scorecard as specified by the <b>Scorecard</b> complex type object (section <a href="#">2.2.4.162</a> ) in the <b>UpdateScorecard</b> input element (section <a href="#">3.1.4.77.2.1</a> ).
<b>ValidateKpi</b>	The <b>ValidateKpi</b> operation checks whether a KPI stored on the server (2) is valid.
<b>ValidateScorecard</b>	The <b>ValidateScorecard</b> operation checks if a scorecard stored on the server (2) is valid.
<b>ValidateSiteCollection</b>	The <b>ValidateSiteCollection</b> operation is used to check if the <b>context site</b> has the server (2) feature installed.

### 3.1.4.1 CreateAnnotation

The **CreateAnnotation** operation is used to create an **Annotation** complex type (section [2.2.4.18](#)) on the server (2).

The following is the WSDL port type specification of the **CreateAnnotation WSDL operation**.

```
<wsdl:operation name="CreateAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateAnnotationSoapIn"/>
  <wsdl:output message="tns:CreateAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateAnnotationSoapIn** request message (section [3.1.4.1.1.1](#)), and the server (2) responds with a **CreateAnnotationSoapOut** response message (section [3.1.4.1.1.2](#)) as follows:

- The protocol client MUST send the **Annotation** to be created.
- The server (2) MUST create the specified **Annotation** in the database.
- If creation is successful, the server (2) MUST return the created **Annotation** whose following fields are updated:
  - CreatedOn
  - Guid

- LastUpdatedOn

ErrorCode	Description
AnnotationNotEnabled	See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ).
InvalidAnnotation	See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ).
InvalidComment	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
InvalidPermission	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the **ErrorCode** MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.1.1 Messages

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

Message	Description
<b>CreateAnnotationSoapIn</b>	The request WSDL message for the <b>CreateAnnotation</b> WSDL operation.
<b>CreateAnnotationSoapOut</b>	The response WSDL message for the <b>CreateAnnotation</b> 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
<b>CreateAnnotation</b>	The input data for the <b>CreateAnnotation</b> WSDL operation.
<b>CreateAnnotationResponse</b>	The result data for the <b>CreateAnnotation</b> WSDL operation.

### 3.1.4.1.2.1 CreateAnnotation

The **CreateAnnotation** element specifies the input data for the **CreateAnnotation** WSDL operation.

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

**annotation:** The **Annotation** complex type (section [2.2.4.18](#)) to be created on the server (2). This element **MUST** be present.

### 3.1.4.1.2.2 CreateAnnotationResponse

The **CreateAnnotationResponse** element specifies the result data for the **CreateAnnotation** WSDL operation.

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

**CreateAnnotationResult:** The **Annotation** complex type (section [2.2.4.18](#)) created on the server (2). This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.1](#).

### 3.1.4.1.3 Complex Types

None.

### 3.1.4.1.4 Simple Types

None.

### 3.1.4.1.5 Attributes

None.

### 3.1.4.1.6 Groups

None.

### 3.1.4.1.7 Attribute Groups

None.

### 3.1.4.2 CreateDashboard

The **CreateDashboard** operation is used to create a **Dashboard** complex type (section [2.2.4.79](#)) on the server (2).

The following is the WSDL port type specification of the **CreateDashboard** WSDL operation.

```
<wsdl:operation name="CreateDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateDashboardSoapIn"/>
  <wsdl:output message="tns:CreateDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateDashboardSoapIn** request message (section [3.1.4.2.1.1](#)), and the server (2) responds with a **CreateDashboardSoapOut** response message (section [3.1.4.2.1.2](#)) as follows:

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

ErrorCode	Description
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).



ErrorCode	Description
Unknown	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the **ErrorCode** MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.2.1 Messages

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

Message	Description
<b>CreateDashboardSoapIn</b>	The request WSDL message for the <b>CreateDashboard</b> WSDL operation.
<b>CreateDashboardSoapOut</b>	The response WSDL message for the <b>CreateDashboard</b> 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
<b>CreateDashboard</b>	The input data for the <b>CreateDashboard</b> WSDL operation.
<b>CreateDashboardResponse</b>	The result data for the <b>CreateDashboard</b> WSDL operation.

#### 3.1.4.2.2.1 CreateDashboard

The **CreateDashboard** element specifies the input data for the **CreateDashboard** WSDL operation.

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

```

<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
  <xs:element minOccurs="0" maxOccurs="1" name="dashboard" type="tns:Dashboard"/>
</xs:sequence>
</xs:complexType>
</xs:element>

```

**listUrl:** The location on the server (2) where the dashboard is created. This element MUST be present. It MUST be a valid URL as specified in [\[RFC1738\]](#) and MUST be a valid **subsite** on the server (2).

**dashboard:** The **Dashboard** complex type (section [2.2.4.79](#)) to be created on the server (2). This element MUST be present.

### 3.1.4.2.2 CreateDashboardResponse

The **CreateDashboardResponse** element specifies the result data for the **CreateDashboard** WSDL operation.

```

<xs:element name="CreateDashboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateDashboardResult"
        type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**CreateDashboardResult:** The **Dashboard** complex type (section [2.2.4.79](#)) created on the server (2). This element MUST be present. All of the fields MUST be set as designated in section [3.1.4.2](#).

### 3.1.4.2.3 Complex Types

None.

### 3.1.4.2.4 Simple Types

None.

### 3.1.4.2.5 Attributes

None.

### 3.1.4.2.6 Groups

None.

### 3.1.4.2.7 Attribute Groups

None.

### 3.1.4.3 CreateDataSource

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

The following is the WSDL port type specification of the **CreateDataSource** WSDL operation.

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

The protocol client sends a **CreateDataSourceSoapIn** request message (section [3.1.4.3.1.1](#)), and the server (2) responds with a **CreateDataSourceSoapOut** response message (section [3.1.4.3.1.2](#)) as follows:

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

Error code	Description
<b>InvalidDataSource</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

Error code	Description
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.3.1 Messages

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

Message	Description
<b>CreateDataSourceSoapIn</b>	The request WSDL message for the <b>CreateDataSource</b> WSDL operation.
<b>CreateDataSourceSoapOut</b>	The response WSDL message for the <b>CreateDataSource</b> 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
<b>CreateDataSource</b>	The input data for the <b>CreateDataSource</b> WSDL operation.
<b>CreateDataSourceResponse</b>	The result data for the <b>CreateDataSource</b> WSDL operation.

#### 3.1.4.3.2.1 CreateDataSource

The **CreateDataSource** element specifies the input data for the **CreateDataSource** WSDL operation.

```

<xs:element name="CreateDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

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

**dataSource:** The **DataSource** to be created on the server (2). This element **MUST** be present.

### 3.1.4.3.2 CreateDataSourceResponse

The **CreateDataSourceResponse** element specifies the result data for the **CreateDataSource** WSDL operation.

```

<xs:element name="CreateDataSourceResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateDataSourceResult"
type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**CreateDataSourceResult:** The **DataSource** complex type (section [2.2.4.85](#)) created on the server (2). This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.3](#).

### 3.1.4.3.3 Complex Types

None.

### 3.1.4.3.4 Simple Types

None.

### 3.1.4.3.5 Attributes

None.

### 3.1.4.3.6 Groups

None.

### 3.1.4.3.7 Attribute Groups

None.

### 3.1.4.4 CreateFilter

The **CreateFilter** operation is used to create a **Filter** complex type (section [2.2.4.98](#)) on the server (2).

The following is the WSDL port type specification of the **CreateFilter** WSDL operation.

```
<wsdl:operation name="CreateFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateFilterSoapIn"/>
  <wsdl:output message="tns:CreateFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateFilterSoapIn** request message (section [3.1.4.4.1.1](#)), and the server (2) responds with a **CreateFilterSoapOut** response message (section [3.1.4.4.1.2](#)) as follows:

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

Error code	Description
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.4.1 Messages

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

Message	Description
<b>CreateFilterSoapIn</b>	The request WSDL message for the <b>CreateFilter</b> WSDL operation.
<b>CreateFilterSoapOut</b>	The response WSDL message for the <b>CreateFilter</b> 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
<b>CreateFilter</b>	The input data for the <b>CreateFilter</b> WSDL operation.
<b>CreateFilterResponse</b>	The result data for the <b>CreateFilter</b> WSDL operation.

#### 3.1.4.4.2.1 CreateFilter

The **CreateFilter** element specifies the input data for the **CreateFilter** WSDL operation.

```
<xs:element name="CreateFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the server (2) where the **Filter** complex type (section [2.2.4.98](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative URL, as specified in [\[RFC1808\]](#) and **MUST** be a valid site (2) on the server (2).

**filter:** The Filter to be created on the server (2). This element **MUST** be present.

### 3.1.4.4.2 CreateFilterResponse

The **CreateFilterResponse** element specifies the result data for the **CreateFilter** WSDL operation.

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

**CreateFilterResult:** The **Filter** complex type (section [2.2.4.98](#)) created on the server (2). This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.4](#).

### 3.1.4.4.3 Complex Types

None.

### 3.1.4.4.4 Simple Types

None.

### 3.1.4.4.5 Attributes

None.

### 3.1.4.4.6 Groups

None.

### 3.1.4.4.7 Attribute Groups

None.

### 3.1.4.5 CreateIndicator

The **CreateIndicator** operation is used to create an **Indicator** complex type (section [2.2.4.125](#)) on the server (2).

The following is the WSDL port type specification of the **CreateIndicator** WSDL operation.

```
<wsdl:operation name="CreateIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateIndicatorSoapIn"/>
  <wsdl:output message="tns:CreateIndicatorSoapOut"/>
</wsdl:operation>
```



The protocol client sends a **CreateIndicatorSoapIn** request message (section [3.1.4.5.1.1](#)), and the server (2) responds with a **CreateIndicatorSoapOut** response message (section [3.1.4.5.1.2](#)) as follows:

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

Error code	Description
<b>InvalidIndicator</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.5.1 Messages

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

Message	Description
<b>CreateIndicatorSoapIn</b>	The request WSDL message for the <b>CreateIndicator</b> WSDL operation.
<b>CreateIndicatorSoapOut</b>	The response WSDL message for the <b>CreateIndicator</b> 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
<b>CreateIndicator</b>	The input data for the <b>CreateIndicator</b> WSDL operation.
<b>CreateIndicatorResponse</b>	The result data for the <b>CreateIndicator</b> WSDL operation.

#### 3.1.4.5.2.1 CreateIndicator

The **CreateIndicator** element specifies the input data for the **CreateIndicator** WSDL operation.

```
<xs:element name="CreateIndicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the server (2) where the **Indicator** complex type (section [2.2.4.125](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative URL as specified in [\[RFC1808\]](#) and **MUST** be a valid site (2) on the server (2).

**indicator:** The **Indicator** to be created on the server (2). **MUST** be present.

### 3.1.4.5.2 CreateIndicatorResponse

The **CreateIndicatorResponse** element specifies the result data for the **CreateIndicator** WSDL operation.

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

**CreateIndicatorResult:** The **Indicator** complex type (section [2.2.4.125](#)) created on the server (2). This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.5](#).

### 3.1.4.5.3 Complex Types

None.

### 3.1.4.5.4 Simple Types

None.

### 3.1.4.5.5 Attributes

None.

### 3.1.4.5.6 Groups

None.

### 3.1.4.5.7 Attribute Groups

None.

### 3.1.4.6 CreateKpi

The **CreateKpi** operation is used to create a **Kpi** complex type (section [2.2.4.128](#)) on the server (2).

The following is the WSDL port type specification of the **CreateKpi** WSDL operation.

```
<wsdl:operation name="CreateKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateKpiSoapIn"/>
  <wsdl:output message="tns:CreateKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateKpiSoapIn** request message (section [3.1.4.6.1.1](#)), and the server (2) responds with a **CreateKpiSoapOut** response message (section [3.1.4.6.1.2](#)) as follows:

- The protocol client **MUST** send the **Kpi** and its target location on the server (2).

- The server (2) MUST create the specified **Kpi** at the specified server (2) location.
- If creation is successful, the server (2) MUST return the created **Kpi** with the following fields set as specified in the **FirstClassElement** (section [2.2.4.99](#)) and **KpiMeasure** (section [2.2.4.129](#)) complex types:
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version
  - Actuals.OwnerKpiLocation
  - Targets.OwnerKpiLocation

Error code	Description
<b>InvalidKpi</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.6.1 Messages

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

Message	Description
<b>CreateKpiSoapIn</b>	The request WSDL message for the <b>CreateKpi</b> WSDL operation.
<b>CreateKpiSoapOut</b>	The response WSDL message for the <b>CreateKpi</b> 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
<b>CreateKpi</b>	The input data for the <b>CreateKpi</b> WSDL operation.
<b>CreateKpiResponse</b>	The result data for the <b>CreateKpi</b> WSDL operation.

#### 3.1.4.6.2.1 CreateKpi

The **CreateKpi** element specifies the input data for the **CreateKpi** WSDL operation.

```
<xs:element name="CreateKpi" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="kpi" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the server (2) where the **Kpi** complex type (section [2.2.4.128](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative URL as specified in [\[RFC1808\]](#) and **MUST** be a valid site (2) on the server (2).

**kpi:** The KPI to be created on the server (2). This element **MUST** be present.

### 3.1.4.6.2.2 CreateKpiResponse

The **CreateKpiResponse** element specifies the result data for the **CreateKpi** WSDL operation.

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

**CreateKpiResult:** The **Kpi** complex type (section [2.2.4.128](#)) created on the server (2). This element MUST be present. All of the fields MUST be set as designated in section [3.1.4.6](#).

### 3.1.4.6.3 Complex Types

None.

### 3.1.4.6.4 Simple Types

None.

### 3.1.4.6.5 Attributes

None.

### 3.1.4.6.6 Groups

None.

### 3.1.4.6.7 Attribute Groups

None.

### 3.1.4.7 CreateReportView

The **CreateReportView** operation creates a **ReportView** complex type (section [2.2.4.160](#)) on the server (2).

The following is the WSDL port type specification of the **CreateReportView** WSDL operation.

```
<wsdl:operation name="CreateReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateReportViewSoapIn"/>
  <wsdl:output message="tns:CreateReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **CreateReportViewSoapIn** request message (section [3.1.4.7.1.1](#)), and the server (2) responds with a **CreateReportViewSoapOut** response message (section [3.1.4.7.1.2](#)) as follows:

- The protocol client MUST send the **ReportView** and URL location.
- The server (2) MUST create the specified **ReportView** at the specified URL location.

- If creation is successful, the server (2) MUST return the created **ReportView** with the following fields set as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

Error code	Description
<b>InvalidReportView</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationAbsolutePath</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.7.1 Messages

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

Message	Description
<b>CreateReportViewSoapIn</b>	The request WSDL message for the <b>CreateReportView</b> WSDL operation.
<b>CreateReportViewSoapOut</b>	The response WSDL message for the <b>CreateReportView</b> 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
<b>CreateReportView</b>	The input data for the <b>CreateReportView</b> WSDL operation.
<b>CreateReportViewResponse</b>	The result data for the <b>CreateReportView</b> WSDL operation.

#### 3.1.4.7.2.1 CreateReportView

The **CreateReportView** element specifies the input data for the **CreateReportView** WSDL operation.

```
<xs:element name="CreateReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**listUrl:** The location on the server (2) where the **ReportView** complex type (section [2.2.4.160](#)) is to be created. This element **MUST** be present. It **MUST** be a valid relative URL as specified in [\[RFC1808\]](#) and **MUST** be a valid site (2) on the server (2).

**reportView:** The **ReportView** to be created on the server (2). This element **MUST** be present.

#### 3.1.4.7.2.2 CreateReportViewResponse

The **CreateReportViewResponse** element specifies the result data for the **CreateReportView** WSDL operation.

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



```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateReportViewResult"
        type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**CreateReportViewResult:** The **ReportView** complex type (section [2.2.4.160](#)) created on the server (2). This element MUST be present. All of the fields MUST be set as designated in section [3.1.4.7](#).

### 3.1.4.7.3 Complex Types

None.

### 3.1.4.7.4 Simple Types

None.

### 3.1.4.7.5 Attributes

None.

### 3.1.4.7.6 Groups

None.

### 3.1.4.7.7 Attribute Groups

None.

## 3.1.4.8 CreateScorecard

The **CreateScorecard** operation creates a **Scorecard** complex type (section [2.2.4.162](#)) on the server (2).

The following is the WSDL port type specification of the **CreateScorecard** WSDL operation.

```

<wsdl:operation name="CreateScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:CreateScorecardSoapIn"/>
  <wsdl:output message="tns:CreateScorecardSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **CreateScorecardSoapIn** request message (section [3.1.4.8.1.1](#)), and the server (2) responds with a **CreateScorecardSoapOut** response message (section [3.1.4.8.1.2](#)) as follows:

- The protocol client MUST send the **Scorecard** and URL location.
- The server (2) MUST create the specified **Scorecard** at the specified URL location.
- If creation is successful, the server (2) MUST return the created **Scorecard** with the following fields set as specified in the **FirstClassElement** complex type (section [2.2.4.99](#)):

- Location
- CreatedBy
- ModifiedBy
- CreatedDate
- LastModified
- Version

Error code	Description
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common list of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.8.1 Messages

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

Message	Description
<b>CreateScorecardSoapIn</b>	The request WSDL message for the <b>CreateScorecard</b> WSDL operation.
<b>CreateScorecardSoapOut</b>	The response WSDL message for the <b>CreateScorecard</b> 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
<b>CreateScorecard</b>	The input data for the <b>CreateScorecard</b> WSDL operation.
<b>CreateScorecardResponse</b>	The result data for the <b>CreateScorecard</b> WSDL operation.

#### 3.1.4.8.2.1 CreateScorecard

The **CreateScorecard** element specifies the input data for the **CreateScorecard** WSDL operation.

```
<xs:element name="CreateScorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** The location on the server (2) where a Scorecard complex type (section [2.2.4.162](#)) is to be created. This element **MUST** present. It **MUST** be a valid relative URL as specified in [\[RFC1808\]](#) and **MUST** be a valid site (2) on the server (2).

**scorecard:** The Scorecard to be created on the server (2). This element **MUST** be present.

#### 3.1.4.8.2.2 CreateScorecardResponse

The **CreateScorecardResponse** element specifies the result data for the **CreateScorecard** WSDL operation.

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

**CreateScorecardResult:** A Scorecard complex type (section [2.2.4.162](#)) created on the server (2). This element **MUST** be present. All of the fields **MUST** be set as designated in section [3.1.4.8](#).

### 3.1.4.8.3 Complex Types

None.

### 3.1.4.8.4 Simple Types

None.

### 3.1.4.8.5 Attributes

None.

### 3.1.4.8.6 Groups

None.

### 3.1.4.8.7 Attribute Groups

None.

### 3.1.4.9 DeleteAnnotation

The **DeleteAnnotation** operation deletes an **Annotation** complex type (section [2.2.4.18](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteAnnotation** WSDL operation.

```
<wsdl:operation name="DeleteAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteAnnotationSoapIn"/>
  <wsdl:output message="tns:DeleteAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteAnnotationSoapIn** request message (section [3.1.4.9.1.1](#)), and the server (2) responds with a **DeleteAnnotationSoapOut** response message (section [3.1.4.9.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of an **Annotation**.
- The server (2) **MUST** delete the **Annotation**.

#### Exceptions:

Error code	Description
<b>AnnotationNotEnabled</b>	<b>Annotations</b> are not enabled in the server (2).
<b>AnnotationDeleteNotEnabled</b>	If Annotation Delete is not enabled in the server (2), but this request, which would delete comments, is received, the comments will not be changed on the server (2) and the <b>AnnotationDeleteNotEnabled</b> error code will be returned.

Error code	Description
<b>InvalidAnnotation</b>	The <b>annotation</b> does not exist in the server (2).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.9.1 Messages

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

Message	Description
<b>DeleteAnnotationSoapIn</b>	The request WSDL message for the <b>DeleteAnnotation</b> WSDL operation.
<b>DeleteAnnotationSoapOut</b>	The response WSDL message for the <b>DeleteAnnotation</b> 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
<b>DeleteAnnotation</b>	The input data for the <b>DeleteAnnotation</b> WSDL operation.
<b>DeleteAnnotationResponse</b>	The result data for the <b>DeleteAnnotation</b> WSDL operation.

#### 3.1.4.9.2.1 DeleteAnnotation

The **DeleteAnnotation** element specifies the input data for the **DeleteAnnotation** WSDL operation.

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

```
<xs:element minOccurs="1" maxOccurs="1" name="annotationID"
xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
</xs:sequence>
</xs:complexType>
</xs:element>
```

**annotationID:** A GUID that specifies the **Annotation** complex type (section [2.2.4.18](#)) to be deleted. This element **MUST** be present.

### 3.1.4.9.2.2 DeleteAnnotationResponse

The **DeleteAnnotationResponse** element specifies the result data for the **DeleteAnnotation** WSDL operation.

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

### 3.1.4.9.3 Complex Types

None.

### 3.1.4.9.4 Simple Types

None.

### 3.1.4.9.5 Attributes

None.

### 3.1.4.9.6 Groups

None.

### 3.1.4.9.7 Attribute Groups

None.

### 3.1.4.10 DeleteDashboard

The **DeleteDashboard** operation deletes a **Dashboard** complex type (section [2.2.4.79](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteDashboard** WSDL operation.

```
<wsdl:operation name="DeleteDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteDashboardSoapIn"/>
  <wsdl:output message="tns:DeleteDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteDashboardSoapIn** request message (section [3.1.4.10.1.1](#)), and the server (2) responds with a **DeleteDashboardSoapOut** response message (section [3.1.4.10.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Dashboard**.
- The server (2) MUST delete the **Dashboard**.

**Exceptions:**

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the ErrorCode MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.10.1 Messages

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

Message	Description
<b>DeleteDashboardSoapIn</b>	The request WSDL message for the <b>DeleteDashboard</b> WSDL operation.
<b>DeleteDashboardSoapOut</b>	The response WSDL message for the <b>DeleteDashboard</b> WSDL operation.

#### 3.1.4.10.1.1 DeleteDashboardSoapIn

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

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/DeleteDashboard`

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

#### 3.1.4.10.1.2 DeleteDashboardSoapOut

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

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

### 3.1.4.10.2 Elements

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

Element	Description
<b>DeleteDashboard</b>	The input data for the <b>DeleteDashboard</b> WSDL operation.
<b>DeleteDashboardResponse</b>	The result data for the <b>DeleteDashboard</b> WSDL operation.

### 3.1.4.10.2.1 DeleteDashboard

The **DeleteDashboard** element specifies the input data for the **DeleteDashboard** WSDL operation.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present and MUST contain the location of a **Dashboard** complex type (section [2.2.4.79](#)).

### 3.1.4.10.2.2 DeleteDashboardResponse

The **DeleteDashboardResponse** element specifies the result data for the **DeleteDashboard** WSDL operation.

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

### 3.1.4.10.3 Complex Types

None.

### 3.1.4.10.4 Simple Types

None.

### 3.1.4.10.5 Attributes

None.

### 3.1.4.10.6 Groups

None.

### 3.1.4.10.7 Attribute Groups

None.



### 3.1.4.11 DeleteDataSource

The **DeleteDataSource** operation deletes a **DataSource** complex type (section [2.2.4.85](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteDataSource** WSDL operation.

```
<wsdl:operation name="DeleteDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteDataSourceSoapIn"/>
  <wsdl:output message="tns:DeleteDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteDataSourceSoapIn** request message (section [3.1.4.11.1.1](#)), and the server (2) responds with a **DeleteDataSourceSoapOut** response message (section [3.1.4.11.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) for a **DataSource**.
- The server (2) MUST delete the **DataSource**.

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.11.1 Messages

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

Message	Description
<b>DeleteDataSourceSoapIn</b>	The request WSDL message for the <b>DeleteDataSource</b> WSDL operation.
<b>DeleteDataSourceSoapOut</b>	The response WSDL message for the <b>DeleteDataSource</b> WSDL operation.

##### 3.1.4.11.1.1 DeleteDataSourceSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteDataSource
```

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

### 3.1.4.11.1.2 DeleteDataSourceSoapOut

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

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

### 3.1.4.11.2 Elements

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

Element	Description
<b>DeleteDataSource</b>	The input data for the <b>DeleteDataSource</b> WSDL operation.
<b>DeleteDataSourceResponse</b>	The result data for the <b>DeleteDataSource</b> WSDL operation.

#### 3.1.4.11.2.1 DeleteDataSource

The **DeleteDataSource** element specifies the input data for the **DeleteDataSource** WSDL operation.

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

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a **DataSource**.

#### 3.1.4.11.2.2 DeleteDataSourceResponse

The **DeleteDataSourceResponse** element specifies the result data for the **DeleteDataSource** WSDL operation.

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

#### 3.1.4.11.3 Complex Types

None.

#### 3.1.4.11.4 Simple Types

None.

#### 3.1.4.11.5 Attributes

None.

### 3.1.4.11.6 Groups

None.

### 3.1.4.11.7 Attribute Groups

None.

### 3.1.4.12 DeleteFilter

The **DeleteFilter** operation deletes a **Filter** complex type (section [2.2.4.98](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteFilter** WSDL operation.

```
<wsdl:operation name="DeleteFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns>DeleteFilterSoapIn"/>
  <wsdl:output message="tns>DeleteFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteFilterSoapIn** request message (section [3.1.4.12.1.1](#)), and the server (2) responds with a **DeleteFilterSoapOut** response message (section [3.1.4.12.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Filter**.
- The server (2) MUST delete the **Filter**.

#### Exceptions:

Error code	Description
<b>FCODeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCODeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.12.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>DeleteFilterSoapIn</b>	The request WSDL message for the <b>DeleteFilter</b> WSDL operation.
<b>DeleteFilterSoapOut</b>	The response WSDL message for the <b>DeleteFilter</b> 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
<b>DeleteFilter</b>	The input data for the <b>DeleteFilter</b> WSDL operation.
<b>DeleteFilterResponse</b>	The result data for the <b>DeleteFilter</b> WSDL operation.

#### 3.1.4.12.2.1 DeleteFilter

The **DeleteFilter** element specifies the input data for the **DeleteFilter** WSDL operation.

```
<xs:element name="DeleteFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a **Filter**.

#### 3.1.4.12.2.2 DeleteFilterResponse

The **DeleteFilterResponse** element specifies the result data for the **DeleteFilter** WSDL operation.

```
<xs:element name="DeleteFilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.12.3 Complex Types

None.

#### 3.1.4.12.4 Simple Types

None.

### 3.1.4.12.5 Attributes

None.

### 3.1.4.12.6 Groups

None.

### 3.1.4.12.7 Attribute Groups

None.

### 3.1.4.13 DeleteIndicator

The **DeleteIndicator** operation deletes an **Indicator** complex type (section [2.2.4.125](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteIndicator** WSDL operation.

```
<wsdl:operation name="DeleteIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteIndicatorSoapIn"/>
  <wsdl:output message="tns:DeleteIndicatorSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteIndicatorSoapIn** request message (section [3.1.4.13.1.1](#)), and the server (2) responds with a **DeleteIndicatorSoapOut** response message (section [3.1.4.13.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of an **Indicator**.
- The server (2) MUST delete the **Indicator**.

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.13.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>DeleteIndicatorSoapIn</b>	The request WSDL message for the <b>DeleteIndicator</b> WSDL operation.
<b>DeleteIndicatorSoapOut</b>	The response WSDL message for the <b>DeleteIndicator</b> WSDL operation.

### 3.1.4.13.1.1 DeleteIndicatorSoapIn

The request WSDL message for the **DeleteIndicator** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteIndicator
```

The SOAP body contains the **DeleteIndicator** element.

### 3.1.4.13.1.2 DeleteIndicatorSoapOut

The response WSDL message for the **DeleteIndicator** WSDL operation.

The SOAP body contains the **DeleteIndicatorResponse** element.

### 3.1.4.13.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>DeleteIndicator</b>	The input data for the <b>DeleteIndicator</b> WSDL operation.
<b>DeleteIndicatorResponse</b>	The result data for the <b>DeleteIndicator</b> WSDL operation.

#### 3.1.4.13.2.1 DeleteIndicator

The **DeleteIndicator** element specifies the input data for the **DeleteIndicator** WSDL operation.

```
<xs:element name="DeleteIndicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of an Indicator.

#### 3.1.4.13.2.2 DeleteIndicatorResponse

The **DeleteIndicatorResponse** element specifies the result data for the **DeleteIndicator** WSDL operation.

```
<xs:element name="DeleteIndicatorResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType/>  
</xs:element>
```

### 3.1.4.13.3 Complex Types

None.

### 3.1.4.13.4 Simple Types

None.

### 3.1.4.13.5 Attributes

None.

### 3.1.4.13.6 Groups

None.

### 3.1.4.13.7 Attribute Groups

None.

### 3.1.4.14 DeleteKpi

The **DeleteKpi** operation deletes a **Kpi** complex type (section [2.2.4.128](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteKpi** WSDL operation.

```
<wsdl:operation name="DeleteKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteKpiSoapIn"/>
  <wsdl:output message="tns:DeleteKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteKpiSoapIn** request message (section [3.1.4.14.1.1](#)), and the server (2) responds with a **DeleteKpiSoapOut** response message (section [3.1.4.14.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Kpi**.
- The server (2) MUST delete the **Kpi**.

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.14.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>DeleteKpiSoapIn</b>	The request WSDL message for the <b>DeleteKpi</b> WSDL operation.
<b>DeleteKpiSoapOut</b>	The response WSDL message for the <b>DeleteKpi</b> WSDL operation.

### 3.1.4.14.1.1 DeleteKpiSoapIn

The request WSDL message for the **DeleteKpi** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteKpi
```

The SOAP body contains the **DeleteKpi** element.

### 3.1.4.14.1.2 DeleteKpiSoapOut

The response WSDL message for the **DeleteKpi** WSDL operation.

The SOAP body contains the **DeleteKpiResponse** element.

### 3.1.4.14.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>DeleteKpi</b>	The input data for the <b>DeleteKpi</b> WSDL operation.
<b>DeleteKpiResponse</b>	The result data for the <b>DeleteKpi</b> WSDL operation.

#### 3.1.4.14.2.1 DeleteKpi

The **DeleteKpi** element specifies the input data for the **DeleteKpi** WSDL operation.

```
<xs:element name="DeleteKpi" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a KPI.

#### 3.1.4.14.2.2 DeleteKpiResponse

The **DeleteKpiResponse** element specifies the result data for the **DeleteKpi** WSDL operation.

```
<xs:element name="DeleteKpiResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```



```
<xs:complexType/>
</xs:element>
```

### 3.1.4.14.3 Complex Types

None.

### 3.1.4.14.4 Simple Types

None.

### 3.1.4.14.5 Attributes

None.

### 3.1.4.14.6 Groups

None.

### 3.1.4.14.7 Attribute Groups

None.

### 3.1.4.15 DeleteReportView

The **DeleteReportView** operation deletes a **ReportView** complex type (section [2.2.4.160](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteReportView** WSDL operation.

```
<wsdl:operation name="DeleteReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns>DeleteReportViewSoapIn"/>
  <wsdl:output message="tns>DeleteReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteReportViewSoapIn** request message (section [3.1.4.15.1.1](#)), and the server (2) responds with a **DeleteReportViewSoapOut** response message (section [3.1.4.15.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **ReportView**.
- The server (2) MUST delete the **ReportView**.

#### Exceptions:

Error code	Description
<b>FCODeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCODeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.15.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>DeleteReportViewSoapIn</b>	The request WSDL message for the <b>DeleteReportView</b> WSDL operation.
<b>DeleteReportViewSoapOut</b>	The response WSDL message for the <b>DeleteReportView</b> WSDL operation.

#### 3.1.4.15.1.1 DeleteReportViewSoapIn

The request WSDL message for the **DeleteReportView** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteReportView
```

The SOAP body contains the **DeleteReportView** element.

#### 3.1.4.15.1.2 DeleteReportViewSoapOut

The response WSDL message for the **DeleteReportView** WSDL operation.

The SOAP body contains the **DeleteReportViewResponse** element.

### 3.1.4.15.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>DeleteReportView</b>	The input data for the <b>DeleteReportView</b> WSDL operation.
<b>DeleteReportViewResponse</b>	The result data for the <b>DeleteReportView</b> WSDL operation.

#### 3.1.4.15.2.1 DeleteReportView

The **DeleteReportView** element specifies the input data for the **DeleteReportView** WSDL operation.

```
<xs:element name="DeleteReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>  
    </xs:sequence>  
  </xs:complexType>
```

```
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a **ReportView** complex type (section [2.2.4.160](#)).

### 3.1.4.15.2 DeleteReportViewResponse

The **DeleteReportViewResponse** element specifies the result data for the **DeleteReportView** WSDL operation.

```
<xs:element name="DeleteReportViewResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.15.3 Complex Types

None.

### 3.1.4.15.4 Simple Types

None.

### 3.1.4.15.5 Attributes

None.

### 3.1.4.15.6 Groups

None.

### 3.1.4.15.7 Attribute Groups

None.

### 3.1.4.16 DeleteScorecard

The **DeleteScorecard** operation deletes a **Scorecard** complex type (section [2.2.4.162](#)) from the server (2).

The following is the WSDL port type specification of the **DeleteScorecard** WSDL operation.

```
<wsdl:operation name="DeleteScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:DeleteScorecardSoapIn"/>
  <wsdl:output message="tns:DeleteScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteScorecardSoapIn** request message (section [3.1.4.16.1.1](#)), and the server (2) responds with a **DeleteScorecardSoapOut** response message (section [3.1.4.16.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Scorecard**.

- The server (2) MUST delete the **Scorecard**.

**Exceptions:**

Error code	Description
<b>InvalidPermission</b>	The content store<25> containing this object no longer exists or the object has already been deleted.
<b>FCODeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.16.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>DeleteScorecardSoapIn</b>	The request WSDL message for the <b>DeleteScorecard</b> WSDL operation.
<b>DeleteScorecardSoapOut</b>	The response WSDL message for the <b>DeleteScorecard</b> 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
<b>DeleteScorecard</b>	The input data for the <b>DeleteScorecard</b> WSDL operation.
<b>DeleteScorecardResponse</b>	The result data for the <b>DeleteScorecard</b> WSDL operation.

### 3.1.4.16.2.1 DeleteScorecard

The **DeleteScorecard** element specifies the input data for the **DeleteScorecard** WSDL operation.

```
<xs:element name="DeleteScorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. It MUST contain the location of a **Scorecard** complex type (section [2.2.4.162](#)).

### 3.1.4.16.2.2 DeleteScorecardResponse

The **DeleteScorecardResponse** element specifies the result data for the **DeleteScorecard** WSDL operation.

```
<xs:element name="DeleteScorecardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.16.3 Complex Types

None.

### 3.1.4.16.4 Simple Types

None.

### 3.1.4.16.5 Attributes

None.

### 3.1.4.16.6 Groups

None.

### 3.1.4.16.7 Attribute Groups

None.

### 3.1.4.17 ExportDashboard

The **ExportDashboard** operation [<26>](#) is used to export dashboard pages and their associated content from the server (2) into a specified Deployment Package ([\[MS-PRIMEPF\]](#)).

The following is the WSDL port type specification of the **ExportDashboard** WSDL operation.

```
<wsdl:operation name="ExportDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ExportDashboardSoapIn"/>
</wsdl:operation>
```

```
<wsdl:output message="tns:ExportDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **ExportDashboardSoapIn** request message (section [3.1.4.17.1.1](#)), and the server (2) responds with an **ExportDashboardSoapOut** response message (section [3.1.4.17.1.2](#)) as follows:

- The server (2) exports the items specified in **itemUrls** into the Deployment Package located at the filename.
- If there was an application error on the server (2) during the operation, the server (2) MUST return a SOAP fault response, which SHOULD include one of exceptions specified below, but MAY contain any other exceptions.

**Exceptions:**

Error code	Description
<b>InvalidUrl</b>	An invalid URL was specified
<b>FCOUnauthorizedAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#)

### 3.1.4.17.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>ExportDashboardSoapIn</b>	The request WSDL message for the <b>ExportDashboard</b> WSDL operation.
<b>ExportDashboardSoapOut</b>	The response WSDL message for the <b>ExportDashboard</b> WSDL operation.

#### 3.1.4.17.1.1 ExportDashboardSoapIn

The request WSDL message for the **ExportDashboard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ExportDashboard
```

The SOAP body contains the **ExportDashboard** element.

#### 3.1.4.17.1.2 ExportDashboardSoapOut

The response WSDL message for the **ExportDashboard** WSDL operation.

The SOAP body contains the **ExportDashboardResponse** element.

### 3.1.4.17.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>ExportDashboard</b>	The input data for the <b>ExportDashboard</b> WSDL operation.
<b>ExportDashboardResponse</b>	The result data for the <b>ExportDashboard</b> WSDL operation.

#### 3.1.4.17.2.1 ExportDashboard

The **ExportDashboard** element specifies the input data for the **ExportDashboard** WSDL operation.

```
<xs:element name="ExportDashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="filename" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="siteCollectionUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemUrls" type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**filename:** Contains the site collection relative path and file name of the Deployment Package ([\[MS-PRIMEPF\]](#)) to use for the export. The path specified **MUST** be the relative path of a document library in the site collection specified in **siteCollectionUrl**. This element **MUST** be present.

**siteCollectionUrl:** Contains the site collection URL to use for the export. This element **MUST** be present.

**itemUrls:** Contains an array of strings containing the site relative URLs of the items to include in the Deployment Package. This element **MUST** be present. It **MUST** contain at least one item URL.

#### 3.1.4.17.2.2 ExportDashboardResponse

The **ExportDashboardResponse** element specifies the result data for the **ExportDashboard** WSDL operation.

```
<xs:element name="ExportDashboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.17.3 Complex Types

None.

#### 3.1.4.17.4 Simple Types

None.

### 3.1.4.17.5 Attributes

None.

### 3.1.4.17.6 Groups

None.

### 3.1.4.17.7 Attribute Groups

None.

### 3.1.4.18 GenerateView

The **GenerateView** operation generates the data structure that represents a scorecard grid view, the **GridViewData** complex type (section [2.2.4.121](#)), based on information stored on the server (2).

The following is the WSDL port type specification of the **GenerateView** WSDL operation.

```
<wsdl:operation name="GenerateView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GenerateViewSoapIn"/>
  <wsdl:output message="tns:GenerateViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GenerateViewSoapIn** request message (section [3.1.4.18.1.1](#)), and the server (2) responds with a **GenerateViewSoapOut** response message (section [3.1.4.18.1.2](#)) as follows:

- The server (2) protocol uses the **scorecardLocation** to retrieve the scorecard for which the view will be generated.
- **pageFilters** MAY be used to slice the scorecard data.
- **propertyBags** MUST NOT be null, but MAY be empty or SHOULD contain information that will be consumed by the server (2) defined transforms for the scorecard. See the **GridViewTransformReference** complex type (section [2.2.4.123](#)) for details.
- If there was an application error on the server (2) during the operation, the server (2) MUST return a SOAP fault response, which SHOULD include one of the exceptions specified in the **GetScorecard** (section [3.1.4.51](#)) and **GetDataSource** (section [3.1.4.35](#)) operations, but MAY instead contain any other exceptions.

#### 3.1.4.18.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GenerateViewSoapIn</b>	The request WSDL message for the <b>GenerateView</b> WSDL operation.
<b>GenerateViewSoapOut</b>	The response WSDL message for the <b>GenerateView</b> WSDL operation.



### 3.1.4.18.1.1 GenerateViewSoapIn

The request WSDL message for the **GenerateView** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GenerateView
```

The SOAP body contains the **GenerateView** element.

### 3.1.4.18.1.2 GenerateViewSoapOut

The response WSDL message for the **GenerateView** WSDL operation.

The SOAP body contains the **GenerateViewResponse** element.

### 3.1.4.18.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GenerateView</b>	The input data for the <b>GenerateView</b> WSDL operation.
<b>GenerateViewResponse</b>	The result data for the <b>GenerateView</b> WSDL operation.

#### 3.1.4.18.2.1 GenerateView

The **GenerateView** element specifies the input data for the **GenerateView** WSDL operation.

```
<xs:element name="GenerateView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pageFilters" type="tns:ArrayOfMember"/>
      <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** Points to the scorecard for which the grid view will be generated, as defined in the **RepositoryLocation** complex type (section [2.2.4.161](#)). It MUST NOT be null or empty, and it MUST point to a valid scorecard location. If ANY of those conditions are not met, the returned view is null.

**pageFilters:** Represents a collection of members (3) used to slice the scorecard values, as defined in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

**propertyBags:** Is a dictionary, as defined in the **DictionaryWrapperOfStringPropertyBag** complex type (section [2.2.4.89](#)), containing specific settings that will be consumed by each

individual transformation defined for the scorecard. See the **GridViewTransformReference** complex type in section [2.2.4.123](#) for details. This element MUST NOT be null, but MAY be empty.

### 3.1.4.18.2.2 GenerateViewResponse

The **GenerateViewResponse** element specifies the result data for the **GenerateView** WSDL operation.

```
<xs:element name="GenerateViewResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GenerateViewResult"
type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GenerateViewResult:** Represents a scorecard grid view data, as defined in the **GridViewData** complex type (section [2.2.4.121](#)). The returned result is **NULL**, if **scorecardLocation** is null, empty or invalid.

### 3.1.4.18.3 Complex Types

None.

### 3.1.4.18.4 Simple Types

None.

### 3.1.4.18.5 Attributes

None.

### 3.1.4.18.6 Groups

None.

### 3.1.4.18.7 Attribute Groups

None.

### 3.1.4.19 GenerateViewDirect

The **GenerateViewDirect** operation generates the data structure that represents a scorecard grid view (see **GridViewData** complex type, section [2.2.4.121](#)), using information sent from the client.

The following is the WSDL port type specification of the **GenerateViewDirect** WSDL operation.

```
<wsdl:operation name="GenerateViewDirect" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GenerateViewDirectSoapIn"/>
  <wsdl:output message="tns:GenerateViewDirectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GenerateViewDirectSoapIn** request message (section [3.1.4.19.1.1](#)), and the server (2) responds with a **GenerateViewDirectSoapOut** response message (section [3.1.4.19.1.2](#)) as follows:

- The server (2) protocol uses the **scorecard, kpis, dataSources** and **indicators** to build the scorecard view. The provided information can be incomplete, in which case the missing information will be retrieved from the server (2).
- **pageFilters** MAY be used to slice the scorecard data.
- **propertyBags** MUST NOT be null but MAY be empty or SHOULD contain information that will be consumed by the server-defined transforms for the scorecard. See the **GridViewTransformReference** complex type (section [2.2.4.123](#)) for details.

### 3.1.4.19.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GenerateViewDirectSoapIn</b>	The request WSDL message for the <b>GenerateViewDirect</b> WSDL operation.
<b>GenerateViewDirectSoapOut</b>	The response WSDL message for the <b>GenerateViewDirect</b> WSDL operation.

#### 3.1.4.19.1.1 GenerateViewDirectSoapIn

The request WSDL message for the **GenerateViewDirect** WSDL operation.

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect`

The SOAP body contains the **GenerateViewDirect** element.

#### 3.1.4.19.1.2 GenerateViewDirectSoapOut

The response WSDL message for the **GenerateViewDirect** WSDL operation.

The SOAP body contains the **GenerateViewDirectResponse** element.

### 3.1.4.19.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GenerateViewDirect</b>	The input data for the <b>GenerateViewDirect</b> WSDL operation.
<b>GenerateViewDirectResponse</b>	The result data for the <b>GenerateViewDirect</b> WSDL operation.

### 3.1.4.19.2.1 GenerateViewDirect

The **GenerateViewDirect** element specifies the input data for the **GenerateViewDirect** WSDL operation.

```
<xs:element name="GenerateViewDirect" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
      <xs:element minOccurs="0" maxOccurs="1" name="kpis" type="tns:ArrayOfKpi"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSources"
type="tns:ArrayOfDataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="indicators" type="tns:ArrayOfIndicator"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pageFilters" type="tns:ArrayOfMember"/>
      <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecard:** The scorecard for which the grid view will be generated. The element MUST NOT be null.

**kpis:** Represents a list (1) of **Kpi** complex types (section [2.2.4.128](#)) used by **scorecard**, as defined in the **ArrayOfKpi** complex type (section [2.2.4.41](#)). It MAY be null and it SHOULD contain all the **Kpis** referenced by **scorecard**. It MUST contain at least all the **Kpis** referenced by **scorecard** that are not yet stored on the server (2).

**dataSources:** Represents a list (1) of data sources (1) used by **scorecard**, as defined in the **ArrayOfDataSource** complex type (section [3.1.4.19.3.2](#)). It MAY be null and it SHOULD contain all the data sources referenced by **scorecard**. It MUST contain at least all the data sources (1) referenced by **scorecard** that are not yet stored on the server (2).

**indicators:** Represents a list (1) of **indicators** used by **scorecard**, as defined in the **ArrayOfIndicator** complex type (section [3.1.4.19.3.1](#)). It MAY be null and it SHOULD contain all the **indicators** referenced by **scorecard**. It MUST contain at least all the **indicators** referenced by **scorecard** that are not yet stored on the server (2).

**pageFilters:** Represents a collection of members (3) used to slice the scorecard values, as defined in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

**propertyBags:** Is a dictionary, as defined in the **DictionaryWrapperOfStringPropertyBag** complex type (section [2.2.4.89](#)), containing specific settings that will be consumed by each individual transformation defined for the scorecard. See the **GridViewTransformReference** complex type (section [2.2.4.123](#)) for details. The element MUST NOT be null, but MAY be empty.

### 3.1.4.19.2.2 GenerateViewDirectResponse

The **GenerateViewDirectResponse** element specifies the result data for the **GenerateViewDirect** WSDL operation.

```
<xs:element name="GenerateViewDirectResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GenerateViewDirectResult"
type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

**GenerateViewDirectResult:** Represents a scorecard grid view data, as specified by the **GridViewData** complex type (section [2.2.4.121](#)). The returned result is a **BpmException** complex type (section [2.2.4.61](#)), if **scorecard** is null or invalid or if **kpis**, **dataSources**, and **indicators** together with the server (2) store do not contain all necessary dependencies.

### 3.1.4.19.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
<b>ArrayOfDataSource</b>	Specifies an array of data sources.
<b>ArrayOfIndicator</b>	Specifies an array of indicators for a scorecard.

#### 3.1.4.19.3.1 ArrayOfIndicator

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfIndicator** complex type specifies an array of indicators for a scorecard.

```
<xs:complexType name="ArrayOfIndicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Indicator" nillable="true"
      type="tns:Indicator"/>
  </xs:sequence>
</xs:complexType>
```

**Indicator:** This element MUST NOT be null. It MUST conform to the schema of the **Indicator** complex type (section [2.2.4.125](#)).

#### 3.1.4.19.3.2 ArrayOfDataSource

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfDataSource** complex type specifies an array of data sources.

```
<xs:complexType name="ArrayOfDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="DataSource" nillable="true"
      type="tns:DataSource"/>
  </xs:sequence>
</xs:complexType>
```

**DataSource:** This element MUST NOT be null and MUST conform to the schema of the **DataSource** (section [2.2.4.85](#)) complex type.

### 3.1.4.19.4 Simple Types

None.

### 3.1.4.19.5 Attributes

None.

### 3.1.4.19.6 Groups

None.

### 3.1.4.19.7 Attribute Groups

None.

### 3.1.4.20 GetAllAnnotationsByScorecardLocation

The **GetAllAnnotationsByScorecardLocation** operation retrieves an array of **Annotation** complex type elements (section [2.2.4.18](#)) associated with a scorecard.

The following is the WSDL port type specification of the **GetAllAnnotationsByScorecardLocation** WSDL operation.

```
<wsdl:operation name="GetAllAnnotationsByScorecardLocation"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAllAnnotationsByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:GetAllAnnotationsByScorecardLocationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAllAnnotationsByScorecardLocationSoapIn** request message (section [3.1.4.20.1.1](#)), and the server (2) responds with a **GetAllAnnotationsByScorecardLocationSoapOut** response message (section [3.1.4.20.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a scorecard.
- The server (2) MUST retrieve an array of **Annotation** elements.

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	Caused by not having access to the scorecard. See section <a href="#">2.2.2.1.3</a> for the Common list of Error Codes.

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.20.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetAllAnnotationsByScorecardLocationSoapIn</b>	The request WSDL message for the <b>GetAllAnnotationsByScorecardLocation</b> WSDL operation.
<b>GetAllAnnotationsByScorecardLocationSoapOut</b>	The response WSDL message for the <b>GetAllAnnotationsByScorecardLocation</b> WSDL operation.

### 3.1.4.20.1.1 GetAllAnnotationsByScorecardLocationSoapIn

The request WSDL message for the **GetAllAnnotationsByScorecardLocation** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAllAnnotationsByScorecardLocation
```

The SOAP body contains the **GetAllAnnotationsByScorecardLocation** element.

### 3.1.4.20.1.2 GetAllAnnotationsByScorecardLocationSoapOut

The response WSDL message for the **GetAllAnnotationsByScorecardLocation** WSDL operation.

The SOAP body contains the **GetAllAnnotationsByScorecardLocationResponse** element.

### 3.1.4.20.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetAllAnnotationsByScorecardLocation</b>	The input data for the <b>GetAllAnnotationsByScorecardLocation</b> WSDL operation.
<b>GetAllAnnotationsByScorecardLocationResponse</b>	The result data for the <b>GetAllAnnotationsByScorecardLocation</b> WSDL operation.

### 3.1.4.20.2.1 GetAllAnnotationsByScorecardLocation

The **GetAllAnnotationsByScorecardLocation** element specifies the input data for the **GetAllAnnotationsByScorecardLocation** WSDL operation.

```
<xs:element name="GetAllAnnotationsByScorecardLocation"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
```

```
</xs:element>
```

**scorecardLocation:** The location of a scorecard, as specified by a **RepositoryLocation** complex type (section [2.2.4.161](#)). This element MUST be present.

### 3.1.4.20.2 GetAllAnnotationsByScorecardLocationResponse

The **GetAllAnnotationsByScorecardLocationResponse** element specifies the result data for the **GetAllAnnotationsByScorecardLocation** WSDL operation.

```
<xs:element name="GetAllAnnotationsByScorecardLocationResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
        name="GetAllAnnotationsByScorecardLocationResult" type="tns:ArrayOfAnnotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetAllAnnotationsByScorecardLocationResult:** An array of **Annotation** complex type elements (section [2.2.4.18](#)) associated with the **scorecardLocation** that was requested from the server (2).

### 3.1.4.20.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
<b>ArrayOfAnnotation</b>	Specifies an array of <b>Annotation</b> elements.

#### 3.1.4.20.3.1 ArrayOfAnnotation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfAnnotation** complex type specifies an array of **Annotation** elements.

```
<xs:complexType name="ArrayOfAnnotation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Annotation" nillable="true"
      type="tns:Annotation"/>
  </xs:sequence>
</xs:complexType>
```

**Annotation:** This element MUST NOT be null and MUST conform to the schema of the **Annotation** complex type (section [2.2.4.18](#)).

#### 3.1.4.20.4 Simple Types

None.



### 3.1.4.20.5 Attributes

None.

### 3.1.4.20.6 Groups

None.

### 3.1.4.20.7 Attribute Groups

None.

### 3.1.4.21 GetAnalyticReportView

The **GetAnalyticReportView** operation retrieves a report view from the server (2) that has been created through the **SaveTemporaryAnalyticReport** (section [3.1.4.65](#)) or **CreateReportView** (section [3.1.4.7](#)) operation.

The following is the WSDL port type specification of the **GetAnalyticReportView** WSDL operation.

```
<wsdl:operation name="GetAnalyticReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnalyticReportViewSoapIn"/>
  <wsdl:output message="tns:GetAnalyticReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAnalyticReportViewSoapIn** request message (section [3.1.4.21.1.1](#)), and the server (2) responds with a **GetAnalyticReportViewSoapOut** response message (section [3.1.4.21.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the report view to be retrieved.
- The server (2) sends the corresponding report view.
- In the event that a report view cannot be retrieved, the server (2) SHOULD [<27>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	If the report view was created with <b>SaveTemporaryAnalyticReport</b> , the security permissions are inherited from the parent report view. The location of the parent report view can be determined from the <b>RepositoryLocation</b> object "ParentReportViewLocation" embedded within "CustomData" of the report view.
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.21.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetAnalyticReportViewSoapIn</b>	The request WSDL message for the <b>GetAnalyticReportView</b> WSDL operation.
<b>GetAnalyticReportViewSoapOut</b>	The response WSDL message for the <b>GetAnalyticReportView</b> WSDL operation.

#### 3.1.4.21.1.1 GetAnalyticReportViewSoapIn

The request WSDL message for the **GetAnalyticReportView** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView
```

The SOAP body contains the **GetAnalyticReportView** element.

#### 3.1.4.21.1.2 GetAnalyticReportViewSoapOut

The response WSDL message for the **GetAnalyticReportView** WSDL operation.

The SOAP body contains the **GetAnalyticReportViewResponse** element.

### 3.1.4.21.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetAnalyticReportView</b>	The input data for the <b>GetAnalyticReportView</b> WSDL operation.
<b>GetAnalyticReportViewResponse</b>	The result data for the <b>GetAnalyticReportView</b> WSDL operation.

#### 3.1.4.21.2.1 GetAnalyticReportView

The **GetAnalyticReportView** element specifies the input data for the **GetAnalyticReportView** WSDL operation.

```
<xs:element name="GetAnalyticReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the report view on the server (2).

- If the report view to be retrieved was created with the **SaveTemporaryAnalyticReport** operation (section [3.1.4.65](#)):
  - The **ItemGuid** property MUST equal the GUID that was returned from **SaveTemporaryAnalyticReport**.
  - The **ItemType** property MUST equal **TempReportView** as specified by the **FirstClassObjectType** simple type (section [2.2.5.20](#)).
  - The **ItemUrl** property MUST equal an empty string.
- If the report view to be retrieved was created with the **CreateReportView** (section [3.1.4.7](#)), the **ItemUrl** property MUST be set to the location of the report view.

### 3.1.4.21.2.2 GetAnalyticReportViewResponse

The **GetAnalyticReportViewResponse** element specifies the result data for the **GetAnalyticReportView** WSDL operation.

```
<xs:element name="GetAnalyticReportViewResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAnalyticReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetAnalyticReportViewResult:** The **ReportView** complex type object (section [2.2.4.160](#)) that was requested from the server (2).

### 3.1.4.21.3 Complex Types

None.

### 3.1.4.21.4 Simple Types

None.

### 3.1.4.21.5 Attributes

None.

### 3.1.4.21.6 Groups

None.

### 3.1.4.21.7 Attribute Groups

None.

### 3.1.4.22 GetAnnotation

The **GetAnnotation** operation retrieves an **Annotation** complex type (section [2.2.4.18](#)) associated with a scorecard cell from the server (2).

The following is the WSDL port type specification of the **GetAnnotation** WSDL operation.

```
<wsdl:operation name="GetAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnnotationSoapIn"/>
  <wsdl:output message="tns:GetAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAnnotationSoapIn** request message (section [3.1.4.22.1.1](#)), and the server (2) responds with a **GetAnnotationSoapOut** response message (section [3.1.4.22.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the scorecard containing the **Annotation**. It also sends an array of **Tuple** complex type objects (section [3.1.4.22.3.2](#)) and a string that specifies the **Annotation** within the scorecard to be retrieved. All of these objects MUST be present.
- The server (2) sends the corresponding **Annotation**.

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.22.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetAnnotationSoapIn</b>	The request WSDL message for the <b>GetAnnotation</b> WSDL operation.
<b>GetAnnotationSoapOut</b>	The response WSDL message for the <b>GetAnnotation</b> WSDL operation.

#### 3.1.4.22.1.1 GetAnnotationSoapIn

The request WSDL message for the **GetAnnotation** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotation
```

The SOAP body contains the **GetAnnotation** element.

### 3.1.4.22.1.2 GetAnnotationSoapOut

The response WSDL message for the **GetAnnotation** WSDL operation.

The SOAP body contains the **GetAnnotationResponse** element.

### 3.1.4.22.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetAnnotation</b>	The input data for the <b>GetAnnotation</b> WSDL operation.
<b>GetAnnotationResponse</b>	The result data for the <b>GetAnnotation</b> WSDL operation.

#### 3.1.4.22.2.1 GetAnnotation

The **GetAnnotation** element specifies the input data for the **GetAnnotation** WSDL operation.

```
<xs:element name="GetAnnotation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="tupleCollection"
type="tns:ArrayOfTuple"/>
      <xs:element minOccurs="0" maxOccurs="1" name="cellPath" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the scorecard on the server (2) containing the **Annotation**.

- This element **MUST** be present.
- The **ItemUrl** property **MUST** be set to the location of the report view associated with the **Annotation**.

**tupleCollection:** An array of **Tuple** complex type objects (section [3.1.4.22.3.2](#)) that aggregates all the column, row, and page filter selections corresponding to the cell or cells in the scorecard for which this **Annotation** is applicable. This element **MUST** be present.

**cellPath:** **CellpathCoordinates** property, as specified in the **Annotation** complex type (section [2.2.4.18](#)). This element **MUST** be present.

#### 3.1.4.22.2.2 GetAnnotationResponse

The **GetAnnotationResponse** element specifies the result data for the **GetAnnotation** WSDL operation.

```
<xs:element name="GetAnnotationResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationResult"
type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetAnnotationResult:** The **Annotation** complex type object (see section [2.2.4.18](#)) that was requested from the server (2).

### 3.1.4.22.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
<b>ArrayOfTuple</b>	Specifies an array of Tuple.
<b>Tuple</b>	Specifies an ordered collection of one or more members from different dimensions.

#### 3.1.4.22.3.1 ArrayOfTuple

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfTuple** complex type specifies an array of **Tuple** (section [3.1.4.22.3.2](#)).

```

<xs:complexType name="ArrayOfTuple" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Tuple" nillable="true"
type="tns:Tuple"/>
  </xs:sequence>
</xs:complexType>

```

**Tuple:** This element MUST NOT be null and MUST conform to the schema of the **Tuple** complex type (section [3.1.4.22.3.2](#)).

#### 3.1.4.22.3.2 Tuple

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **Tuple** complex type represents an ordered collection of one or more members from different dimensions and it contains an instance of **ArrayOfMember** (see section [2.2.4.45](#)).

```

<xs:complexType name="Tuple" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DimensionMembers"
type="tns:ArrayOfMember"/>
  </xs:sequence>
</xs:complexType>

```

**DimensionMembers:** This element MUST NOT be **null**.

### 3.1.4.22.4 Simple Types

None.

### 3.1.4.22.5 Attributes

None.

### 3.1.4.22.6 Groups

None.

### 3.1.4.22.7 Attribute Groups

None.

### 3.1.4.23 GetAnnotationByID

The **GetAnnotationByID** operation retrieves an **Annotation** complex type (section [2.2.4.18](#)) from a specified GUID from the server (2).

The following is the WSDL port type specification of the **GetAnnotationByID** WSDL operation.

```
<wsdl:operation name="GetAnnotationByID" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnnotationByIDSoapIn"/>
  <wsdl:output message="tns:GetAnnotationByIDSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAnnotationByIDSoapIn** request message (section [3.1.4.23.1.1](#)), and the server (2) responds with a **GetAnnotationByIDSoapOut** response message (section [3.1.4.23.1.2](#)) as follows:

- The protocol client sends a GUID that specifies the **Annotation** to be retrieved.
- The server (2) sends the corresponding **Annotation**.

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.23.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetAnnotationByIDSoapIn</b>	The request WSDL message for the <b>GetAnnotationByID</b> WSDL operation.

Message	Description
<b>GetAnnotationByIDSoapOut</b>	The response WSDL message for the <b>GetAnnotationByID</b> WSDL operation.

### 3.1.4.23.1.1 GetAnnotationByIDSoapIn

The request WSDL message for the **GetAnnotationByID** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotationByID
```

The SOAP body contains the **GetAnnotationByID** element.

### 3.1.4.23.1.2 GetAnnotationByIDSoapOut

The response WSDL message for the **GetAnnotationByID** WSDL operation.

The SOAP body contains the **GetAnnotationByIDResponse** element.

### 3.1.4.23.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetAnnotationByID</b>	The input data for the <b>GetAnnotationByID</b> WSDL operation.
<b>GetAnnotationByIDResponse</b>	The result data for the <b>GetAnnotationByID</b> WSDL operation.

#### 3.1.4.23.2.1 GetAnnotationByID

The **GetAnnotationByID** element specifies the input data for the **GetAnnotationByID** WSDL operation.

```
<xs:element name="GetAnnotationByID" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="annotationID"
        xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**annotationID:** A GUID that specifies the **Annotation** complex type (section [2.2.4.18](#)) to be retrieved. This element **MUST** be present.

#### 3.1.4.23.2.2 GetAnnotationByIDResponse

The **GetAnnotationByIDResponse** element specifies the result data for the **GetAnnotationByID** WSDL operation.



```

<xs:element name="GetAnnotationByIDResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationByIDResult"
type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetAnnotationByIDResult:** The **Annotation** complex type object (section [2.2.4.18](#)) that was requested from the server (2).

### 3.1.4.23.3 Complex Types

None.

### 3.1.4.23.4 Simple Types

None.

### 3.1.4.23.5 Attributes

None.

### 3.1.4.23.6 Groups

None.

### 3.1.4.23.7 Attribute Groups

None.

### 3.1.4.24 GetAnnotationSetting

The **Attribute Groups** operation retrieves an **AnnotationSetting** complex type object (section [3.1.4.24.3.1](#)) that contains the annotation settings for the server (2).

The following is the WSDL port type specification of the **GetAnnotationSetting** WSDL operation.

```

<wsdl:operation name="GetAnnotationSetting" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAnnotationSettingSoapIn"/>
  <wsdl:output message="tns:GetAnnotationSettingSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetAnnotationSettingSoapIn** request message (section [3.1.4.24.1.1](#)), and the server (2) responds with a **GetAnnotationSettingSoapOut** response message (section [3.1.4.24.1.2](#)) as follows:

- The server (2) MUST retrieve an **AnnotationSetting** object.

#### 3.1.4.24.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetAnnotationSettingSoapIn</b>	The request WSDL message for the <b>GetAnnotationSetting</b> WSDL operation.
<b>GetAnnotationSettingSoapOut</b>	The response WSDL message for the <b>GetAnnotationSetting</b> WSDL operation.

### 3.1.4.24.1.1 GetAnnotationSettingSoapIn

The request WSDL message for the **GetAnnotationSetting** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting
```

The SOAP body contains the **GetAnnotationSetting** element.

### 3.1.4.24.1.2 GetAnnotationSettingSoapOut

The response WSDL message for the **GetAnnotationSetting** WSDL operation.

The SOAP body contains the **GetAnnotationSettingResponse** element.

### 3.1.4.24.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetAnnotationSetting</b>	The input data for the <b>GetAnnotationSetting</b> WSDL operation.
<b>GetAnnotationSettingResponse</b>	The result data for the <b>GetAnnotationSetting</b> WSDL operation.

#### 3.1.4.24.2.1 GetAnnotationSetting

The **GetAnnotationSetting** element specifies the input data for the **GetAnnotationSetting** WSDL operation.

```
<xs:element name="GetAnnotationSetting" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.24.2.2 GetAnnotationSettingResponse

The **GetAnnotationSettingResponse** element specifies the result data for the **GetAnnotationSetting** WSDL operation.

```
<xs:element name="GetAnnotationSettingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationSettingResult"
type="tns:AnnotationSetting"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

**GetAnnotationSettingResult:** An **AnnotationSetting** complex type object (section [3.1.4.24.3.1](#)) that was requested from the server (2).

### 3.1.4.24.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
<b>AnnotationSetting</b>	Specifies annotation settings for this service application.

#### 3.1.4.24.3.1 AnnotationSetting

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **AnnotationSetting** complex type specifies annotation settings for this service application.

```

<xs:complexType name="AnnotationSetting" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:attribute name="IsAnnotationEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsAnnotationEnabledDefault" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDeletionByAuthorEnabled" type="xs:boolean" use="required"/>
  <xs:attribute name="IsDeletionByAuthorEnabledDefault" type="xs:boolean" use="required"/>
  <xs:attribute name="MaxAnnotationAllowed" type="xs:int" use="required"/>
</xs:complexType>

```

**IsAnnotationEnabled:** Specifies whether annotations are enabled for scorecards; if set to **true**, annotations are enabled; otherwise, annotations are not enabled.

**IsAnnotationEnabledDefault:** Specifies the default value of **IsAnnotationEnabled** used by the server (2). The default value is **true**.

**IsDeletionByAuthorEnabled:** Specifies whether annotations can be deleted by the user; if set to **true**, annotations can be deleted; otherwise, annotations cannot be deleted.

**IsDeletionByAuthorEnabledDefault:** Specifies the default value of **IsDeletionByAuthorEnabled** used by the server (2). The default is **true**.

**MaxAnnotationAllowed:** Specifies the maximum number of annotations that can be added for a scorecard. This value MUST be an integer greater than or equal to zero.

#### 3.1.4.24.4 Simple Types

None.

#### 3.1.4.24.5 Attributes

None.

### 3.1.4.24.6 Groups

None.

### 3.1.4.24.7 Attribute Groups

None.

### 3.1.4.25 GetAsKpis

The **GetAsKpis** operation takes in an Analysis Services data source along with a server-relative URL to a **Kpi** complex type (section [2.2.4.128](#)) list (1), and returns a collection of **Kpis** as defined in the **ArrayOfKpi** complex type (see section [2.2.4.41](#)).

The following is the WSDL port type specification of the **GetAsKpis** WSDL operation.

```
<wsdl:operation name="GetAsKpis" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetAsKpisSoapIn"/>
  <wsdl:output message="tns:GetAsKpisSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetAsKpisSoapIn** request message (section [3.1.4.25.1.1](#)), and the server (2) responds with a **GetAsKpisSoapOut** message (section [3.1.4.25.1.2](#)) as follows:

- The server (2) validates the data source as to whether it is a **trusted location** (1), along with the user's access permissions. If it is from an un-trusted location, it is added to the list (1) of untrusted data sources.
- The server (2) retrieves the **Cube** complex type object (section [2.2.4.78](#)) represented by the data source.
- The server (2) returns the list (1) of Kpis from the **Cube**.

#### 3.1.4.25.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetAsKpisSoapIn</b>	The request WSDL message for the <b>GetAsKpis</b> WSDL operation.
<b>GetAsKpisSoapOut</b>	The response WSDL message for the <b>GetAsKpis</b> WSDL operation.

##### 3.1.4.25.1.1 GetAsKpisSoapIn

The request WSDL message for the **GetAsKpis** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAsKpis
```

The SOAP body contains the **GetAsKpis** element.

### 3.1.4.25.1.2 GetAsKpisSoapOut

The response WSDL message for the **GetAsKpis** WSDL operation.

The SOAP body contains the **GetAsKpisResponse** element.

### 3.1.4.25.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetAsKpis</b>	The input data for the <b>GetAsKpis</b> WSDL operation.
<b>GetAsKpisResponse</b>	The result data for the <b>GetAsKpis</b> WSDL operation.

#### 3.1.4.25.2.1 GetAsKpis

The **GetAsKpis** element specifies the input data for the **GetAsKpis** WSDL operation.

```
<xs:element name="GetAsKpis" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** This element MUST be an Analysis Services data source.

**listUrl:** This element MUST be a server-relative URL to the Analysis Services data source (see section [2.2.4.85](#)) list (1).

#### 3.1.4.25.2.2 GetAsKpisResponse

The **GetAsKpisResponse** element specifies the result data for the **GetAsKpis** WSDL operation.

```
<xs:element name="GetAsKpisResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAsKpisResult" type="tns:ArrayOfKpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetAsKpisResult:** This element MUST return a collection of **Kpi** complex types (section [2.2.4.128](#)), as defined in the **ArrayOfKpi** complex type (section [2.2.4.41](#)).

### 3.1.4.25.3 Complex Types

None.

### 3.1.4.25.4 Simple Types

None.

### 3.1.4.25.5 Attributes

None.

### 3.1.4.25.6 Groups

None.

### 3.1.4.25.7 Attribute Groups

None.

### 3.1.4.26 GetCube

The **GetCube** operation takes in a **RepositoryLocation** complex type object (section [2.2.4.161](#)), and returns the associated **Cube** complex type object (section [2.2.4.78](#)).

The following is the WSDL port type specification of the **GetCube** WSDL operation.

```
<wsdl:operation name="GetCube" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeSoapIn"/>
  <wsdl:output message="tns:GetCubeSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeSoapIn** request message (section [3.1.4.26.1.1](#)), and the server (2) responds with a **GetCubeSoapOut** message (section [3.1.4.26.1.2](#)) as follows:

- The server (2) retrieves the data source from the **RepositoryLocation**.
- The server (2) validates the data source as to whether it is a trusted location (1), along with the user's access permissions. If it is from an un-trusted location, it is added to the list (1) of untrusted data sources. Valid data source types include Analysis Services and Tabular sources.
- The server (2) returns a **Cube** complex type object (section [2.2.4.78](#)) represented by the data source.

Error code	Description
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceCubeNotFound</b>	See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.26.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetCubeSoapIn</b>	The request WSDL message for the <b>GetCube</b> WSDL operation.
<b>GetCubeSoapOut</b>	The response WSDL message for the <b>GetCube</b> WSDL operation.

#### 3.1.4.26.1.1 GetCubeSoapIn

The request WSDL message for the **GetCube** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCube
```

The SOAP body contains the **GetCube** element.

#### 3.1.4.26.1.2 GetCubeSoapOut

The response WSDL message for the **GetCube** WSDL operation.

The SOAP body contains the **GetCubeResponse** element.

### 3.1.4.26.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetCube</b>	The input data for the <b>GetCube</b> WSDL operation.
<b>GetCubeResponse</b>	The result data for the <b>GetCube</b> WSDL operation.

#### 3.1.4.26.2.1 GetCube

The **GetCube** element specifies the input data for the **GetCube** WSDL operation.

```
<xs:element name="GetCube" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"  
type="tns:RepositoryLocation"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**dataSourceLocation:** This element MUST be a valid **RepositoryLocation** complex type (section [2.2.4.161](#)).

### 3.1.4.26.2.2 GetCubeResponse

The **GetCubeResponse** element specifies the result data for the **GetCube** WSDL operation.

```
<xs:element name="GetCubeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeResult" type="tns:Cube"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetCubeResult:** This element **MUST** return **NULL**, if input fails validation; otherwise, **MUST** return the **Cube** complex type (section [2.2.4.78](#)) represented by the **RepositoryLocation** complex type (section [2.2.4.161](#)).

### 3.1.4.26.3 Complex Types

None.

### 3.1.4.26.4 Simple Types

None.

### 3.1.4.26.5 Attributes

None.

### 3.1.4.26.6 Groups

None.

### 3.1.4.26.7 Attribute Groups

None.

### 3.1.4.27 GetCubeFromDataSource

The **GetCubeFromDataSource** operation takes in a data source object and returns the associated **Cube** complex type object section [2.2.4.78](#)().

The following is the WSDL port type specification of the **GetCubeFromDataSource** WSDL operation.

```
<wsdl:operation name="GetCubeFromDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeFromDataSourceSoapIn** request message (section [3.1.4.27.1.1](#)), and the server (2) responds with a **GetCubeFromDataSourceSoapOut** message (section [3.1.4.27.1.2](#)) as follows:



- The server (2) validates the data source as to whether it is in a trusted location (1), along with the user's access permissions. If it is from an un-trusted location, it is added to the list (1) of untrusted data sources. Valid data source types include Analysis Services and Tabular sources.
- The server (2) returns a **Cube** complex type object (section [2.2.4.78](#)) represented by the data source.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceCubeNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.27.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetCubeFromDataSourceSoapIn</b>	The request WSDL message for the <b>GetCubeFromDataSource</b> WSDL operation.
<b>GetCubeFromDataSourceSoapOut</b>	The response WSDL message for the <b>GetCubeFromDataSource</b> WSDL operation.

#### 3.1.4.27.1.1 GetCubeFromDataSourceSoapIn

The request WSDL message for the **GetCubeFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeFromDataSource
```

The SOAP body contains the **GetCubeFromDataSource** element.

#### 3.1.4.27.1.2 GetCubeFromDataSourceSoapOut

The response WSDL message for the **GetCubeFromDataSource** WSDL operation.

The SOAP body contains the **GetCubeFromDataSourceResponse** element.

### 3.1.4.27.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetCubeFromDataSource</b>	The input data for the <b>GetCubeFromDataSource</b> WSDL operation.
<b>GetCubeFromDataSourceResponse</b>	The result data for the <b>GetCubeFromDataSource</b> WSDL operation.

### 3.1.4.27.2.1 GetCubeFromDataSource

The **GetCubeFromDataSource** element specifies the input data for the **GetCubeFromDataSource** WSDL operation.

```
<xs:element name="GetCubeFromDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** A **DataSource** complex type (section [2.2.4.85](#)) to be used for the request. This element **MUST** be present.

### 3.1.4.27.2.2 GetCubeFromDataSourceResponse

The **GetCubeFromDataSourceResponse** element specifies the result data for the **GetCubeFromDataSource** WSDL operation.

```
<xs:element name="GetCubeFromDataSourceResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeFromDataSourceResult"
type="tns:Cube"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetCubeFromDataSourceResult:** This element **MUST** return 'Null' when the Input does not match the **DataSource** complex type (section [2.2.4.85](#)) stored on the server (2), or when the Input is not read-only and the user does not have adequate permissions to open and edit the **DataSource**. Otherwise, it **MUST** return the **Cube** complex type (section [2.2.4.78](#)) represented by that **DataSource**.

### 3.1.4.27.3 Complex Types

None.

### 3.1.4.27.4 Simple Types

None.

### 3.1.4.27.5 Attributes

None.

### 3.1.4.27.6 Groups

None.

### 3.1.4.27.7 Attribute Groups

None.

### 3.1.4.28 GetCubeMetaData

The **GetCubeMetaData** operation takes in an Analysis Services **RepositoryLocation** complex type object (section [2.2.4.161](#)) and returns the associated **Cube** complex type object (section [2.2.4.78](#)).

The following is the WSDL port type specification of the **GetCubeMetaData** WSDL operation.

```
<wsdl:operation name="GetCubeMetaData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeMetaDataSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeMetaDataSoapIn** request message (section [3.1.4.28.1.1](#)), and the server (2) responds with a **GetCubeMetaDataSoapOut** message (section [3.1.4.28.1.2](#)) as follows:

- The server (2) retrieves the data source from the **RepositoryLocation**.
- The server (2) validates whether it is a trusted location (1), along with the user's access permissions. If it is from an un-trusted location, it is added to the list (1) of untrusted data sources.
- The server (2) retrieves the **Cube** definition represented by the data source, and generates a generic **Cube** object with dimensions (1) as defined in the **Dimension** complex type object (section [2.2.4.90](#)) with only hierarchies and levels from the specified **Analysis Services** cube definition.

Error code	Description
<b>UnableToLoadFCODao</b>	See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ).
<b>DataSourceCubeNotFound</b>	See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ).
<b>DatabaseConnectionNotOpen</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.28.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetCubeMetaDataSoapIn</b>	The request WSDL message for the <b>GetCubeMetaData</b> WSDL operation.
<b>GetCubeMetaDataSoapOut</b>	The response WSDL message for the <b>GetCubeMetaData</b> WSDL operation.

#### 3.1.4.28.1.1 GetCubeMetaDataSoapIn

The request WSDL message for the **GetCubeMetaData** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData
```

The SOAP body contains the **GetCubeMetaData** element.

#### 3.1.4.28.1.2 GetCubeMetaDataSoapOut

The response WSDL message for the **GetCubeMetaData** WSDL operation.

The SOAP body contains the **GetCubeMetaDataResponse** element.

### 3.1.4.28.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetCubeMetaData</b>	The input data for the <b>GetCubeMetaData</b> WSDL operation.
<b>GetCubeMetaDataResponse</b>	The result data for the <b>GetCubeMetaData</b> WSDL operation.

#### 3.1.4.28.2.1 GetCubeMetaData

The **GetCubeMetaData** element specifies the input data for the **GetCubeMetaData** WSDL operation.

```
<xs:element name="GetCubeMetaData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
        type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
```

```
</xs:element>
```

**dataSourceLocation:** This element MUST be an Analysis Services data source **RepositoryLocation** complex type (section [2.2.4.161](#)).

### 3.1.4.28.2 GetCubeMetaDataResponse

The **GetCubeMetaDataResponse** element specifies the result data for the **GetCubeMetaData** WSDL operation.

```
<xs:element name="GetCubeMetaDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeMetaDataResult" type="tns:Cube"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetCubeMetaDataResult:** This element MUST return the **Cube** complex type object (section [2.2.4.78](#)) associated with the **RepositoryLocation** complex type (section [2.2.4.161](#)).

### 3.1.4.28.3 Complex Types

None.

### 3.1.4.28.4 Simple Types

None.

### 3.1.4.28.5 Attributes

None.

### 3.1.4.28.6 Groups

None.

### 3.1.4.28.7 Attribute Groups

None.

### 3.1.4.29 GetCubeMetaDataForDataSource

The **GetCubeMetaDataForDataSource** operation takes in an Analysis Services data source object and returns the associated **Cube** complex type object (section [2.2.4.78](#)). This operation is valid for Analysis Services data sources only.

The following is the WSDL port type specification of the **GetCubeMetaDataForDataSource** WSDL operation.

```
<wsdl:operation name="GetCubeMetaDataForDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeMetaDataForDataSourceSoapIn"/>
```

```
<wsdl:output message="tns:GetCubeMetaDataForDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeMetaDataForDataSourceSoapIn** request message (section [3.1.4.29.1.1](#)), and the server (2) responds with a **GetCubeMetaDataForDataSourceSoapOut** message (section [3.1.4.29.1.2](#)) as follows:

- The server (2) validates whether it is a trusted data source, along with the user's access permissions. If it is from an un-trusted location, it is added to the list (1) of untrusted data sources.
- The server (2) retrieves the **Cube** definition represented by the data source, and generates a generic **Cube** complex type object (section [2.2.4.78](#)) with dimensions (1) as defined in the **Dimension** complex type object (section [2.2.4.90](#)) from the **Analysis Services** cube definition.

Error code	Description
<b>UnableToLoadFCODao</b>	See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ).
<b>DataSourceCubeNotFound</b>	See Full List of Possible Error Codes (section <a href="#">2.2.2.1.2</a> ).
<b>DatabaseConnectionNotOpen</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.29.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetCubeMetaDataForDataSourceSoapIn</b>	The request WSDL message for the <b>GetCubeMetaDataForDataSource</b> WSDL operation.
<b>GetCubeMetaDataForDataSourceSoapOut</b>	The response WSDL message for the <b>GetCubeMetaDataForDataSource</b> WSDL operation.

#### 3.1.4.29.1.1 GetCubeMetaDataForDataSourceSoapIn

The request WSDL message for the **GetCubeMetaDataForDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaDataForDataSource
```

The SOAP body contains the **GetCubeMetaDataForDataSource** element.

### 3.1.4.29.1.2 GetCubeMetaDataForDataSourceSoapOut

The response WSDL message for the **GetCubeMetaDataForDataSource** WSDL operation.

The SOAP body contains the **GetCubeMetaDataForDataSourceResponse** element.

### 3.1.4.29.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetCubeMetaDataForDataSource</b>	The input data for the <b>GetCubeMetaDataForDataSource</b> WSDL operation.
<b>GetCubeMetaDataForDataSourceResponse</b>	The result data for the <b>GetCubeMetaDataForDataSource</b> WSDL operation.

#### 3.1.4.29.2.1 GetCubeMetaDataForDataSource

The **GetCubeMetaDataForDataSource** element specifies 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:** This element MUST be an Analysis Services data source, as specified in section [2.2.4.85](#).

#### 3.1.4.29.2.2 GetCubeMetaDataForDataSourceResponse

The **GetCubeMetaDataForDataSourceResponse** element specifies 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:** This element MUST return the **Cube** complex type object (section [2.2.4.78](#)) associated with the specified data source.

### 3.1.4.29.3 Complex Types

None.

### 3.1.4.29.4 Simple Types

None.

### 3.1.4.29.5 Attributes

None.

### 3.1.4.29.6 Groups

None.

### 3.1.4.29.7 Attribute Groups

None.

### 3.1.4.30 GetCubeNameInfos

The **GetCubeNameInfos** operation retrieves an **ArrayOfNameInfo** complex type (section [2.2.4.48](#)) that describes the cubes of the data source (1).

The following is the WSDL port type specification of the **GetCubeNameInfos** WSDL operation.

```
<wsdl:operation name="GetCubeNameInfos" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCubeNameInfosSoapIn"/>
  <wsdl:output message="tns:GetCubeNameInfosSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCubeNameInfoSoapIn** request message (section [3.1.4.30.1.1](#)), and the server (2) responds with a **GetCubeNameInfoSoapOut** response message (section [3.1.4.30.1.2](#)) as follows:

- The server (2) receives a data source (1).
- The server (2) sends the **NameInfo** complex type object (section [2.2.4.149](#)) for each of the corresponding cubes.

#### Exceptions:

Error code	Description
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).



### 3.1.4.30.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetCubeNameInfosSoapIn</b>	The request WSDL message for the <b>GetCubeNameInfos</b> WSDL operation.
<b>GetCubeNameInfosSoapOut</b>	The response WSDL message for the <b>GetCubeNameInfos</b> WSDL operation.

#### 3.1.4.30.1.1 GetCubeNameInfosSoapIn

The request WSDL message for the **GetCubeNameInfos** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos
```

The SOAP body contains the **GetCubeNameInfos** element.

#### 3.1.4.30.1.2 GetCubeNameInfosSoapOut

The response WSDL message for the **GetCubeNameInfos** WSDL operation.

The SOAP body contains the **GetCubeNameInfosResponse** element.

### 3.1.4.30.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetCubeNameInfos</b>	The input data for the <b>GetCubeNameInfos</b> WSDL operation.
<b>GetCubeNameInfosResponse</b>	The result data for the <b>GetCubeNameInfos</b> WSDL operation.

#### 3.1.4.30.2.1 GetCubeNameInfos

The **GetCubeNameInfos** element specifies the input data for the **GetCubeNameInfos** WSDL operation.

```
<xs:element name="GetCubeNameInfos" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**dataSource:** The data source (1). This element MUST be present.

### 3.1.4.30.2.2 GetCubeNameInfosResponse

The **GetCubeNameInfosResponse** element specifies the result data for the **GetCubeNameInfos** WSDL operation.

```
<xs:element name="GetCubeNameInfosResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeNameInfosResult"
        type="tns:ArrayOfNameInfo"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetCubeNameInfosResult:** An **ArrayOfNameInfo** complex type (section [2.2.4.48](#)). This element MUST be present.

### 3.1.4.30.3 Complex Types

None.

### 3.1.4.30.4 Simple Types

None.

### 3.1.4.30.5 Attributes

None.

### 3.1.4.30.6 Groups

None.

### 3.1.4.30.7 Attribute Groups

None.

### 3.1.4.31 GetCurrentCultureLcid

The **GetCurrentCultureLcid** operation retrieves the current culture locale identifier.

The following is the WSDL port type specification of the **GetCurrentCultureLcid** WSDL operation.

```
<wsdl:operation name="GetCurrentCultureLcid" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCurrentCultureLcidSoapIn"/>
  <wsdl:output message="tns:GetCurrentCultureLcidSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCurrentCultureLcidSoapIn** request message (section [3.1.4.31.1.1](#)), and the server (2) responds with a **GetCurrentCultureLcidSoapOut** response message (section [3.1.4.31.1.2](#)) as follows:

- The server (2) MUST respond by retrieving the current culture locale identifier.

- If there was an application error on the server (2) during the operation, the server (2) MUST return a SOAP fault response. The error code MUST be one of the values specified in section [2.2.2.1.2](#).

### 3.1.4.31.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetCurrentCultureLcidSoapIn</b>	The request WSDL message for the <b>GetCurrentCultureLcid</b> WSDL operation.
<b>GetCurrentCultureLcidSoapOut</b>	The response WSDL message for the <b>GetCurrentCultureLcid</b> WSDL operation.

#### 3.1.4.31.1.1 GetCurrentCultureLcidSoapIn

The request WSDL message for the **GetCurrentCultureLcid** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid
```

The SOAP body contains the **GetCurrentCultureLcid** element.

#### 3.1.4.31.1.2 GetCurrentCultureLcidSoapOut

The response WSDL message for the **GetCurrentCultureLcid** WSDL operation.

The SOAP body contains the **GetCurrentCultureLcidResponse** element.

### 3.1.4.31.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetCurrentCultureLcid</b>	The input data for the <b>GetCurrentCultureLcid</b> WSDL operation.
<b>GetCurrentCultureLcidResponse</b>	The result data for the <b>GetCurrentCultureLcid</b> WSDL operation.

#### 3.1.4.31.2.1 GetCurrentCultureLcid

The **GetCurrentCultureLcid** element specifies the input data for the **GetCurrentCultureLcid** WSDL operation.

```
<xs:element name="GetCurrentCultureLcid" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.31.2.2 GetCurrentCultureLcidResponse

The **GetCurrentCultureLcidResponse** element specifies the result data for the **GetCurrentCultureLcid** WSDL operation.

```
<xs:element name="GetCurrentCultureLcidResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="GetCurrentCultureLcidResult"
        type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetCurrentCultureLcidResult:** An integer representing the current culture locale identifier, which determines how dates, times, numbers, currencies, calendar preferences, input methods, and sorting preferences are formatted.

### 3.1.4.31.3 Complex Types

None.

### 3.1.4.31.4 Simple Types

None.

### 3.1.4.31.5 Attributes

None.

### 3.1.4.31.6 Groups

None.

### 3.1.4.31.7 Attribute Groups

None.

### 3.1.4.32 GetCurrentUserInfo

The **GetCurrentUserInfo** operation retrieves the user name and display name information of the current user.

The following is the WSDL port type specification of the **GetCurrentUserInfo** WSDL operation.

```
<wsdl:operation name="GetCurrentUserInfo" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetCurrentUserInfoSoapIn"/>
  <wsdl:output message="tns:GetCurrentUserInfoSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetCurrentUserInfoSoapIn** request message (section [3.1.4.32.1.1](#)), and the server (2) responds with a **GetCurrentUserInfoSoapOut** response message (section [3.1.4.32.1.2](#)) as follows:

- The protocol client MUST provide out parameters to hold the current user name and display name.
- The server (2) MUST set those parameters to the current user name and user display name.
- In the event of an application error, the server (2) MUST set the current user name to the string "i:Anonymous" and user display name to the string "Anonymous".

### 3.1.4.32.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetCurrentUserInfoSoapIn</b>	The request WSDL message for the <b>GetCurrentUserInfo</b> WSDL operation.
<b>GetCurrentUserInfoSoapOut</b>	The response WSDL message for the <b>GetCurrentUserInfo</b> WSDL operation.

#### 3.1.4.32.1.1 GetCurrentUserInfoSoapIn

The request WSDL message for the **GetCurrentUserInfo** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo
```

The SOAP body contains the **GetCurrentUserInfo** element.

#### 3.1.4.32.1.2 GetCurrentUserInfoSoapOut

The response WSDL message for the **GetCurrentUserInfo** WSDL operation.

The SOAP body contains the **GetCurrentUserInfoResponse** element.

### 3.1.4.32.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetCurrentUserInfo</b>	The input data for the <b>GetCurrentUserInfo</b> WSDL operation.
<b>GetCurrentUserInfoResponse</b>	The result data for the <b>GetCurrentUserInfo</b> WSDL operation.

#### 3.1.4.32.2.1 GetCurrentUserInfo

The **GetCurrentUserInfo** element specifies the input data for the **GetCurrentUserInfo** WSDL operation.

```
<xs:element name="GetCurrentUserInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```
<xs:complexType/>
</xs:element>
```

### 3.1.4.32.2.2 GetCurrentUserInfoResponse

The **GetCurrentUserInfoResponse** element specifies the result data for the **GetCurrentUserInfo** WSDL operation.

```
<xs:element name="GetCurrentUserInfoResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="userName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="userDisplayName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**userName:** User name information of current user.

**userDisplayName:** Display name information of current user.

### 3.1.4.32.3 Complex Types

None.

### 3.1.4.32.4 Simple Types

None.

### 3.1.4.32.5 Attributes

None.

### 3.1.4.32.6 Groups

None.

### 3.1.4.32.7 Attribute Groups

None.

### 3.1.4.33 GetDashboard

The **GetDashboard** operation retrieves a dashboard.

The following is the WSDL port type specification of the **GetDashboard** WSDL operation.

```
<wsdl:operation name="GetDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDashboardSoapIn"/>
  <wsdl:output message="tns:GetDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDashboardSoapIn** request message (section [3.1.4.33.1.1](#)), and the server (2) responds with a **GetDashboardSoapOut** response message (section [3.1.4.33.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the dashboard to be retrieved.
- The server (2) responds with the corresponding dashboard.
- In the event the dashboard cannot be retrieved, the server (2) SHOULD [<28>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.33.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetDashboardSoapIn</b>	The request WSDL message for the <b>GetDashboard</b> WSDL operation.
<b>GetDashboardSoapOut</b>	The response WSDL message for the <b>GetDashboard</b> WSDL operation.

#### 3.1.4.33.1.1 GetDashboardSoapIn

The request WSDL message for the **GetDashboard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDashboard
```

The SOAP body contains the **GetDashboard** element.

#### 3.1.4.33.1.2 GetDashboardSoapOut

The response WSDL message for the **GetDashboard** WSDL operation.

The SOAP body contains the **GetDashboardResponse** element.

### 3.1.4.33.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetDashboard</b>	The input data for the <b>GetDashboard</b> WSDL operation.
<b>GetDashboardResponse</b>	The result data for the <b>GetDashboard</b> WSDL operation.

### 3.1.4.33.2.1 GetDashboard

The **GetDashboard** element specifies the input data for the **GetDashboard** WSDL operation.

```
<xs:element name="GetDashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. The **ItemUrl** property MUST contain a valid URL.

### 3.1.4.33.2.2 GetDashboardResponse

The **GetDashboardResponse** element specifies the result data for the **GetDashboard** WSDL operation.

```
<xs:element name="GetDashboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDashboardResult"
type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetDashboardResult:** A **Dashboard** complex type, as specified in section [2.2.4.79](#). This element SHOULD be present.

### 3.1.4.33.3 Complex Types

None.

### 3.1.4.33.4 Simple Types

None.

### 3.1.4.33.5 Attributes

None.

### 3.1.4.33.6 Groups

None.



### 3.1.4.33.7 Attribute Groups

None.

### 3.1.4.34 GetDatabaseNamesFromDataSource

The **GetDatabaseNamesFromDataSource** operation retrieves an array of database names associated with the data source (1).

The following is the WSDL port type specification of the **GetDatabaseNamesFromDataSource** WSDL operation.

```
<wsdl:operation name="GetDatabaseNamesFromDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDatabaseNamesFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDatabaseNamesFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDatabaseNamesSoapIn** request message (section [3.1.4.34.1.1](#)), and the server (2) responds with a **GetDatabaseNamesSoapOut** response message (section [3.1.4.34.1.2](#)) as follows:

- The server (2) receives a **DataSource** complex type (section [2.2.4.79](#)).
- The server (2) returns the name for each database associated with the data source (3).

#### Exceptions:

Error code	Description
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.34.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetDatabaseNamesFromDataSourceSoapIn</b>	The request WSDL message for the <b>GetDatabaseNamesFromDataSource</b> WSDL operation.
<b>GetDatabaseNamesFromDataSourceSoapOut</b>	The response WSDL message for the <b>GetDatabaseNamesFromDataSource</b> WSDL operation.

### 3.1.4.34.1.1 GetDatabaseNamesFromDataSourceSoapIn

The request WSDL message for the **GetDatabaseNamesFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDatabaseNamesFromDataSource
```

The SOAP body contains the **GetDatabaseNamesFromDataSource** element.

### 3.1.4.34.1.2 GetDatabaseNamesFromDataSourceSoapOut

The response WSDL message for the **GetDatabaseNamesFromDataSource** WSDL operation.

The SOAP body contains the **GetDatabaseNamesFromDataSourceResponse** element.

### 3.1.4.34.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetDatabaseNamesFromDataSource</b>	The input data for the <b>GetDatabaseNamesFromDataSource</b> WSDL operation.
<b>GetDatabaseNamesFromDataSourceResponse</b>	The result data for the <b>GetDatabaseNamesFromDataSource</b> WSDL operation.

#### 3.1.4.34.2.1 GetDatabaseNamesFromDataSource

The **GetDatabaseNamesFromDataSource** element specifies the input data for the **GetDatabaseNamesFromDataSource** WSDL operation.

```
<xs:element name="GetDatabaseNamesFromDataSource"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The data source (1). This element **MUST** be present.

#### 3.1.4.34.2.2 GetDatabaseNamesFromDataSourceResponse

The **GetDatabaseNamesFromDataSourceResponse** element specifies the result data for the **GetDatabaseNamesFromDataSource** WSDL operation.

```
<xs:element name="GetDatabaseNamesFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetDatabaseNamesFromDataSourceResult"
          type="tns:ArrayOfString"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

```

**GetDatabaseNamesFromDataSourceResult:** An array of strings. This element MUST be present.

### 3.1.4.34.3 Complex Types

None.

### 3.1.4.34.4 Simple Types

None.

### 3.1.4.34.5 Attributes

None.

### 3.1.4.34.6 Groups

None.

### 3.1.4.34.7 Attribute Groups

None.

### 3.1.4.35 GetDataSource

The **GetDataSource** operation retrieves a data source (1).

The following is the WSDL port type specification of the **GetDataSource** WSDL operation.

```

<wsdl:operation name="GetDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetDataSourceSoapIn** request message (section [3.1.4.35.1.1](#)), and the server (2) responds with a **GetDataSourceSoapOut** response message (section [3.1.4.35.1.2](#)) as follows:

- Receives a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source (1) to be retrieved.
- The server (2) sends the corresponding data source (1).
- In the event that a data source (1) cannot be retrieved, the server (2) SHOULD [<29>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.35.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetDataSourceSoapIn</b>	The request WSDL message for the <b>GetDataSource</b> WSDL operation.
<b>GetDataSourceSoapOut</b>	The response WSDL message for the <b>GetDataSource</b> WSDL operation.

#### 3.1.4.35.1.1 GetDataSourceSoapIn

The request WSDL message for the **GetDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDataSource
```

The SOAP body contains the **GetDataSource** element.

#### 3.1.4.35.1.2 GetDataSourceSoapOut

The response WSDL message for the **GetDataSource** WSDL operation.

The SOAP body contains the **GetDataSourceResponse** element.

### 3.1.4.35.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetDataSource</b>	The input data for the <b>GetDataSource</b> WSDL operation.
<b>GetDataSourceResponse</b>	The result data for the <b>GetDataSource</b> WSDL operation.

#### 3.1.4.35.2.1 GetDataSource

The **GetDataSource** element specifies the input data for the **GetDataSource** WSDL operation.

```
<xs:element name="GetDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**location:** A **RepositoryLocation** complex type (section [2.2.4.161](#)) of a data source. This element **MUST** be present.

### 3.1.4.35.2.2 GetDataSourceResponse

The **GetDataSourceResponse** element specifies the result data for the **GetDataSource** WSDL operation.

```

<xs:element name="GetDataSourceResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDataSourceResult"
type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetDataSourceResult:** A data source (1), as specified in the **DataSource** complex type (section [2.2.4.85](#)). This element **MUST** be present.

### 3.1.4.35.3 Complex Types

None.

### 3.1.4.35.4 Simple Types

None.

### 3.1.4.35.5 Attributes

None.

### 3.1.4.35.6 Groups

None.

### 3.1.4.35.7 Attribute Groups

None.

### 3.1.4.36 GetDependentElements

The **GetDependentElements** operation retrieves from the server (2) all **FirstClassElement** complex types (section [2.2.4.99](#)) associated with a list (1) of repository locations. In addition, all **FirstClassElements** that are related by reference are also included in the response. For example, for a requested scorecard, all **Kpis**, **Indicators**, and **DataSources** that the scorecard depends on will also be retrieved.

The following is the WSDL port type specification of the **GetDependentElements** WSDL operation.

```
<wsdl:operation name="GetDependentElements" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDependentElementsSoapIn"/>
  <wsdl:output message="tns:GetDependentElementsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDependentElementsSoapIn** request message (section [3.1.4.36.1.1](#)), and the server (2) responds with a **GetDependentElementsSoapOut** response message (section [3.1.4.36.1.2](#)) as follows:

- The protocol client sends a list (1) of **RepositoryLocation** complex types (section [2.2.4.161](#)).
- The server (2) responds with a **DependentElementInfo** complex type (section [3.1.4.36.3.2](#)) containing all **FirstClassElement** items specified by the list of **RepositoryLocations**, all associated sub-items, and all containing list URLs.
- In the event that all **FirstClassElement** items and sub-items referenced by the list cannot be retrieved, the server (2) SHOULD [<30>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.36.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetDependentElementsSoapIn</b>	The request WSDL message for the <b>GetDependentElements</b> WSDL operation.
<b>GetDependentElementsSoapOut</b>	The response WSDL message for the <b>GetDependentElements</b> WSDL operation.

#### 3.1.4.36.1.1 GetDependentElementsSoapIn

The request WSDL message for the **GetDependentElements** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDependentElements
```

The SOAP body contains the **GetDependentElements** element.

### 3.1.4.36.1.2 GetDependentElementsSoapOut

The response WSDL message for the **GetDependentElements** WSDL operation.

The SOAP body contains the **GetDependentElementsResponse** element.

### 3.1.4.36.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetDependentElements</b>	The input data for the <b>GetDependentElements</b> WSDL operation.
<b>GetDependentElementsResponse</b>	The result data for the <b>GetDependentElements</b> WSDL operation.

#### 3.1.4.36.2.1 GetDependentElements

The **GetDependentElements** element specifies the input data for the **GetDependentElements** WSDL operation.

```
<xs:element name="GetDependentElements" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="missingItems"
type="tns:ArrayOfRepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**missingItems:** An **ArrayOfRepositoryLocation** complex type, as specified in section [3.1.4.36.3.1](#). This element specifies which items to retrieve.

#### 3.1.4.36.2.2 GetDependentElementsResponse

The **GetDependentElementsResponse** element specifies the result data for the **GetDependentElements** WSDL operation.

```
<xs:element name="GetDependentElementsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDependentElementsResult"
type="tns:DependentElementInfo"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetDependentElementsResult:** A **DependentElementInfo** complex type, as specified in section [3.1.4.36.3.2](#). This element **MUST** be present.

### 3.1.4.36.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
<b>ArrayOfRepositoryList</b>	Specifies an array of RepositoryList elements.
<b>ArrayOfRepositoryLocation</b>	Specifies an array of <b>RepositoryLocation</b> .
<b>DependentElementInfo</b>	Contains elements and associated list references.
<b>ListLocation</b>	Contains the necessary information to identify a list (1) on the server (2).
<b>RepositoryList</b>	Specifies a location where <b>FirstClassElement</b> (section <a href="#">2.2.4.99</a> ) items are stored on the server.

#### 3.1.4.36.3.1 ArrayOfRepositoryLocation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfRepositoryLocation** complex type specifies an array of **RepositoryLocation** complex types (section [2.2.4.161](#)).

```
<xs:complexType name="ArrayOfRepositoryLocation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="RepositoryLocation" nillable="true"
      type="tns:RepositoryLocation"/>
  </xs:sequence>
</xs:complexType>
```

**RepositoryLocation:** This element MUST NOT be null and MUST conform to the schema of the **RepositoryLocation**.

#### 3.1.4.36.3.2 DependentElementInfo

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **DependentElementInfo** complex type contains elements and associated list references.

```
<xs:complexType name="DependentElementInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DependentLists"
      type="tns:ArrayOfRepositoryList"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DependentElements"
      type="tns:ArrayOfFirstClassElement"/>
  </xs:sequence>
</xs:complexType>
```

**DependentLists:** An **ArrayOfRepositoryList** complex type (section [3.1.4.36.3.3](#)). A collection of lists (1) associated with the items in **DependentElements**.



**DependentElements:** An **ArrayOfFirstClassElement** complex type (section [2.2.4.34](#)). A collection of **FirstClassElement** complex type items (section [2.2.4.99](#)), and all items associated through **FirstClassElement** references.

### 3.1.4.36.3.3 ArrayOfRepositoryList

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfRepositoryList** complex type specifies an array of **RepositoryList** elements (section [3.1.4.36.3.4](#)).

```
<xs:complexType name="ArrayOfRepositoryList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="RepositoryList" nillable="true"
      type="tns:RepositoryList"/>
  </xs:sequence>
</xs:complexType>
```

**RepositoryList:** This element MUST NOT be null and MUST conform to the schema of the **RepositoryList** complex type (section [3.1.4.36.3.4](#)).

### 3.1.4.36.3.4 RepositoryList

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **RepositoryList** complex type specifies a location where **FirstClassElement** complex type items (section [2.2.4.99](#)) are stored on the server (2).

```
<xs:complexType name="RepositoryList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Location" type="tns:ListLocation"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SupportedTypes" type="tns:FCOContentType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Title" type="xs:string"/>
    <xs:element xmlns:s1="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
      name="ListId" type="s1:guid"/>
  </xs:sequence>
</xs:complexType>
```

**Location:** Specifies the **ListLocation** complex type (section [3.1.4.36.3.5](#)). This element MUST be present.

**SupportedTypes:** The content types that are supported in the form of the **FCOContentType** simple type (section [3.1.4.36.4.1](#)).

**Title:** Specifies the title for the **RepositoryList**. This element MUST be present. The value MUST NOT be empty and MUST NOT consist of only whitespace characters.

**ListId:** Specifies the identity for this **RepositoryList**. This element MUST be formatted as a GUID.

### 3.1.4.36.3.5 ListLocation

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ListLocation** complex type contains the necessary information to identify a list (1) on the server (2).

```

<xs:complexType name="ListLocation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SiteUrl" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ListUrl" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**SiteUrl:** The url for the server where the list (1) is located. The attribute MUST be a valid [RFC1738](#) URL.

**ListUrl:** The location on the server where the list (1) is located. MUST be present. MUST be a valid URL as specified in [RFC1738](#).

### 3.1.4.36.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
<b>FCOContentType</b>	Specifies the type of an <b>FCO</b> .

#### 3.1.4.36.4.1 FCOContentType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **FCOContentType** simple type specifies the type of an **FCO**.

```

<xs:simpleType name="FCOContentType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="PpsDashboard"/>
        <xs:enumeration value="PpsScorecard"/>
        <xs:enumeration value="PpsKpi"/>
        <xs:enumeration value="PpsReportView"/>
        <xs:enumeration value="PpsIndicator"/>
        <xs:enumeration value="PpsDataSource"/>
        <xs:enumeration value="PpsFilter"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for the **FCOContentType** simple type.

Value	Meaning
None	The type of object is unknown.
PpsDashboard	The object is a <a href="#">Dashboard</a> .
PpsScorecard	The object is a <a href="#">Scorecard</a> .

Value	Meaning
PpsKpi	The object is a <a href="#">Kpi</a> .
PpsReportView	The object is a <a href="#">ReportView</a> .
PpsIndicator	The object is an <a href="#">Indicator</a> .
PpsDataSource	The object is a <a href="#">DataSource</a> .
PpsFilter	The object is a <a href="#">Filter</a> .

### 3.1.4.36.5 Attributes

None.

### 3.1.4.36.6 Groups

None.

### 3.1.4.36.7 Attribute Groups

None.

### 3.1.4.37 GetDimensions

The **GetDimensions** operation retrieves an array of dimension (1) objects.

The following is the WSDL port type specification of the **GetDimensions** WSDL operation.

```
<wsdl:operation name="GetDimensions" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDimensionsSoapIn"/>
  <wsdl:output message="tns:GetDimensionsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDimensionsSoapIn** request message (section [3.1.4.37.1.1](#)), and the server (2) responds with a **GetDimensionsSoapOut** response message (section [3.1.4.37.1.2](#)) as follows:

- Receives a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the associated data source (1).
- The server (2) sends the corresponding **ArrayOfDimension** complex type (section [2.2.4.32](#)).

#### Exceptions:

Error code	Description
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

Error code	Description
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.37.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetDimensionsSoapIn</b>	The request WSDL message for the <b>GetDimensions</b> WSDL operation.
<b>GetDimensionsSoapOut</b>	The response WSDL message for the <b>GetDimensions</b> WSDL operation.

#### 3.1.4.37.1.1 GetDimensionsSoapIn

The request WSDL message for the **GetDimensions** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensions
```

The SOAP body contains the **GetDimensions** element.

#### 3.1.4.37.1.2 GetDimensionsSoapOut

The response WSDL message for the **GetDimensions** WSDL operation.

The SOAP body contains the **GetDimensionsResponse** element.

### 3.1.4.37.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetDimensions</b>	The input data for the <b>GetDimensions</b> WSDL operation.
<b>GetDimensionsResponse</b>	The result data for the <b>GetDimensions</b> WSDL operation.

#### 3.1.4.37.2.1 GetDimensions

The **GetDimensions** element specifies the input data for the **GetDimensions** WSDL operation.

```
<xs:element name="GetDimensions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

**dataSourceLocation:** A **RepositoryLocation** complex type (section [2.2.4.161](#)). This element MUST be present.

### 3.1.4.37.2.2 GetDimensionsResponse

The **GetDimensionsResponse** element specifies the result data for the **GetDimensions** WSDL operation.

```

<xs:element name="GetDimensionsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsResult"
type="tns:ArrayOfDimension"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetDimensionsResult:** An **ArrayOfDimension** complex type (section [2.2.4.32](#)). This element MUST be present.

### 3.1.4.37.3 Complex Types

None.

### 3.1.4.37.4 Simple Types

None.

### 3.1.4.37.5 Attributes

None.

### 3.1.4.37.6 Groups

None.

### 3.1.4.37.7 Attribute Groups

None.

### 3.1.4.38 GetDimensionsFromDataSource

The **GetDimensionsFromDataSource** operation retrieves an array of dimension (1) objects (see section [2.2.4.90](#)).

The following is the WSDL port type specification of the **GetDimensionsFromDataSource** WSDL operation.

```

<wsdl:operation name="GetDimensionsFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetDimensionsFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDimensionsFromDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetDimensionsFromDataSourceSoapIn** request message (section [3.1.4.38.1.1](#)), and the server (2) responds with a **GetDimensionsFromDataSourceSoapOut** response message (section [3.1.4.38.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)).
- The server (2) sends the corresponding **ArrayOfDimension** complex type (section [2.2.4.32](#)).

#### Exceptions:

Error code	Description
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.38.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetDimensionsFromDataSourceSoapIn</b>	The request WSDL message for the <b>GetDimensionsFromDataSource</b> WSDL operation.
<b>GetDimensionsFromDataSourceSoapOut</b>	The response WSDL message for the <b>GetDimensionsFromDataSource</b> WSDL operation.

#### 3.1.4.38.1.1 GetDimensionsFromDataSourceSoapIn

The request WSDL message for the **GetDimensionsFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource
```

The SOAP body contains the **GetDimensionsFromDataSource** element.

### 3.1.4.38.1.2 GetDimensionsFromDataSourceSoapOut

The response WSDL message for the **GetDimensionsFromDataSource** WSDL operation.

The SOAP body contains the **GetDimensionsFromDataSourceResponse** element.

### 3.1.4.38.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetDimensionsFromDataSource</b>	The input data for the <b>GetDimensionsFromDataSource</b> WSDL operation.
<b>GetDimensionsFromDataSourceResponse</b>	The result data for the <b>GetDimensionsFromDataSource</b> WSDL operation.

#### 3.1.4.38.2.1 GetDimensionsFromDataSource

The **GetDimensionsFromDataSource** element specifies the input data for the **GetDimensionsFromDataSource** WSDL operation.

```
<xs:element name="GetDimensionsFromDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** A data source (1), as specified in section [2.2.4.85](#). This element MUST be present.

#### 3.1.4.38.2.2 GetDimensionsFromDataSourceResponse

The **GetDimensionsFromDataSourceResponse** element specifies the result data for the **GetDimensionsFromDataSource** WSDL operation.

```
<xs:element name="GetDimensionsFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsFromDataSourceResult"
        type="tns:ArrayOfDimension"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetDimensionsFromDataSourceResult:** An **ArrayOfDimension** complex type (section [2.2.4.32](#)). This element MUST be present.

### 3.1.4.38.3 Complex Types

None.

### 3.1.4.38.4 Simple Types

None.

### 3.1.4.38.5 Attributes

None.

### 3.1.4.38.6 Groups

None.

### 3.1.4.38.7 Attribute Groups

None.

### 3.1.4.39 GetFilter

The **GetFilter** operation retrieves a **Filter** complex type (section [2.2.4.98](#)).

The following is the WSDL port type specification of the **GetFilter** WSDL operation.

```
<wsdl:operation name="GetFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetFilterSoapIn"/>
  <wsdl:output message="tns:GetFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetFilterSoapIn** request message (section [3.1.4.40.1.1](#)), and the server (2) responds with a **GetFilterSoapOut** response message (section [3.1.4.40.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **Filter** to be retrieved.
- The server (2) responds with the corresponding **Filter**.
- In the event the **Filter** cannot be retrieved, the server (2) SHOULD [<31>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).



### 3.1.4.39.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetFilterSoapIn</b>	The request WSDL message for the <b>GetFilter</b> WSDL operation.
<b>GetFilterSoapOut</b>	The response WSDL message for the <b>GetFilter</b> WSDL operation.

#### 3.1.4.39.1.1 GetFilterSoapIn

The request WSDL message for the **GetFilter** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetFilter
```

The SOAP body contains the **GetFilter** element.

#### 3.1.4.39.1.2 GetFilterSoapOut

The response WSDL message for the **GetFilter** WSDL operation.

The SOAP body contains the **GetFilterResponse** element.

### 3.1.4.39.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetFilter</b>	The input data for the <b>GetFilter</b> WSDL operation.
<b>GetFilterResponse</b>	The result data for the <b>GetFilter</b> WSDL operation.

#### 3.1.4.39.2.1 GetFilter

The **GetFilter** element specifies the input data for the **GetFilter** WSDL operation.

```
<xs:element name="GetFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. The **ItemUrl** property MUST contain a valid URL.

### 3.1.4.39.2.2 GetFilterResponse

The **GetFilterResponse** element specifies the result data for the **GetFilter** WSDL operation.

```
<xs:element name="GetFilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetFilterResult" type="tns:Filter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetFilterResult:** A **Filter** complex type, as specified in section [2.2.4.98](#). This element SHOULD be present.

### 3.1.4.39.3 Complex Types

None.

### 3.1.4.39.4 Simple Types

None.

### 3.1.4.39.5 Attributes

None.

### 3.1.4.39.6 Groups

None.

### 3.1.4.39.7 Attribute Groups

None.

### 3.1.4.40 GetIndicator

The **GetIndicator** operation retrieves an **Indicator** complex type (section [2.2.4.125](#)) from the server (2).

The following is the WSDL port type specification of the **GetIndicator** WSDL operation.

```
<wsdl:operation name="GetIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetIndicatorSoapIn"/>
  <wsdl:output message="tns:GetIndicatorSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetIndicatorSoapIn** request message (section [3.1.4.40.1.1](#)), and the server (2) responds with a **GetIndicatorSoapOut** response message (section [3.1.4.40.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **Indicator** to be retrieved.

- The server (2) sends the corresponding **Indicator**.
- In the event that an **indicator** cannot be retrieved, the server (2) SHOULD [<32>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

**Exceptions:**

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

**3.1.4.40.1 Messages**

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetIndicatorSoapIn</b>	The request WSDL message for the <b>GetIndicator</b> WSDL operation.
<b>GetIndicatorSoapOut</b>	The response WSDL message for the <b>GetIndicator</b> WSDL operation.

**3.1.4.40.1.1 GetIndicatorSoapIn**

The request WSDL message for the **GetIndicator** WSDL operation.

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/GetIndicator`

The SOAP body contains the **GetIndicator** element.

**3.1.4.40.1.2 GetIndicatorSoapOut**

The response WSDL message for the **GetIndicator** WSDL operation.

The SOAP body contains the **GetIndicatorResponse** element.

**3.1.4.40.2 Elements**

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetIndicator</b>	The input data for the <b>GetIndicator</b> WSDL operation.
<b>GetIndicatorResponse</b>	The result data for the <b>GetIndicator</b> WSDL operation.

### 3.1.4.40.2.1 GetIndicator

The **GetIndicator** element specifies the input data for the **GetIndicator** WSDL operation.

```
<xs:element name="GetIndicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** The **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the indicator on the server (2).

- It MUST be present.
- The **ItemUrl** property MUST be set to the location of the **indicator**.

### 3.1.4.40.2.2 GetIndicatorResponse

The **GetIndicatorResponse** element specifies the result data for the **GetIndicator** WSDL operation.

```
<xs:element name="GetIndicatorResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetIndicatorResult"
        type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetIndicatorResult:** The **Indicator** complex type object (section [2.2.4.125](#)) that was requested from the server (2).

### 3.1.4.40.3 Complex Types

None.

### 3.1.4.40.4 Simple Types

None.

### 3.1.4.40.5 Attributes

None.

### 3.1.4.40.6 Groups

None.

### 3.1.4.40.7 Attribute Groups

None.

### 3.1.4.41 GetKpi

The **GetKpi** operation retrieves a **Kpi** complex type object (section [2.2.4.128](#)).

The following is the WSDL port type specification of the **GetKpi** WSDL operation.

```
<wsdl:operation name="GetKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetKpiSoapIn"/>
  <wsdl:output message="tns:GetKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetKpiSoapIn** request message (section [3.1.4.41.1.1](#)), and the server (2) responds with a **GetKpiSoapOut** response message (section [3.1.4.41.1.2](#)) as follows:

- The server (2) receives the **RepositoryLocation** complex type (section [2.2.4.161](#)) of a **Kpi**.
- The server (2) MUST retrieve the **Kpi**.
- In the event that a **Kpi** cannot be retrieved, the server (2) SHOULD [<33>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.41.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetKpiSoapIn</b>	The request WSDL message for the <b>GetKpi</b> WSDL operation.
<b>GetKpiSoapOut</b>	The response WSDL message for the <b>GetKpi</b> WSDL operation.

#### 3.1.4.41.1.1 GetKpiSoapIn

The request WSDL message for the **GetKpi** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetKpi
```

The SOAP body contains the **GetKpi** element.

#### 3.1.4.41.1.2 GetKpiSoapOut

The response WSDL message for the **GetKpi** WSDL operation.

The SOAP body contains the **GetKpiResponse** element.

#### 3.1.4.41.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetKpi</b>	The input data for the <b>GetKpi</b> WSDL operation.
<b>GetKpiResponse</b>	The result data for the <b>GetKpi</b> WSDL operation.

##### 3.1.4.41.2.1 GetKpi

The **GetKpi** element specifies the input data for the **GetKpi** WSDL operation.

```
<xs:element name="GetKpi" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** The location of the KPI to be retrieved, as specified by a **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

##### 3.1.4.41.2.2 GetKpiResponse

The **GetKpiResponse** element specifies the result data for the **GetKpi** WSDL operation.

```
<xs:element name="GetKpiResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetKpiResult:** The **Kpi** complex type object (section [2.2.4.128](#)) that was requested from the server (2).

##### 3.1.4.41.3 Complex Types

None.

#### 3.1.4.41.4 Simple Types

None.

#### 3.1.4.41.5 Attributes

None.

#### 3.1.4.41.6 Groups

None.

#### 3.1.4.41.7 Attribute Groups

None.

### 3.1.4.42 GetKpisFromScorecard

The **GetKpisFromScorecard** operation retrieves an array of **Kpi** complex type objects (section [2.2.4.128](#)) associated with a scorecard.

The following is the WSDL port type specification of the **GetKpisFromScorecard** WSDL operation.

```
<wsdl:operation name="GetKpisFromScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetKpisFromScorecardSoapIn"/>
  <wsdl:output message="tns:GetKpisFromScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetKpisFromScorecardSoapIn** request message (section [3.1.4.43.1.1](#)), and the server (2) responds with a **GetKpisFromScorecardSoapOut** response message (section [3.1.4.43.1.2](#)) as follows:

- The server (2) receives a **RepositoryLocation** complex type (section [2.2.4.161](#)) of a scorecard.
- The server (2) MUST retrieve the array of **Kpi** elements.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.42.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetKpisFromScorecardSoapIn</b>	The request WSDL message for the <b>GetKpisFromScorecard</b> WSDL operation.
<b>GetKpisFromScorecardSoapOut</b>	The response WSDL message for the <b>GetKpisFromScorecard</b> WSDL operation.

### 3.1.4.42.1.1 GetKpisFromScorecardSoapIn

The request WSDL message for the **GetKpisFromScorecard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetKpisFromScorecard
```

The SOAP body contains the **GetKpisFromScorecard** element.

### 3.1.4.42.1.2 GetKpisFromScorecardSoapOut

The response WSDL message for the **GetKpisFromScorecard** WSDL operation.

The SOAP body contains the **GetKpisFromScorecardResponse** element.

### 3.1.4.42.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetKpisFromScorecard</b>	The input data for the <b>GetKpisFromScorecard</b> WSDL operation.
<b>GetKpisFromScorecardResponse</b>	The result data for the <b>GetKpisFromScorecard</b> WSDL operation.

### 3.1.4.42.2.1 GetKpisFromScorecard

The **GetKpisFromScorecard** element specifies the input data for the **GetKpisFromScorecard** WSDL operation.

```
<xs:element name="GetKpisFromScorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** The location of a scorecard, as specified by the **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.



### 3.1.4.42.2 GetKpisFromScorecardResponse

The **GetKpisFromScorecardResponse** element specifies the result data for the **GetKpisFromScorecard** WSDL operation.

```
<xs:element name="GetKpisFromScorecardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpisFromScorecardResult"
        type="tns:ArrayOfKpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetKpisFromScorecardResult:** An array of **Kpi** complex type elements (section [2.2.4.128](#)) that was requested from the server (2).

### 3.1.4.42.3 Complex Types

None.

### 3.1.4.42.4 Simple Types

None.

### 3.1.4.42.5 Attributes

None.

### 3.1.4.42.6 Groups

None.

### 3.1.4.42.7 Attribute Groups

None.

### 3.1.4.43 GetLatestAnalyticReportVersion

The **GetLatestAnalyticReportVersion** operation retrieves from the server (2) the version number for a report view that has been created through **SaveTemporaryAnalyticReport** operation (section [3.1.4.65](#)).

The following is the WSDL port type specification of the **GetLatestAnalyticReportVersion** WSDL operation.

```
<wsdl:operation name="GetLatestAnalyticReportVersion"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetLatestAnalyticReportVersionSoapIn"/>
  <wsdl:output message="tns:GetLatestAnalyticReportVersionSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetReportViewSoapIn** request message (section [3.1.4.43.1.1](#)) and the server (2) responds with a **GetReportViewSoapOut** response message (section [3.1.4.43.1.2](#)) as follows:

- The protocol client sends a GUID that uniquely identifies a report view.
- The server (2) sends an integer representing the latest version number of the corresponding report view.

In case of failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is specified in section [2.2.2.1](#).

### 3.1.4.43.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetLatestAnalyticReportVersionSoapIn</b>	The request WSDL message for the <b>GetLatestAnalyticReportVersion</b> WSDL operation.
<b>GetLatestAnalyticReportVersionSoapOut</b>	The response WSDL message for the <b>GetLatestAnalyticReportVersion</b> WSDL operation.

#### 3.1.4.43.1.1 GetLatestAnalyticReportVersionSoapIn

The request WSDL message for the **GetLatestAnalyticReportVersion** WSDL operation.

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/GetLatestAnalyticReportVersion`

The SOAP body contains the **GetLatestAnalyticReportVersion** element.

#### 3.1.4.43.1.2 GetLatestAnalyticReportVersionSoapOut

The response WSDL message for the **GetLatestAnalyticReportVersion** WSDL operation.

The SOAP body contains the **GetLatestAnalyticReportVersionResponse** element.

### 3.1.4.43.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetLatestAnalyticReportVersion</b>	The input data for the <b>GetLatestAnalyticReportVersion</b> WSDL operation.
<b>GetLatestAnalyticReportVersionResponse</b>	The result data for the <b>GetLatestAnalyticReportVersion</b> WSDL operation.

### 3.1.4.43.2.1 GetLatestAnalyticReportVersion

The **GetLatestAnalyticReportVersion** element specifies the input data for the **GetLatestAnalyticReportVersion** WSDL operation.

```
<xs:element name="GetLatestAnalyticReportVersion"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="analyticReportViewId"
        xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewId:** The **SaveTemporaryAnalyticReportResult** element (section [3.1.4.65.2.2](#)) returned when the report view was saved. This element **MUST** be present.

### 3.1.4.43.2.2 GetLatestAnalyticReportVersionResponse

The **GetLatestAnalyticReportVersionResponse** element specifies the result data for the **GetLatestAnalyticReportVersion** WSDL operation.

```
<xs:element name="GetLatestAnalyticReportVersionResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="GetLatestAnalyticReportVersionResult"
        type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetLatestAnalyticReportVersionResult:** The version number of the report view. This element **MUST** be present.

### 3.1.4.43.3 Complex Types

None.

### 3.1.4.43.4 Simple Types

None.

### 3.1.4.43.5 Attributes

None.

### 3.1.4.43.6 Groups

None.

### 3.1.4.43.7 Attribute Groups

None.

### 3.1.4.44 GetListItems

The **GetListItems** operation retrieves all **FirstClassElements** complex types (section [2.2.4.99](#)) associated with a given repository list (1) from the server (2).

The following is the WSDL port type specification of the **GetListItems** WSDL operation.

```
<wsdl:operation name="GetListItems" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetListItemsSoapIn"/>
  <wsdl:output message="tns:GetListItemsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetListItemsSoapIn** request message (section [3.1.4.44.1.1](#)), and the server (2) responds with a **GetListItemsSoapOut** response message (section [3.1.4.44.1.2](#)) as follows:

- The protocol client sends the URL of the list (1) from which to retrieve items.
- The server (2) responds with a collection of corresponding **FirstClassElement** items.
- In the event that all **FirstClassElement** items in the list (1) cannot be retrieved, the server (2) SHOULD [<34>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.44.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetListItemsSoapIn</b>	The request WSDL message for the <b>GetListItems</b> WSDL operation.
<b>GetListItemsSoapOut</b>	The response WSDL message for the <b>GetListItems</b> WSDL operation.

#### 3.1.4.44.1.1 GetListItemsSoapIn

The request WSDL message for the **GetListItems** WSDL operation.

The SOAP action value is:

The SOAP body contains the **GetListItems** element.

### 3.1.4.44.1.2 GetListItemsSoapOut

The response WSDL message for the **GetListItems** WSDL operation.

The SOAP body contains the **GetListItemsResponse** element.

### 3.1.4.44.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetListItems</b>	The input data for the <b>GetListItems</b> WSDL operation.
<b>GetListItemsResponse</b>	The result data for the <b>GetListItems</b> WSDL operation.

#### 3.1.4.44.2.1 GetListItems

The **GetListItems** element specifies the input data for the **GetListItems** WSDL operation.

```
<xs:element name="GetListItems" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**listUrl:** A server-relative URL that references the list (1) on the server (2) from which to retrieve the items. This element **MUST** be present and **MUST** be a valid URL.

#### 3.1.4.44.2.2 GetListItemsResponse

The **GetListItemsResponse** element specifies the result data for the **GetListItems** WSDL operation.

```
<xs:element name="GetListItemsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetListItemsResult"
type="tns:ArrayOfFirstClassElement"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetListItemsResult:** An array of **FirstClassElement** complex type objects (section [2.2.4.99](#)), as specified in the **ArrayOfFirstClassElement** (section [2.2.4.34](#)). This element **MUST** be present. This

array MUST contain one element for each item in the requested list (1) and SHOULD NOT contain null elements.

### 3.1.4.44.3 Complex Types

None.

### 3.1.4.44.4 Simple Types

None.

### 3.1.4.44.5 Attributes

None.

### 3.1.4.44.6 Groups

None.

### 3.1.4.44.7 Attribute Groups

None.

### 3.1.4.45 GetMdx

The **GetMdx** operation retrieves an MDX that can be used to query data sources for the given analytic report. The Analytic Chart and Analytic Grid report view types contain custom data that is used to generate MDX queries. See the **ReportView** complex type (section [2.2.4.160](#)) for more detail.

The following is the WSDL port type specification of the **GetMdx** WSDL operation.

```
<wsdl:operation name="GetMdx" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetMdxSoapIn"/>
  <wsdl:output message="tns:GetMdxSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetMdxSoapIn** request message (section [3.1.4.45.1.1](#)), and the server (2) responds with a **GetMdxSoapOut** response message (section [3.1.4.45.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) referencing the analytic report from which to generate the MDX.
- The server (2) responds with an MDX expression.
- In the event the MDX cannot be retrieved, the server (2) SHOULD [<35>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.45.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetMdxSoapIn</b>	The request WSDL message for the <b>GetMdx</b> WSDL operation.
<b>GetMdxSoapOut</b>	The response WSDL message for the <b>GetMdx</b> WSDL operation.

#### 3.1.4.45.1.1 GetMdxSoapIn

The request WSDL message for the **GetMdx** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetMdx
```

The SOAP body contains the **GetMdx** element.

#### 3.1.4.45.1.2 GetMdxSoapOut

The response WSDL message for the **GetMdx** WSDL operation.

The SOAP body contains the **GetMdxResponse** element.

### 3.1.4.45.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetMdx</b>	The input data for the <b>GetMdx</b> WSDL operation.
<b>GetMdxResponse</b>	The result data for the <b>GetMdx</b> WSDL operation.

#### 3.1.4.45.2.1 GetMdx

The **GetMdx** element specifies the input data for the **GetMdx** WSDL operation.

```
<xs:element name="GetMdx" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

**analyticReportViewLocation:** A **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

- If the report view was created with the **CreateReportView** operation (section [3.1.4.7](#)), the **ItemUrl** property **MUST** contain a valid URL. **ItemType** and **ItemGuid** are set by the server (2).
- If the report view was created with the **SaveTemporaryAnalyticReport** operation (section [3.1.4.65](#)):
  - The **ItemGuid** property **MUST** equal the GUID that was returned from **SaveTemporaryAnalyticReport**.
  - The **ItemType** property **MUST** equal **TempReportView**, as specified by **FirstClassObjectType** simple type (section [2.2.5.20](#)).
  - The **ItemUrl** property **MUST** equal an empty string.

### 3.1.4.45.2.2 GetMdxResponse

The **GetMdxResponse** element specifies the result data for the **GetMdx** WSDL operation.

```

<xs:element name="GetMdxResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetMdxResult" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetMdxResult:** A string that represents an MDX. This string **SHOULD NOT** be empty.

### 3.1.4.45.3 Complex Types

None.

### 3.1.4.45.4 Simple Types

None.

### 3.1.4.45.5 Attributes

None.

### 3.1.4.45.6 Groups

None.



### 3.1.4.45.7 Attribute Groups

None.

### 3.1.4.46 GetParameterDisplayData

The **GetParameterDisplayData** operation builds a template data table containing only the columns produced by a specific parameter type. The referred parameter represents a specific kind of connection between two Web Parts. The resulting **DataTable** (as described in [\[DataTable\]](#)) represents an empty sample of the information that gets passed on that connection.

The following is the WSDL port type specification of the **GetParameterDisplayData** WSDL operation.

```
<wsdl:operation name="GetParameterDisplayData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetParameterDisplayDataSoapIn"/>
  <wsdl:output message="tns:GetParameterDisplayDataSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetParameterDisplayDataSoapIn** request message (section [3.1.4.46.1.1](#)), and the server (2) responds with a **GetParameterDisplayDataSoapOut** response message (section [3.1.4.46.1.2](#)) as follows:

- The server (2) uses the **ParameterProviderId** property from the **ParameterDefinition** complex type (section [2.2.4.155](#)) to identify one of the parameter providers registered on the server (2).
- The server (2) creates the **DataTable** containing all columns used by that parameter type. The server (2) uses the data source (1) referenced by **parameterSourceLocation** and the **GridViewData** [<36>](#) complex type (section [2.2.4.121](#)) referenced by **gridViewData** element (see section [3.1.4.46.2.1](#)) to create the **DataTable**.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.46.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetParameterDisplayDataSoapIn</b>	The request WSDL message for the <b>GetParameterDisplayData</b> WSDL operation.
<b>GetParameterDisplayDataSoapOut</b>	The response WSDL message for the <b>GetParameterDisplayData</b> WSDL operation.

### 3.1.4.46.1.1 GetParameterDisplayDataSoapIn

The request WSDL message for the **GetParameterDisplayData** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData
```

The SOAP body contains the **GetParameterDisplayData** element.

### 3.1.4.46.1.2 GetParameterDisplayDataSoapOut

The response WSDL message for the **GetParameterDisplayData** WSDL operation.

The SOAP body contains the **GetParameterDisplayDataResponse** element.

### 3.1.4.46.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetParameterDisplayData</b>	The input data for the <b>GetParameterDisplayData</b> WSDL operation.
<b>GetParameterDisplayDataResponse</b>	The result data for the <b>GetParameterDisplayData</b> WSDL operation.

#### 3.1.4.46.2.1 GetParameterDisplayData

The **GetParameterDisplayData** element specifies the input data for the **GetParameterDisplayData** WSDL operation.

```
<xs:element name="GetParameterDisplayData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterDefinition"
type="tns:ParameterDefinition"/>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="gridViewData" type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**parameterDefinition:** Specifies the **ParameterDefinition** complex type (section [2.2.4.155](#)). This element MUST NOT be null and the **ParameterProviderId** property MUST refer to one of the parameter data providers registered on the server (2). This function supports only filter-type parameters shown in the following table.

ParameterProviderId	CustomDefinition
MDXParameterDataProvider	A <a href="#">MdxParameterDefinition</a> object.

ParameterProviderId	CustomDefinition
MemberParameterDataProvider	A <a href="#">MemberParameterDefinition</a> object.
NamedSetParameterDataProvider	A <a href="#">NamedSetParameterDefinition</a> object.
TimeIntelligencePostFormulaProvider	A <a href="#">TimeIntelligencePostFormulaDefinition</a> object.
TimeIntelligenceProvider	A <a href="#">TimeIntelligenceDefinition</a> object.

**parameterSourceLocation:** Specifies a data source location as defined in a **RepositoryLocation** complex type (section [2.2.4.161](#)). This element MAY be null or empty, in which case if the parameter type requires a data source location, the resulting **DataTable** (as described in [\[DataTable\]](#)) is **NULL**.

The following parameter providers require an MDX capable OLAP data source (1).

ParameterProviderId	CustomDefinition
MDXParameterDataProvider	A MdxParameterDefinition object.
MemberParameterDataProvider	A MemberParameterDefinition object.
NamedSetParameterDataProvider	A NamedSetParameterDefinition object.

**gridViewData:** Unused. This element MUST be set to **NULL** and MUST be ignored by the protocol client.

### 3.1.4.46.2.2 GetParameterDisplayDataResponse

The **GetParameterDisplayDataResponse** element specifies the result data for the **GetParameterDisplayData** WSDL operation.

```
<xs:element name="GetParameterDisplayDataResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetParameterDisplayDataResult">
        <xs:complexType>
          <xs:sequence>
            <xs:any minOccurs="0" maxOccurs="unbounded"
              namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
            <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
              processContents="lax"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetParameterDisplayDataResult:** This defines the template data table that contains only the columns produced by a specific parameter type.

### 3.1.4.46.3 Complex Types

None.

### 3.1.4.46.4 Simple Types

None.

### 3.1.4.46.5 Attributes

None.

### 3.1.4.46.6 Groups

None.

### 3.1.4.46.7 Attribute Groups

None.

### 3.1.4.47 GetPreviewDataSet

The **GetPreviewDataSet** method retrieves a data set from a data source, which is suitable for previewing results.

The following is the WSDL port type specification of the **GetPreviewDataSet** WSDL operation.

```
<wsdl:operation name="GetPreviewDataSet" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetPreviewDataSetSoapIn"/>
  <wsdl:output message="tns:GetPreviewDataSetSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetPreviewDataSetSoapIn** request message (section [3.1.4.47.1.1](#)), and the server (2) responds with a **GetPreviewDataSetSoapOut** response message (section [3.1.4.47.1.2](#)) as follows:

- The protocol client sends a **DataSource** complex type (section [2.2.4.85](#)) that defines the data to be retrieved.
- The server (2) responds with a data set suitable for previewing the data.
- In the event a data set cannot be retrieved, the server (2) MUST return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.47.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetPreviewDataSetSoapIn</b>	The request WSDL message for the <b>GetPreviewDataSet</b> WSDL operation.
<b>GetPreviewDataSetSoapOut</b>	The response WSDL message for the <b>GetPreviewDataSet</b> WSDL operation.

#### 3.1.4.47.1.1 GetPreviewDataSetSoapIn

The request WSDL message for the **GetPreviewDataSet** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetPreviewDataSet
```

The SOAP body contains the **GetPreviewDataSet** element.

#### 3.1.4.47.1.2 GetPreviewDataSetSoapOut

The response WSDL message for the **GetPreviewDataSet** WSDL operation.

The SOAP body contains the **GetPreviewDataSetResponse** element.

### 3.1.4.47.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetPreviewDataSet</b>	The input data for the <b>GetPreviewDataSet</b> WSDL operation.
<b>GetPreviewDataSetResponse</b>	The result data for the <b>GetPreviewDataSet</b> WSDL operation.

#### 3.1.4.47.2.1 GetPreviewDataSet

The **GetPreviewDataSet** element specifies the input data for the **GetPreviewDataSet** WSDL operation.

```
<xs:element name="GetPreviewDataSet" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="maxRecords" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

**maxRecords:** The maximum number of records to retrieve.

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST allow the query of preview data sets. [<37>](#)

### 3.1.4.47.2.2 GetPreviewDataSetResponse

The **GetPreviewDataSetResponse** element specifies the result data for the **GetPreviewDataSet** WSDL operation.

```
<xs:element name="GetPreviewDataSetResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPreviewDataSetResult">
        <xs:complexType mixed="true">
          <xs:sequence>
            <xs:any/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetPreviewDataSetResult:** The data set matching the specifications in the **DataSource** complex type (section [2.2.4.85](#)). The data set MUST include two elements: a schema element and a data element. The content of the data element MUST conform to the schema in the schema element. The data set SHOULD include one table, but SHOULD be empty if the **dataSource** is invalid. The data table MUST include the columns specified in **DataSource**.

### 3.1.4.47.3 Complex Types

None.

### 3.1.4.47.4 Simple Types

None.

### 3.1.4.47.5 Attributes

None.

### 3.1.4.47.6 Groups

None.

### 3.1.4.47.7 Attribute Groups

None.

### 3.1.4.48 GetQueryResultMembers

The **GetQueryResultMembers** operation retrieves an array of members (3) associated with the specified report.

The following is the WSDL port type specification of the **GetQueryResultMembers** WSDL operation.

```
<wsdl:operation name="GetQueryResultMembers" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetQueryResultMembersSoapIn"/>
  <wsdl:output message="tns:GetQueryResultMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetQueryResultMembersSoapIn** request message (section [3.1.4.48.1.1](#)), and the server (2) responds with a **GetQueryResultMembersSoapOut** response message (section [3.1.4.48.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the report view. It also sends a unique dimension (1) name.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

#### Exceptions:

Error code	Description
<b>InvalidDataSource</b>	Current operation on the data source (1) cannot be finished because the data source (1) has failed basic validation.
<b>InvalidReportView</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.48.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetQueryResultMembersSoapIn</b>	The request WSDL message for the <b>GetQueryResultMembers</b> WSDL operation.
<b>GetQueryResultMembersSoapOut</b>	The response WSDL message for the <b>GetQueryResultMembers</b> WSDL operation.

##### 3.1.4.48.1.1 GetQueryResultMembersSoapIn

The request WSDL message for the **GetQueryResultMembers** WSDL operation.

The SOAP action value is:

<http://www.microsoft.com/performancepoint/scorecards/GetQueryResultMembers>

The SOAP body contains the **GetQueryResultMembers** element.

### 3.1.4.48.1.2 GetQueryResultMembersSoapOut

The response WSDL message for the **GetQueryResultMembers** WSDL operation.

The SOAP body contains the **GetQueryResultMembersResponse** element.

### 3.1.4.48.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetQueryResultMembers</b>	The input data for the <b>GetQueryResultMembers</b> WSDL operation.
<b>GetQueryResultMembersResponse</b>	The result data for the <b>GetQueryResultMembers</b> WSDL operation.

#### 3.1.4.48.2.1 GetQueryResultMembers

The **GetQueryResultMembers** element specifies the input data for the **GetQueryResultMembers** WSDL operation.

```
<xs:element name="GetQueryResultMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formattingDimensionName"
type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewLocation:** A **RepositoryLocation** complex type (section [2.2.4.161](#)). This element **MUST** be present.

**formattingDimensionName:** The unique name of the formatting dimension (1). The element **MUST** be present.

#### 3.1.4.48.2.2 GetQueryResultMembersResponse

The **GetQueryResultMembersResponse** element specifies the result data for the **GetQueryResultMembers** WSDL operation.

```
<xs:element name="GetQueryResultMembersResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```



```

        <xs:element minOccurs="0" maxOccurs="1" name="GetQueryResultMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

**GetQueryResultMembersResult:** This element MUST contain an **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.48.3 Complex Types

None.

### 3.1.4.48.4 Simple Types

None.

### 3.1.4.48.5 Attributes

None.

### 3.1.4.48.6 Groups

None.

### 3.1.4.48.7 Attribute Groups

None.

## 3.1.4.49 GetRegisteredCustomFCOs

The **GetRegisteredCustomFCOs** operation retrieves custom object definitions registered on the server (2).

The following is the WSDL port type specification of the **GetRegisteredCustomFCOs** WSDL operation.

```

<wsdl:operation name="GetRegisteredCustomFCOs" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
    <wsdl:input message="tns:GetRegisteredCustomFCOsSoapIn"/>
    <wsdl:output message="tns:GetRegisteredCustomFCOsSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetRegisteredCustomFCOsSoapIn** request message (section [3.1.4.49.1.1](#)), and the server (2) responds with a **GetRegisteredCustomFCOsSoapOut** response message (section [3.1.4.49.1.2](#)) as follows:

- The protocol client sends the type of custom objects to be returned by the server (2). The informed type MUST be one of the following: All, **DataSource**, **Filter**, and **ReportView**, as defined in the **CustomFCOType** simple type (section [3.1.4.49.4.1](#)).
- The server (2) reads all the custom object entries registered on the server (2) and returns only those matching the type provided by the client protocol.

- The result is a collection of **CustomFCODefinition** complex type objects (section [3.1.4.49.3.2](#)), as defined in the **ArrayOfCustomFCODefinition** complex type (section [3.1.4.49.3.1](#)).

### 3.1.4.49.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetRegisteredCustomFCOsSoapIn</b>	The request WSDL message for the <b>GetRegisteredCustomFCOs</b> WSDL operation.
<b>GetRegisteredCustomFCOsSoapOut</b>	The response WSDL message for the <b>GetRegisteredCustomFCOs</b> WSDL operation.

#### 3.1.4.49.1.1 GetRegisteredCustomFCOsSoapIn

The request WSDL message for the **GetRegisteredCustomFCOs** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs
```

The SOAP body contains the **GetRegisteredCustomFCOs** element.

#### 3.1.4.49.1.2 GetRegisteredCustomFCOsSoapOut

The response WSDL message for the **GetRegisteredCustomFCOs** WSDL operation.

The SOAP body contains the **GetRegisteredCustomFCOsResponse** element.

### 3.1.4.49.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetRegisteredCustomFCOs</b>	The input data for the <b>GetRegisteredCustomFCOs</b> WSDL operation.
<b>GetRegisteredCustomFCOsResponse</b>	The result data for the <b>GetRegisteredCustomFCOs</b> WSDL operation.

#### 3.1.4.49.2.1 GetRegisteredCustomFCOs

The **GetRegisteredCustomFCOs** element specifies the input data for the **GetRegisteredCustomFCOs** WSDL operation.

```
<xs:element name="GetRegisteredCustomFCOs" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="tns:CustomFCOType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**type:** Specifies the type of custom objects to be returned by the server (2). The informed type MUST be one of the following: All, **DataSource**, **Filter**, and **ReportView**, as defined in **CustomFCOType** simple type (section [3.1.4.49.4.1](#)).

### 3.1.4.49.2.2 GetRegisteredCustomFCOsResponse

The **GetRegisteredCustomFCOsResponse** element specifies the result data for the **GetRegisteredCustomFCOs** WSDL operation.

```

<xs:element name="GetRegisteredCustomFCOsResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRegisteredCustomFCOsResult"
        type="tns:ArrayOfCustomFCODefinition"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetRegisteredCustomFCOsResult:** Specifies a collection of **CustomFCODefinition** complex type objects (section [3.1.4.49.3.2](#)), as defined in the **ArrayOfCustomFCODefinition** complex type (section [3.1.4.49.3.1](#)). This collection MUST contain all the valid custom objects registered on the server (2) that equal the type sent from the protocol client.

### 3.1.4.49.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
<b>ArrayOfCustomFCODefinition</b>	Specifies an array of definitions for a custom object.
<b>CustomFCODefinition</b>	Specifies how instances of a custom object class are created, modified, and rendered in dashboards.

#### 3.1.4.49.3.1 ArrayOfCustomFCODefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **ArrayOfCustomFCODefinition** complex type specifies an array of definitions for a custom object.

```

<xs:complexType name="ArrayOfCustomFCODefinition"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="CustomFCODefinition"
      nillable="true" type="tns:CustomFCODefinition"/>
  </xs:sequence>

```

```
</xs:complexType>
```

**CustomFCODefinition:** This element MUST NOT be null and MUST conform to the schema of the **CustomFCODefinition** complex type (section [3.1.4.49.3.2](#)).

### 3.1.4.49.3.2 CustomFCODefinition

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

The **CustomFCODefinition** complex type specifies how instances of a custom object class are created, modified, and rendered in dashboards.

```
<xs:complexType name="CustomFCODefinition" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="TemplateIconSerialized" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Type" type="tns:CustomFCOType" use="required"/>
  <xs:attribute name="SubType" type="xs:string"/>
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
  <xs:attribute name="RendererClass" type="xs:string"/>
  <xs:attribute name="EditorUri" type="xs:string"/>
</xs:complexType>
```

**TemplateIconSerialized:** Specifies an image that represents the custom object. The value MUST be either empty or a base64 encoding of a bitmap.

**Type:** The type of custom object class instance, as specified in the **CustomFCOType** simple type (section [3.1.4.49.4.1](#)). The value MUST be **DataSource**, **Filter**, or **ReportView**.

**SubType:** The sub-type instances of the custom object class.

- The value MUST NOT be empty.
- The value MUST NOT be longer than 60 characters.
- The value MUST NOT contain the following characters: apostrophe ('), quotation mark ("), or backslash (\).

**Name:** The name of the custom object class.

**Description:** The description of the custom object class.

**RendererClass:** The assembly-qualified name of a type that renders the custom object. When the **Type** attribute equals "DataSource", the value MUST be empty.

**EditorUri:** The URL of the associated application used to create and modify the custom object. The value MUST NOT be empty.

### 3.1.4.49.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
<b>CustomFCOType</b>	Specifies the type of a custom object.

### 3.1.4.49.4.1 CustomFCOType

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **CustomFCOType** enumeration specifies the type of a custom object.

```
<xs:simpleType name="CustomFCOType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="DataSource"/>
        <xs:enumeration value="Filter"/>
        <xs:enumeration value="ReportView"/>
        <xs:enumeration value="All"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for the **CustomFCOType** simple type.

Value	Meaning
None	The object type is not specified.
DataSource	The object is a <b>DataSource</b> complex type (section <a href="#">2.2.4.85</a> ).
Filter	The object is a <b>Filter</b> complex type (section <a href="#">2.2.4.98</a> ).
ReportView	The object is a <b>ReportView</b> complex type (section <a href="#">2.2.4.160</a> ).
All	This object is a <b>DataSource</b> , <b>Filter</b> or <b>ReportView</b> . This value MUST only be used when <b>GetRegisteredCustomFCOs</b> operation (section <a href="#">3.1.4.49</a> ) is invoked.

### 3.1.4.49.5 Attributes

None.

### 3.1.4.49.6 Groups

None.

### 3.1.4.49.7 Attribute Groups

None.

### 3.1.4.50 GetReportView

The **GetReportView** operation retrieves a **ReportView** complex type (section [2.2.4.160](#)) from the server (2).

The following is the WSDL port type specification of the **GetReportView** WSDL operation.

```
<wsdl:operation name="GetReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetReportViewSoapIn"/>
  <wsdl:output message="tns:GetReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetReportViewSoapIn** request message (section [3.1.4.50.1.1](#)), and the server (2) responds with a **GetReportViewSoapOut** response message (section [3.1.4.50.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **ReportView** to be retrieved.
- The server (2) sends the corresponding **ReportView**.
- In the event that a **ReportView** cannot be retrieved, the server (2) SHOULD [<38>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.50.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetReportViewSoapIn</b>	The request WSDL message for the <b>GetReportView</b> WSDL operation.
<b>GetReportViewSoapOut</b>	The response WSDL message for the <b>GetReportView</b> WSDL operation.

##### 3.1.4.50.1.1 GetReportViewSoapIn

The request WSDL message for the **GetReportView** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetReportView
```

The SOAP body contains the **GetReportView** element.

### 3.1.4.50.1.2 GetReportViewSoapOut

The response WSDL message for the **GetReportView** WSDL operation.

The SOAP body contains the **GetReportViewResponse** element.

### 3.1.4.50.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetReportView</b>	The input data for the <b>GetReportView</b> WSDL operation.
<b>GetReportViewResponse</b>	The result data for the <b>GetReportView</b> WSDL operation.

#### 3.1.4.50.2.1 GetReportView

The **GetReportView** element specifies the input data for the **GetReportView** WSDL operation.

```
<xs:element name="GetReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** The **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the **ReportView** complex type (section [2.2.4.160](#)) on the server (2).

- This element **MUST** be present.
- The **ItemUrl** property **MUST** be set to the location of the **ReportView**.

#### 3.1.4.50.2.2 GetReportViewResponse

The **GetReportViewResponse** element specifies the result data for the **GetReportView** WSDL operation.

```
<xs:element name="GetReportViewResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetReportViewResult:** The **ReportView** complex type object (section [2.2.4.160](#)) that was requested from the server (2).

### 3.1.4.50.3 Complex Types

None.

### 3.1.4.50.4 Simple Types

None.

### 3.1.4.50.5 Attributes

None.

### 3.1.4.50.6 Groups

None.

### 3.1.4.50.7 Attribute Groups

None.

### 3.1.4.51 GetScorecard

The **GetScorecard** operation retrieves a **Scorecard** complex type (section [2.2.4.162](#)).

The following is the WSDL port type specification of the **GetScorecard** WSDL operation.

```
<wsdl:operation name="GetScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:GetScorecardSoapIn"/>
  <wsdl:output message="tns:GetScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetScorecardSoapIn** request message (section [3.1.4.51.1.1](#)), and the server (2) responds with a **GetScorecardSoapOut** response message (section [3.1.4.51.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the **Scorecard** to be retrieved.
- The server (2) responds with the corresponding **Scorecard**.
- In the event that the **Scorecard** cannot be retrieved, the server (2) SHOULD [<39>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).



### 3.1.4.51.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>GetScorecardSoapIn</b>	The request WSDL message for the <b>GetScorecard</b> WSDL operation.
<b>GetScorecardSoapOut</b>	The response WSDL message for the <b>GetScorecard</b> WSDL operation.

#### 3.1.4.51.1.1 GetScorecardSoapIn

The request WSDL message for the **GetScorecard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetScorecard
```

The SOAP body contains the **GetScorecard** element.

#### 3.1.4.51.1.2 GetScorecardSoapOut

The response WSDL message for the **GetScorecard** WSDL operation.

The SOAP body contains the **GetScorecardResponse** element.

### 3.1.4.51.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>GetScorecard</b>	The input data for the <b>GetScorecard</b> WSDL operation.
<b>GetScorecardResponse</b>	The result data for the <b>GetScorecard</b> WSDL operation.

#### 3.1.4.51.2.1 GetScorecard

The **GetScorecard** element specifies the input data for the **GetScorecard** WSDL operation.

```
<xs:element name="GetScorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**location:** A **RepositoryLocation** complex type, as specified in section [2.2.4.161](#). This element MUST be present. The **ItemUrl** property MUST contain a valid URL.

### 3.1.4.51.2.2 GetScorecardResponse

The **GetScorecardResponse** element specifies the result data for the **GetScorecard** WSDL operation.

```
<xs:element name="GetScorecardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetScorecardResult"
        type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetScorecardResult:** A **Scorecard** complex type, as specified in section [2.2.4.162](#). This element SHOULD be present.

### 3.1.4.51.3 Complex Types

None.

### 3.1.4.51.4 Simple Types

None.

### 3.1.4.51.5 Attributes

None.

### 3.1.4.51.6 Groups

None.

### 3.1.4.51.7 Attribute Groups

None.

### 3.1.4.52 ImportDashboard

The **ImportDashboard** operation [<40>](#) is used to import content from a specified Deployment Package ([\[MS-PRIMEPF\]](#)) to the server (2).

The following is the WSDL port type specification of the **ImportDashboard** WSDL operation.

```
<wsdl:operation name="ImportDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ImportDashboardSoapIn"/>
  <wsdl:output message="tns:ImportDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **ImportDashboardSoapIn** request message (section [3.1.4.52.1.1](#)), and the server (2) responds with an **ImportDashboardSoapOut** response message (section [3.1.4.52.1.2](#)) as follows:

- The server (2) imports the items from the Deployment Package ([MS-PRIMEPF]) specified in the filename.
- If there was an application error on the server (2) during the operation, the server (2) MUST return a SOAP fault response, which SHOULD include one of exceptions specified below, but MAY contain any other exceptions.

**Exceptions:**

Error code	Description
<b>InvalidUrl</b>	An invalid URL was specified
<b>FCOUnauthorizedAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

**3.1.4.52.1 Messages**

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>ImportDashboardSoapIn</b>	The request WSDL message for the <b>ImportDashboard</b> WSDL operation.
<b>ImportDashboardSoapOut</b>	The response WSDL message for the <b>ImportDashboard</b> WSDL operation.

**3.1.4.52.1.1 ImportDashboardSoapIn**

The request WSDL message for the **ImportDashboard** WSDL operation.

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/ImportDashboard`

The SOAP body contains the **ImportDashboard** element.

**3.1.4.52.1.2 ImportDashboardSoapOut**

The response WSDL message for the **ImportDashboard** WSDL operation.

The SOAP body contains the **ImportDashboardResponse** element.

**3.1.4.52.2 Elements**

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>ImportDashboard</b>	The input data for the <b>ImportDashboard</b> WSDL operation.
<b>ImportDashboardResponse</b>	The result data for the <b>ImportDashboard</b> WSDL operation.

### 3.1.4.52.2.1 ImportDashboard

The **ImportDashboard** element specifies the input data for the **ImportDashboard** WSDL operation.

```
<xs:element name="ImportDashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="siteUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="filename" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="locationMap">
        <xs:complexType mixed="true">
          <xs:sequence>
            <xs:any/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element minOccurs="0" maxOccurs="1" name="datasourceMap">
        <xs:complexType mixed="true">
          <xs:sequence>
            <xs:any/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element minOccurs="0" maxOccurs="1" name="masterPageUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**siteUrl:** Contains the site collection URL to use for the import. This element **MUST** be present.

**filename:** Contains the site collection relative path and file name of the Deployment Package ([\[MS-PRIMEPF\]](#)) to import. The path specified **MUST** be the relative path of a document library in the site collection specified in **siteUrl**. This element **MUST** be present.

**locationMap:** Contains a **SerializableDictionary** complex type (section [2.2.4.164](#)) containing keys of type string and values of type string where:

- **Key** contains the server-relative URL of the source list in the Deployment Package ([\[MS-PRIMEPF\]](#))
- **Value** contains the server-relative URL of the destination list

During the import, all **list items** in the Deployment Package in one of the list URLs specified in **Keys** **MUST** be imported to the corresponding new destination list URL specified in the corresponding **Value**. If the parent list URL of a list item in the Deployment Package does not have an entry specified in **Keys**, then the list item **MUST** be imported to the same destination list as specified in the Deployment Package.

This element **MUST** be present.

**datasourceMap:** Contains a **SerializableDictionary** containing keys of type string and values of type string where:

- **Key** contains the server-relative URL of a **DataSource** complex type (section [2.2.4.85](#)) in the Deployment Package ([MS-PRIMEPF]).
- **Value** contains the server-relative URL of an existing **DataSource** in the destination site.

During the import, all **FirstClassElement** complex types (section [2.2.4.99](#)) with references to the **DataSources** specified in **Keys** MUST be updated to use the new **DataSource** specified in the corresponding **Value**.

This element MUST be present.

**masterPageUrl:** Contains the site relative URL of the master page to be used by the dashboard pages in the Deployment Package ([MS-PRIMEPF]). If this element is specified, the server (2) MUST update the dashboard pages to use the given master page; otherwise, the server (2) MUST NOT change the master page during import.

### 3.1.4.52.2 ImportDashboardResponse

The **ImportDashboardResponse** element specifies the result data for the **ImportDashboard** WSDL operation.

```
<xs:element name="ImportDashboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType/>  
</xs:element>
```

### 3.1.4.52.3 Complex Types

None.

### 3.1.4.52.4 Simple Types

None.

### 3.1.4.52.5 Attributes

None.

### 3.1.4.52.6 Groups

None.

### 3.1.4.52.7 Attribute Groups

None.

### 3.1.4.53 QueryChildMembers

The **QueryChildMembers** operation uses a data source for the specified member, and returns a collection of members.

The following is the WSDL port type specification of the **QueryChildMembers** WSDL operation.

```
<wsdl:operation name="QueryChildMembers" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryChildMembersSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersSoapIn** request message (section [3.1.4.53.1.1](#)), and the server (2) responds with a **QueryChildMembersSoapOut** response message (section [3.1.4.53.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.53.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryChildMembersSoapIn</b>	The request WSDL message for the <b>QueryChildMembers</b> WSDL operation.
<b>QueryChildMembersSoapOut</b>	The response WSDL message for the <b>QueryChildMembers</b> WSDL operation.

#### 3.1.4.53.1.1 QueryChildMembersSoapIn

The request WSDL message for the **QueryChildMembers** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers
```

The SOAP body contains the **QueryChildMembers** element.

#### 3.1.4.53.1.2 QueryChildMembersSoapOut

The response WSDL message for the **QueryChildMembers** WSDL operation.

The SOAP body contains the **QueryChildMembersResponse** element.

### 3.1.4.53.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryChildMembers</b>	The input data for the <b>QueryChildMembers</b> WSDL operation.
<b>QueryChildMembersResponse</b>	The result data for the <b>QueryChildMembers</b> WSDL operation.

#### 3.1.4.53.2.1 QueryChildMembers

The **QueryChildMembers** element specifies the input data for the **QueryChildMembers** WSDL operation.

```
<xs:element name="QueryChildMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of the data source for the members (3) on the server (2).

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified URL.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of child members for a specified member name.

**memberUniqueName:** A value that uniquely identifies this element within the hierarchy. The value MUST be less than 255 characters and MUST NOT be null or empty.

#### 3.1.4.53.2.2 QueryChildMembersResponse

The **QueryChildMembersResponse** element specifies the result data for the **QueryChildMembers** WSDL operation.

```
<xs:element name="QueryChildMembersResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryChildMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryChildMembersResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.53.3 Complex Types

None.

### 3.1.4.53.4 Simple Types

None.

### 3.1.4.53.5 Attributes

None.

### 3.1.4.53.6 Groups

None.

### 3.1.4.53.7 Attribute Groups

None.

### 3.1.4.54 QueryChildMembersByRangeFromDataSource

The **QueryChildMembersByRangeFromDataSource** operation queries the **DataSource** complex type (section [2.2.4.85](#)), and returns a collection of child members.

The following is the WSDL port type specification of the **QueryChildMembersByRangeFromDataSource** WSDL operation.

```
<wsdl:operation name="QueryChildMembersByRangeFromDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryChildMembersByRangeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersByRangeFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersByRangeFromDataSourceSoapIn** request message (section [3.1.4.54.1.1](#)), and the server (2) responds with a **QueryChildMembersByRangeFromDataSourceSoapOut** response message (section [3.1.4.54.1.2](#)) as follows:

- The protocol client sends a **DataSource** to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).



### 3.1.4.54.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryChildMembersByRangeFromDataSourceSoapIn</b>	The request WSDL message for the <b>QueryChildMembersByRangeFromDataSource</b> WSDL operation.
<b>QueryChildMembersByRangeFromDataSourceSoapOut</b>	The response WSDL message for the <b>QueryChildMembersByRangeFromDataSource</b> WSDL operation.

#### 3.1.4.54.1.1 QueryChildMembersByRangeFromDataSourceSoapIn

The request WSDL message for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFromDataSource
```

The SOAP body contains the **QueryChildMembersByRangeFromDataSource** element.

#### 3.1.4.54.1.2 QueryChildMembersByRangeFromDataSourceSoapOut

The response WSDL message for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

The SOAP body contains the **QueryChildMembersByRangeFromDataSourceResponse** element.

### 3.1.4.54.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryChildMembersByRangeFromDataSource</b>	The input data for the <b>QueryChildMembersByRangeFromDataSource</b> WSDL operation.
<b>QueryChildMembersByRangeFromDataSourceResponse</b>	The result data for the <b>QueryChildMembersByRangeFromDataSource</b> WSDL operation.

#### 3.1.4.54.2.1 QueryChildMembersByRangeFromDataSource

The **QueryChildMembersByRangeFromDataSource** element specifies the input data for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

```
<xs:element name="QueryChildMembersByRangeFromDataSource"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    <xs:element minOccurs="0" maxOccurs="1" name="self" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="start" type="xs:long"/>
    <xs:element minOccurs="1" maxOccurs="1" name="count" type="xs:long"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST allow the query of child members for a specified member.

**self:** A name identifying a member within a **DataSource**. This element MUST NOT be null or empty, or contain more than 255 characters.

**start:** The starting index of the records in the returned **ArrayOfMember** complex type (section [2.2.4.45](#)). The starting index MUST NOT be greater than the number of members in the requested range.

**count:** The number of records to be returned in the **ArrayOfMember**. The value MUST NOT be less than zero.

### 3.1.4.54.2.2 QueryChildMembersByRangeFromDataSourceResponse

The **QueryChildMembersByRangeFromDataSourceResponse** element specifies the result data for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

```

<xs:element name="QueryChildMembersByRangeFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
        name="QueryChildMembersByRangeFromDataSourceResult" type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**QueryChildMembersByRangeFromDataSourceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.54.3 Complex Types

None.

### 3.1.4.54.4 Simple Types

None.

### 3.1.4.54.5 Attributes

None.

### 3.1.4.54.6 Groups

None.

### 3.1.4.54.7 Attribute Groups

None.

### 3.1.4.55 QueryChildMembersFromDataSource

The **QueryChildMembersFromDataSource** operation uses the data source to retrieve a collection of child members for the specified member name.

The following is the WSDL port type specification of the **QueryChildMembersFromDataSource** WSDL operation.

```
<wsdl:operation name="QueryChildMembersFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryChildMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersFromDataSourceSoapIn** request message (section [3.1.4.55.1.1](#)), and the server (2) responds with a **QueryChildMembersFromDataSourceSoapOut** response message (section [3.1.4.55.1.2](#)) as follows:

- The protocol client sends a **DataSource** complex type ( section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.55.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryChildMembersFromDataSourceSoapIn</b>	The request WSDL message for the <b>QueryChildMembersFromDataSource</b> WSDL operation.
<b>QueryChildMembersFromDataSourceSoapOut</b>	The response WSDL message for the <b>QueryChildMembersFromDataSource</b> WSDL operation.

### 3.1.4.55.1.1 QueryChildMembersFromDataSourceSoapIn

The request WSDL message for the **QueryChildMembersFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource
```

The SOAP body contains the **QueryChildMembersFromDataSource** element.

### 3.1.4.55.1.2 QueryChildMembersFromDataSourceSoapOut

The response WSDL message for the **QueryChildMembersFromDataSource** WSDL operation.

The SOAP body contains the **QueryChildMembersFromDataSourceResponse** element.

### 3.1.4.55.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryChildMembersFromDataSource</b>	The input data for the <b>QueryChildMembersFromDataSource</b> WSDL operation.
<b>QueryChildMembersFromDataSourceResponse</b>	The result data for the <b>QueryChildMembersFromDataSource</b> WSDL operation.

#### 3.1.4.55.2.1 QueryChildMembersFromDataSource

The **QueryChildMembersFromDataSource** element specifies the input data for the **QueryChildMembersFromDataSource** WSDL operation.

```
<xs:element name="QueryChildMembersFromDataSource"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST support the query of child members for a specified member.

**memberUniqueName:** A value that uniquely identifies this element within the hierarchy. This value MUST NOT be null or empty, and MUST be less than 255 characters.

### 3.1.4.55.2.2 QueryChildMembersFromDataSourceResponse

The **QueryChildMembersFromDataSourceResponse** element specifies the result data for the **QueryChildMembersFromDataSource** WSDL operation.

```
<xs:element name="QueryChildMembersFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryChildMembersFromDataSourceResult"
        type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryChildMembersFromDataSourceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.55.3 Complex Types

None.

### 3.1.4.55.4 Simple Types

None.

### 3.1.4.55.5 Attributes

None.

### 3.1.4.55.6 Groups

None.

### 3.1.4.55.7 Attribute Groups

None.

### 3.1.4.56 QueryDimensionRootMembers

The **QueryDimensionRootMembers** operation uses a data source (1) from the repository location for the specified member, and returns a collection of root members.

The following is the WSDL port type specification of the **QueryDimensionRootMembers** WSDL operation.

```
<wsdl:operation name="QueryDimensionRootMembers"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryDimensionRootMembersSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryDimensionRootMembersSoapIn** request message (section [3.1.4.56.1.1](#)), and the server (2) responds with a **QueryDimensionRootMembersSoapOut** response message (section [3.1.4.56.1.2](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.56.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryDimensionRootMembersSoapIn</b>	The request WSDL message for the <b>QueryDimensionRootMembers</b> WSDL operation.
<b>QueryDimensionRootMembersSoapOut</b>	The response WSDL message for the <b>QueryDimensionRootMembers</b> WSDL operation.

#### 3.1.4.56.1.1 QueryDimensionRootMembersSoapIn

The request WSDL message for the **QueryDimensionRootMembers** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers
```

The SOAP body contains the **QueryDimensionRootMembers** element.

#### 3.1.4.56.1.2 QueryDimensionRootMembersSoapOut

The response WSDL message for the **QueryDimensionRootMembers** WSDL operation.

The SOAP body contains the **QueryDimensionRootMembersResponse** element.

### 3.1.4.56.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryDimensionRootMembers</b>	The input data for the <b>QueryDimensionRootMembers</b> WSDL operation.
<b>QueryDimensionRootMembersResponse</b>	The result data for the <b>QueryDimensionRootMembers</b> WSDL operation.

### 3.1.4.56.2.1 QueryDimensionRootMembers

The **QueryDimensionRootMembers** element specifies the input data for the **QueryDimensionRootMembers** WSDL operation.

```
<xs:element name="QueryDimensionRootMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dimensionName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The **RepositoryLocation** complex type (section [2.2.4.161](#)) that specifies the location of the data source for the members (3) on the server (2).

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified URL.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of root members for a specified member name.

**dimensionName:** A value that uniquely identifies this dimension (1). The value MUST be less than 255 characters and MUST NOT be null or empty.

### 3.1.4.56.2.2 QueryDimensionRootMembersResponse

The **QueryDimensionRootMembersResponse** element specifies the result data for the **QueryDimensionRootMembers** WSDL operation.

```
<xs:element name="QueryDimensionRootMembersResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryDimensionRootMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryDimensionRootMembersResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.56.3 Complex Types

None.

### 3.1.4.56.4 Simple Types

None.

### 3.1.4.56.5 Attributes

None.

### 3.1.4.56.6 Groups

None.

### 3.1.4.56.7 Attribute Groups

None.

### 3.1.4.57 QueryDimensionRootMembersFromDataSource

The **QueryDimensionRootMembersFromDataSource** method uses the data source to retrieve a collection of root members for the specified member name.

The following is the WSDL port type specification of the **QueryDimensionRootMembersFromDataSource** WSDL operation.

```
<wsdl:operation name="QueryDimensionRootMembersFromDataSource"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryDimensionRootMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryDimensionRootMembersFromDataSourceSoapIn** request message (section [3.1.4.57.1.1](#)), and the server (2) responds with a **QueryDimensionRootMembersFromDataSourceSoapOut** response message (section [3.1.4.57.1.2](#)) as follows:

- The protocol client sends a **DataSource** complex type (section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** complex type (section [2.2.4.45](#)).

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).



### 3.1.4.57.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryDimensionRootMembersFromDataSourceSoapIn</b>	The request WSDL message for the <b>QueryDimensionRootMembersFromDataSource</b> WSDL operation.
<b>QueryDimensionRootMembersFromDataSourceSoapOut</b>	The response WSDL message for the <b>QueryDimensionRootMembersFromDataSource</b> WSDL operation.

#### 3.1.4.57.1.1 QueryDimensionRootMembersFromDataSourceSoapIn

The request WSDL message for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

The SOAP action value is:

<http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource>

The SOAP body contains the **QueryDimensionRootMembersFromDataSource** element.

#### 3.1.4.57.1.2 QueryDimensionRootMembersFromDataSourceSoapOut

The response WSDL message for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

The SOAP body contains the **QueryDimensionRootMembersFromDataSourceResponse** element.

### 3.1.4.57.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryDimensionRootMembersFromDataSource</b>	The input data for the <b>QueryDimensionRootMembersFromDataSource</b> WSDL operation.
<b>QueryDimensionRootMembersFromDataSourceResponse</b>	The result data for the <b>QueryDimensionRootMembersFromDataSource</b> WSDL operation.

#### 3.1.4.57.2.1 QueryDimensionRootMembersFromDataSource

The **QueryDimensionRootMembersFromDataSource** element specifies the input data for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

```

<xs:element name="QueryDimensionRootMembersFromDataSource"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dimensionName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**dataSource:** The **DataSource** complex type (section [2.2.4.85](#)) to be used in the query. This element MUST NOT be null or empty. The **DataSource** MUST support the query of root members for a specified dimension (1).

**dimensionName:** A value that uniquely identifies this dimension (1). This value MUST NOT be null or empty and MUST be less than 255 characters.

### 3.1.4.57.2.2 QueryDimensionRootMembersFromDataSourceResponse

The **QueryDimensionRootMembersFromDataSourceResponse** element specifies the result data for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

```

<xs:element name="QueryDimensionRootMembersFromDataSourceResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
name="QueryDimensionRootMembersFromDataSourceResult" type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**QueryDimensionRootMembersFromDataSourceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.57.3 Complex Types

None.

### 3.1.4.57.4 Simple Types

None.

### 3.1.4.57.5 Attributes

None.

### 3.1.4.57.6 Groups

None.

### 3.1.4.57.7 Attribute Groups

None.

### 3.1.4.58 QueryNamedSets

The **QueryNamedSets** operation is used to retrieve the named sets that are defined by a data source (1) when given the **RepositoryLocation** complex type (section [2.2.4.161](#)) of the data source (1).

The following is the WSDL port type specification of the **QueryNamedSets** WSDL operation.

```
<wsdl:operation name="QueryNamedSets" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryNamedSetsSoapIn"/>
  <wsdl:output message="tns:QueryNamedSetsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryNamedSetsSoapIn** request message (section [3.1.4.58.1.1](#)), and the server (2) responds with a **QueryNamedSetsSoapOut** response message (section [3.1.4.58.1.2](#)) as follows:

- Receives a **RepositoryLocation** for the data source (1) to be queried for named sets.
- The server (2) queries the corresponding data source (1).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved for the query, the server (2) SHOULD [<41>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.58.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryNamedSetsSoapIn</b>	The request WSDL message for the <b>QueryNamedSets</b> WSDL operation.
<b>QueryNamedSetsSoapOut</b>	The response WSDL message for the <b>QueryNamedSets</b> WSDL operation.

### 3.1.4.58.1.1 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.

### 3.1.4.58.1.2 QueryNamedSetsSoapOut

The response WSDL message for the **QueryNamedSets** WSDL operation.

The SOAP body contains the **QueryNamedSetsResponse** element.

### 3.1.4.58.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryNamedSets</b>	The input data for the <b>QueryNamedSets</b> WSDL operation.
<b>QueryNamedSetsResponse</b>	The result data for the <b>QueryNamedSets</b> WSDL operation.

#### 3.1.4.58.2.1 QueryNamedSets

The **QueryNamedSets** element specifies the input data for the **QueryNamedSets** WSDL operation.

```
<xs:element name="QueryNamedSets" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The location (as specified in the complex type **RepositoryLocation** section [2.2.4.161](#)) for the data source (1) being queried for named sets. This element **MUST** be present. It **MUST** be a **RepositoryLocation** to a data source (1).

#### 3.1.4.58.2.2 QueryNamedSetsResponse

The **QueryNamedSetsResponse** element specifies the result data for the **QueryNamedSets** WSDL operation.

```
<xs:element name="QueryNamedSetsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="QueryNamedSetsResult"
type="tns:ArrayOfNamedSet"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

**QueryNamedSetsResult:** This element MUST be either a collection of **NamedSet** complex type objects (section [2.2.4.147](#)), specified in the **ArrayOfNamedSet** complex type (section [2.2.4.47](#)), or null, if there are no named sets defined for the data source (1).

### 3.1.4.58.3 Complex Types

None.

### 3.1.4.58.4 Simple Types

None.

### 3.1.4.58.5 Attributes

None.

### 3.1.4.58.6 Groups

None.

### 3.1.4.58.7 Attribute Groups

None.

## 3.1.4.59 QueryNamedSetsFromDataSource

The **QueryNamedSetsFromDataSource** operation is used to retrieve the named sets that are defined by the given data source (1).

The following is the WSDL port type specification of the **QueryNamedSetsFromDataSource** WSDL operation.

```

<wsdl:operation name="QueryNamedSetsFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryNamedSetsFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryNamedSetsFromDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **QueryNamedSetsFromDataSourceSoapIn** request message (section [3.1.4.59.1.1](#)), and the server (2) responds with a **QueryNamedSetsFromDataSourceSoapOut** response message (section [3.1.4.59.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)) to be queried for named sets.
- The server (2) queries the received data source (1).
- The server (2) responds with the result.

- In the event that a data source (1) cannot be retrieved for obtaining the named sets, the server (2) SHOULD [return a SOAP fault response](#), as detailed in section [2.2.2.1](#).

**Exceptions:**

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

**3.1.4.59.1 Messages**

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryNamedSetsFromDataSourceSoapIn</b>	The request WSDL message for the <b>QueryNamedSetsFromDataSource</b> WSDL operation.
<b>QueryNamedSetsFromDataSourceSoapOut</b>	The response WSDL message for the <b>QueryNamedSetsFromDataSource</b> WSDL operation.

**3.1.4.59.1.1 QueryNamedSetsFromDataSourceSoapIn**

The request WSDL message for the **QueryNamedSetsFromDataSource** WSDL operation.

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSource`

The SOAP body contains the **QueryNamedSetsFromDataSource** element.

**3.1.4.59.1.2 QueryNamedSetsFromDataSourceSoapOut**

The response WSDL message for the **QueryNamedSetsFromDataSource** WSDL operation.

The SOAP body contains the **QueryNamedSetsFromDataSourceResponse** element.

**3.1.4.59.2 Elements**

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryNamedSetsFromDataSource</b>	The input data for the <b>QueryNamedSetsFromDataSource</b> WSDL operation.
<b>QueryNamedSetsFromDataSourceResponse</b>	The result data for the <b>QueryNamedSetsFromDataSource</b> WSDL operation.

### 3.1.4.59.2.1 QueryNamedSetsFromDataSource

The **QueryNamedSetsFromDataSource** element specifies the input data for the **QueryNamedSetsFromDataSource** WSDL operation.

```
<xs:element name="QueryNamedSetsFromDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The data source (1) to be queried for named sets, as specified in the **DataSource** complex type (section [2.2.4.85](#)). This element MUST be present.

### 3.1.4.59.2.2 QueryNamedSetsFromDataSourceResponse

The **QueryNamedSetsFromDataSourceResponse** element specifies the result data for the **QueryNamedSetsFromDataSource** WSDL operation.

```
<xs:element name="QueryNamedSetsFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryNamedSetsFromDataSourceResult"
        type="tns:ArrayOfNamedSet"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryNamedSetsFromDataSourceResult:** This element MUST be either a collection of **NamedSet** complex type objects (section [2.2.4.147](#)), specified in the **ArrayOfNamedSet** complex type (section [2.2.4.47](#)), or null, if there are no named sets defined for the data source (1).

### 3.1.4.59.3 Complex Types

None.

### 3.1.4.59.4 Simple Types

None.

### 3.1.4.59.5 Attributes

None.

### 3.1.4.59.6 Groups

None.

### 3.1.4.59.7 Attribute Groups

None.

### 3.1.4.60 QueryRelatedMember

The **QueryRelatedMember** operation is used to retrieve a member (3) having the specified relationship to the specified member from the data source (1) at the given **RepositoryLocation** complex type (section [2.2.4.161](#)).

The following is the WSDL port type specification of the **QueryRelatedMember** WSDL operation.

```
<wsdl:operation name="QueryRelatedMember" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryRelatedMemberSoapIn"/>
  <wsdl:output message="tns:QueryRelatedMemberSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryRelatedMemberSoapIn** request message (section [3.1.4.60.1.1](#)), and the server (2) responds with a **QueryRelatedMemberSoapOut** response message (section [3.1.4.60.1.2](#)) as follows:

- Receives a **RepositoryLocation** for the data source (1) to be queried for a related member (3) along with the unique member (3) name and the **MemberRelationship** simple type (section [2.2.5.36](#)) being queried for.
- The server (2) queries the corresponding data source (1) for the related member (3).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved from the **RepositoryLocation**, the server (2) SHOULD [43](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.60.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.



Message	Description
<b>QueryRelatedMemberSoapIn</b>	The request WSDL message for the <b>QueryRelatedMember</b> WSDL operation.
<b>QueryRelatedMemberSoapOut</b>	The response WSDL message for the <b>QueryRelatedMember</b> WSDL operation.

### 3.1.4.60.1.1 QueryRelatedMemberSoapIn

The request WSDL message for the **QueryRelatedMember** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember
```

The SOAP body contains the **QueryRelatedMember** element.

### 3.1.4.60.1.2 QueryRelatedMemberSoapOut

The response WSDL message for the **QueryRelatedMember** WSDL operation.

The SOAP body contains the **QueryRelatedMemberResponse** element.

### 3.1.4.60.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryRelatedMember</b>	The input data for the <b>QueryRelatedMember</b> WSDL operation.
<b>QueryRelatedMemberResponse</b>	The result data for the <b>QueryRelatedMember</b> WSDL operation.

### 3.1.4.60.2.1 QueryRelatedMember

The **QueryRelatedMember** element specifies the input data for the **QueryRelatedMember** WSDL operation.

```
<xs:element name="QueryRelatedMember" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="relationship"
type="tns:MemberRelationship"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The location (as specified in the complex type **RepositoryLocation** complex type section [2.2.4.161](#)) for the data source (1) being queried for a related member (3). This element **MUST** be present. It **MUST** be a **RepositoryLocation** to a data source (1).

**memberUniqueName:** A value that uniquely identifies this element within the data source (1).

**relationship:** The relationship, as specified in the simple type **MemberRelationship** (section [2.2.5.36](#)), between **memberUniqueName** and the result.

### 3.1.4.60.2.2 QueryRelatedMemberResponse

The **QueryRelatedMemberResponse** element specifies the result data for the **QueryRelatedMember** WSDL operation.

```
<xs:element name="QueryRelatedMemberResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryRelatedMemberResult"
        type="tns:Member"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryRelatedMemberResult:** This element **MUST** be either the related member (3) as specified in the **Member** complex type (section [2.2.4.134](#)), or null, if there are no related members (3), or if the **MemberRelationship** simple type (section [2.2.5.36](#)) is "Children".

### 3.1.4.60.3 Complex Types

None.

### 3.1.4.60.4 Simple Types

None.

### 3.1.4.60.5 Attributes

None.

### 3.1.4.60.6 Groups

None.

### 3.1.4.60.7 Attribute Groups

None.

### 3.1.4.61 QueryRelatedMemberFromDataSource

The **QueryRelatedMemberFromDataSource** operation queries the given data source (1) for the member (3) having the specified relationship to the specified member.

The following is the WSDL port type specification of the **QueryRelatedMemberFromDataSource** WSDL operation.

```

<wsdl:operation name="QueryRelatedMemberFromDataSource"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryRelatedMemberFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryRelatedMemberFromDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **QueryRelatedMemberFromDataSourceSoapIn** request message (section [3.1.4.61.1.1](#)) and the server (2) responds with a **QueryRelatedMemberFromDataSourceSoapOut** response message (section [3.1.4.61.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)) to be queried for the related member (3) along with the unique member (3) name and the **MemberRelationship** simple type (section [2.2.5.36](#)) being queried for.
- The server (2) queries the corresponding data source (1) for the related member (3).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved for the query, the server (2) SHOULD [<44>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

**Exceptions:**

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

**3.1.4.61.1 Messages**

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryRelatedMemberFromDataSourceSoapIn</b>	The request WSDL message for the <b>QueryRelatedMemberFromDataSource</b> WSDL operation.
<b>QueryRelatedMemberFromDataSourceSoapOut</b>	The response WSDL message for the <b>QueryRelatedMemberFromDataSource</b> WSDL operation.

**3.1.4.61.1.1 QueryRelatedMemberFromDataSourceSoapIn**

The request WSDL message for the **QueryRelatedMemberFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSource
```

The SOAP body contains the **QueryRelatedMemberFromDataSource** element.

### 3.1.4.61.1.2 QueryRelatedMemberFromDataSourceSoapOut

The response WSDL message for the **QueryRelatedMemberFromDataSource** WSDL operation.

The SOAP body contains the **QueryRelatedMemberFromDataSourceResponse** element.

### 3.1.4.61.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryRelatedMemberFromDataSource</b>	The input data for the <b>QueryRelatedMemberFromDataSource</b> WSDL operation.
<b>QueryRelatedMemberFromDataSourceResponse</b>	The result data for the <b>QueryRelatedMemberFromDataSource</b> WSDL operation.

#### 3.1.4.61.2.1 QueryRelatedMemberFromDataSource

The **QueryRelatedMemberFromDataSource** element specifies the input data for the **QueryRelatedMemberFromDataSource** WSDL operation.

```
<xs:element name="QueryRelatedMemberFromDataSource"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="relationship"
        type="tns:MemberRelationship"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The data source (1) to be queried for a related member, as specified in the **DataSource** complex type (section [2.2.4.85](#)). This element **MUST** be present.

**memberUniqueName:** A value that uniquely identifies this element within the data source (1).

**relationship:** The relationship, as specified in the **MemberRelationship** simple type (section [2.2.5.36](#)), between **memberUniqueName** and the result.

### 3.1.4.61.2.2 QueryRelatedMemberFromDataSourceResponse

The **QueryRelatedMemberFromDataSourceResponse** element specifies the result data for the **QueryRelatedMemberFromDataSource** WSDL operation.

```
<xs:element name="QueryRelatedMemberFromDataSourceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryRelatedMemberFromDataSourceResult"
        type="tns:Member"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryRelatedMemberFromDataSourceResult:** This element MUST be either the related member (3) as specified in the **Member** complex type (section [2.2.4.134](#)), or null, if there are no related members (3).

### 3.1.4.61.3 Complex Types

None.

### 3.1.4.61.4 Simple Types

None.

### 3.1.4.61.5 Attributes

None.

### 3.1.4.61.6 Groups

None.

### 3.1.4.61.7 Attribute Groups

None.

### 3.1.4.62 QueryTimeIntelligence

The **QueryTimeIntelligence** operation queries a data source (1) location for the members (3) that are specified by a time intelligence formula.

The following is the WSDL port type specification of the **QueryTimeIntelligence** WSDL operation.

```
<wsdl:operation name="QueryTimeIntelligence" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTimeIntelligenceSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryTimeIntelligenceSoapIn** request message (section [3.1.4.62.1.1](#)), and the server (2) responds with a **QueryTimeIntelligenceSoapOut** response message (section [3.1.4.62.1.2](#)) as follows:

- Receives **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source (1) to be queried for time intelligence, along with the current time and date and a formula.
- The server (2) queries the corresponding data source (1) using the current time and date and formula for the related member (3).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved from the **RepositoryLocation**, the server (2) SHOULD [<45>](#) return a SOAP fault response, as detailed in section [2.2.2.1](#).

**Exceptions:**

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>TimeIntelligenceNotConfigured</b>	The data source (1) has an invalid time intelligence configuration or time intelligence is not configured.
<b>InvalidTimeIntelligenceFormula</b>	The time intelligence formula is invalid
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.62.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryTimeIntelligenceSoapIn</b>	The request WSDL message for the <b>QueryTimeIntelligence</b> WSDL operation.
<b>QueryTimeIntelligenceSoapOut</b>	The response WSDL message for the <b>QueryTimeIntelligence</b> WSDL operation.

#### 3.1.4.62.1.1 QueryTimeIntelligenceSoapIn

The request WSDL message for the **QueryTimeIntelligence** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence
```

The SOAP body contains the **QueryTimeIntelligence** element.

#### 3.1.4.62.1.2 QueryTimeIntelligenceSoapOut

The response WSDL message for the **QueryTimeIntelligence** WSDL operation.

The SOAP body contains the **QueryTimeIntelligenceResponse** element.

### 3.1.4.62.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryTimeIntelligence</b>	The input data for the <b>QueryTimeIntelligence</b> WSDL operation.
<b>QueryTimeIntelligenceResponse</b>	The result data for the <b>QueryTimeIntelligence</b> WSDL operation.

#### 3.1.4.62.2.1 QueryTimeIntelligence

The **QueryTimeIntelligence** element specifies the input data for the **QueryTimeIntelligence** WSDL operation.

```
<xs:element name="QueryTimeIntelligence" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="1" maxOccurs="1" name="currentTime" type="xs:dateTime"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The location (for specification see the **RepositoryLocation** complex type section [2.2.4.161](#)) for the data source (1) being queried for time intelligence. This element **MUST** be present. It **MUST** be a **RepositoryLocation** to a data source.

**currentTime:** The current time and date. This element **MUST** be present, and its value **MUST** be a valid **dateTime**.

**formula:** The STPS formula, as described in [\[MSFT-TimeIntelligence\]](#). This element **MUST** be present, and its value **MUST** be a STPS formula for the data source.

#### 3.1.4.62.2.2 QueryTimeIntelligenceResponse

The **QueryTimeIntelligenceResponse** element specifies the result data for the **QueryTimeIntelligence** WSDL operation.

```
<xs:element name="QueryTimeIntelligenceResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryTimeIntelligenceResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryTimeIntelligenceResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)). If there are no **Members** returned from the specified formula, **ArrayOfMember** MUST contain a single **Member** where the **Member's Expression** attribute MUST be set to "NULL".

### 3.1.4.62.3 Complex Types

None.

### 3.1.4.62.4 Simple Types

None.

### 3.1.4.62.5 Attributes

None.

### 3.1.4.62.6 Groups

None.

### 3.1.4.62.7 Attribute Groups

None.

## 3.1.4.63 QueryTimeIntelligenceDirect

The **QueryTimeIntelligenceDirect** operation queries the provided data source (1) for the members (3) that are specified by a time intelligence formula.

The following is the WSDL port type specification of the **QueryTimeIntelligenceDirect** WSDL operation.

```
<wsdl:operation name="QueryTimeIntelligenceDirect"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTimeIntelligenceDirectSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceDirectSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryTimeIntelligenceDirectSoapIn** request message (section [3.1.4.64.1.1](#)), and the server (2) responds with a **QueryTimeIntelligenceDirectSoapOut** response message (section [3.1.4.64.1.2](#)) as follows:

- Receives a **DataSource** complex type (section [2.2.4.85](#)) to be queried for the time intelligence, along with the current time and date and a formula.
- The server (2) queries the corresponding data source (1) using the current time and date and formula for the related member (3).
- The server (2) responds with the result.
- In the event that a data source (1) cannot be retrieved for the query, the server (2) SHOULD return a SOAP fault response, as detailed in section [2.2.2.1](#).

### Exceptions:



Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>TimeIntelligenceNotConfigured</b>	The data source (1) has an invalid time intelligence configuration or time intelligence is not configured.
<b>InvalidTimeIntelligenceFormula</b>	The time intelligence formula is invalid.
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.63.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryTimeIntelligenceDirectSoapIn</b>	The request WSDL message for the <b>QueryTimeIntelligenceDirect</b> WSDL operation.
<b>QueryTimeIntelligenceDirectSoapOut</b>	The response WSDL message for the <b>QueryTimeIntelligenceDirect</b> WSDL operation.

#### 3.1.4.63.1.1 QueryTimeIntelligenceDirectSoapIn

The request WSDL message for the **QueryTimeIntelligenceDirect** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect
```

The SOAP body contains the **QueryTimeIntelligenceDirect** element.

#### 3.1.4.63.1.2 QueryTimeIntelligenceDirectSoapOut

The response WSDL message for the **QueryTimeIntelligenceDirect** WSDL operation.

The SOAP body contains the **QueryTimeIntelligenceDirectResponse** element.

### 3.1.4.63.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryTimeIntelligenceDirect</b>	The input data for the <b>QueryTimeIntelligenceDirect</b> WSDL

Element	Description
	operation.
<b>QueryTimeIntelligenceDirectResponse</b>	The result data for the <b>QueryTimeIntelligenceDirect</b> WSDL operation.

### 3.1.4.63.2.1 QueryTimeIntelligenceDirect

The **QueryTimeIntelligenceDirect** element specifies the input data for the **QueryTimeIntelligenceDirect** WSDL operation.

```
<xs:element name="QueryTimeIntelligenceDirect" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="1" maxOccurs="1" name="currentTime" type="xs:dateTime"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The data source (1) to be queried for time intelligence members. See the **DataSource** complex type (section [2.2.4.85](#)) for specification. This element **MUST** be present.

**currentTime:** The current time and date. This element **MUST** be present, and its value **MUST** be a valid **dateTime**.

**formula:** The STPS formula. This element **MUST** be present, and its value **MUST** be a STPS formula for the data source.

### 3.1.4.63.2.2 QueryTimeIntelligenceDirectResponse

The **QueryTimeIntelligenceDirectResponse** element specifies the result data for the **QueryTimeIntelligenceDirect** WSDL operation.

```
<xs:element name="QueryTimeIntelligenceDirectResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryTimeIntelligenceDirectResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryTimeIntelligenceDirectResult:** This element **MUST** contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)). If there are no **Members** returned from the specified formula, **ArrayOfMember** **MUST** contain a single **Member** where the **Member's Expression** attribute **MUST** be set to "NULL".

### 3.1.4.63.3 Complex Types

None.

### 3.1.4.63.4 Simple Types

None.

### 3.1.4.63.5 Attributes

None.

### 3.1.4.63.6 Groups

None.

### 3.1.4.63.7 Attribute Groups

None.

## 3.1.4.64 QueryTransformMembers

The **QueryTransformMembers** method transforms any collection of **Member** complex types (section [2.2.4.134](#)) into a new member collection based on the operation passed on the **transformType** parameter of the **QueryTransformMembers** element (section [3.1.4.64.2.1](#)) as specified in section [3.1.4.64.4.1](#).

The following is the WSDL port type specification of the **QueryTransformMembers** WSDL operation.

```
<wsdl:operation name="QueryTransformMembers" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:QueryTransformMembersSoapIn"/>
  <wsdl:output message="tns:QueryTransformMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryTransformMembersSoapIn** request message (section [3.1.4.64.1.1](#)), and the server (2) responds with a **QueryTransformMembersSoapOut** response message (section [3.1.4.64.1.1](#)) as follows:

- The protocol client sends a **RepositoryLocation** complex type (section [2.2.4.161](#)) for the data source to use for retrieving members.
- The server (2) sends a corresponding **ArrayOfMember** complex type (see section [2.2.4.45](#)).

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.64.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>QueryTransformMembersSoapIn</b>	The request WSDL message for the <b>QueryTransformMembers</b> WSDL operation.
<b>QueryTransformMembersSoapOut</b>	The response WSDL message for the <b>QueryTransformMembers</b> WSDL operation.

### 3.1.4.64.1.1 QueryTransformMembersSoapIn

The request WSDL message for the **QueryTransformMembers** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers
```

The SOAP body contains the **QueryTransformMembers** element.

### 3.1.4.64.1.2 QueryTransformMembersSoapOut

The response WSDL message for the **QueryTransformMembers** WSDL operation.

The SOAP body contains the **QueryTransformMembersResponse** element.

### 3.1.4.64.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>QueryTransformMembers</b>	The input data for the <b>QueryTransformMembers</b> WSDL operation.
<b>QueryTransformMembersResponse</b>	The result data for the <b>QueryTransformMembers</b> WSDL operation.

#### 3.1.4.64.2.1 QueryTransformMembers

The **QueryTransformMembers** element specifies the input data for the **QueryTransformMembers** WSDL operation.

```
<xs:element name="QueryTransformMembers" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberCollection"
type="tns:ArrayOfMember"/>
      <xs:element minOccurs="1" maxOccurs="1" name="transformType"
type="tns:QueryTransformMembersType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** A **RepositoryLocation** complex type object (section [2.2.4.161](#)) that specifies the location of data source for the members (3) on the server (2).

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified URL.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of child members for a specified member name.

**memberCollection:** A collection of **Member** complex types (section [2.2.4.134](#)) that will be transformed based on the type of transformation specified in the **transformType** parameter.

**transformType:** Type of operation specified in the **QueryTransformMembersType** simple type (section [3.1.4.64.4.1](#)) that will be applied to the member collection.

### 3.1.4.64.2.2 QueryTransformMembersResponse

The **QueryTransformMembersResponse** element specifies the result data for the **QueryTransformMembers** WSDL operation.

```
<xs:element name="QueryTransformMembersResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryTransformMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryTransformMembersResult:** This element MUST contain a collection of **Member** complex type objects (section [2.2.4.134](#)), as specified in the **ArrayOfMember** complex type (section [2.2.4.45](#)).

### 3.1.4.64.3 Complex Types

None.

### 3.1.4.64.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
<b>QueryTransformMembersType</b>	Specifies the transformation type that will be applied to the collection of member.

#### 3.1.4.64.4.1 QueryTransformMembersType

**Namespace:** <http://www.microsoft.com/performancepoint/scorecards>

Specifies the transformation type that will be applied to the collection of **Member** complex types (section [2.2.4.134](#)).

```

<xs:simpleType name="QueryTransformMembersType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hierarchize"/>
    <xs:enumeration value="Parents"/>
    <xs:enumeration value="Ancestors"/>
    <xs:enumeration value="AscendantsIntersect"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for the **QueryTransformMembersType** simple type.

Value	Meaning
Hierarchize	Returns the hierarchized representation of the member set.
Parents	Returns the parent of each member on the set. This operation type is reserved and 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.

### 3.1.4.64.5 Attributes

None.

### 3.1.4.64.6 Groups

None.

### 3.1.4.64.7 Attribute Groups

None.

### 3.1.4.65 SaveTemporaryAnalyticReport

The **SaveTemporaryAnalyticReport** operation stores a temporary copy of a **ReportView** complex type (section [2.2.4.160](#)) to the server (2).

The following is the WSDL port type specification of the **SaveTemporaryAnalyticReport** WSDL operation.

```

<wsdl:operation name="SaveTemporaryAnalyticReport"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:SaveTemporaryAnalyticReportSoapIn"/>
  <wsdl:output message="tns:SaveTemporaryAnalyticReportSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **SaveTemporaryAnalyticReportSoapIn** request message (section [3.1.4.65.1.1](#)), and the server (2) responds with a **SaveTemporaryAnalyticReportSoapOut** response message (section [3.1.4.65.1.2](#)) as follows:

- The protocol client MUST send a **ReportView**.

- If the server (2) contains a **ReportView** where all attributes and elements except **Location** equal those of the passed in **ReportView**, the server (2) MUST return the GUID of the **ReportView** on the server (2). The GUID MUST be equal to the **RepositoryLocation** complex type's (section [2.2.4.161](#)) **ItemGuid** GUID. The stored **ReportView** MUST NOT be altered.
- If the server (2) does not contain a **ReportView** where all attributes and elements except **Location** equal those of the passed in **ReportView**, the server (2) MUST store a copy of the **ReportView** and MUST return a unique GUID for it. The server (2) MUST replace the **Location** element for the stored copy which MUST conform to the schema of the **RepositoryLocation**, such that the **ItemType** attribute equals **TempReportView**, as specified in the **FirstClassObjectType** simple type (section [2.2.5.20](#)), and the **ItemGuid** attribute equals the returned GUID.

**Exceptions:**

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.65.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>SaveTemporaryAnalyticReportSoapIn</b>	The request WSDL message for the <b>SaveTemporaryAnalyticReport</b> WSDL operation.
<b>SaveTemporaryAnalyticReportSoapOut</b>	The response WSDL message for the <b>SaveTemporaryAnalyticReport</b> WSDL operation.

#### 3.1.4.65.1.1 SaveTemporaryAnalyticReportSoapIn

The request WSDL message for the **SaveTemporaryAnalyticReport** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport
```

The SOAP body contains the **SaveTemporaryAnalyticReport** element.

#### 3.1.4.65.1.2 SaveTemporaryAnalyticReportSoapOut

The response WSDL message for the **SaveTemporaryAnalyticReport** WSDL operation.

The SOAP body contains the **SaveTemporaryAnalyticReportResponse** element.

### 3.1.4.65.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>SaveTemporaryAnalyticReport</b>	The input data for the <b>SaveTemporaryAnalyticReport</b> WSDL operation.
<b>SaveTemporaryAnalyticReportResponse</b>	The result data for the <b>SaveTemporaryAnalyticReport</b> WSDL operation.

#### 3.1.4.65.2.1 SaveTemporaryAnalyticReport

The **SaveTemporaryAnalyticReport** element specifies the input data for the **SaveTemporaryAnalyticReport** WSDL operation.

```
<xs:element name="SaveTemporaryAnalyticReport" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**reportView:** The report view to store. This element **MUST** be present and **MUST** conform to the schema of the **ReportView** complex type (section [2.2.4.160](#)).

#### 3.1.4.65.2.2 SaveTemporaryAnalyticReportResponse

The **SaveTemporaryAnalyticReportResponse** element specifies the result data for the **SaveTemporaryAnalyticReport** WSDL operation.

```
<xs:element name="SaveTemporaryAnalyticReportResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="SaveTemporaryAnalyticReportResult"
        xmlns:s1="http://microsoft.com/wsdl/types/" type="s1:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**SaveTemporaryAnalyticReportResult:** A GUID that uniquely identifies a **ReportView** complex type (section [2.2.4.160](#)) and the values of all attributes and elements except **Location**. This element **MUST** be present.

#### 3.1.4.65.3 Complex Types

None.



### 3.1.4.65.4 Simple Types

None.

### 3.1.4.65.5 Attributes

None.

### 3.1.4.65.6 Groups

None.

### 3.1.4.65.7 Attribute Groups

None.

### 3.1.4.66 TestConnection

The **TestConnection** operation is used to determine whether a connection as specified by the **dataSource** element can be established.

The following is the WSDL port type specification of the **TestConnection** WSDL operation.

```
<wsdl:operation name="TestConnection" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TestConnectionSoapIn"/>
  <wsdl:output message="tns:TestConnectionSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TestConnectionSoapIn** request message (section [3.1.4.66.1.1](#)), and the server (2) responds with a **TestConnectionSoapOut** response message (section [3.1.4.66.1.2](#)) as follows:

- The protocol client MUST set the **dataSource** element to a non-empty value. If the **Location** attribute of the **dataSource** element refers to a location for which the user does not have read permissions, the server (2) MUST return a SOAP fault containing the error code **InvalidPermission**.
- The server (2) MUST return **TRUE** if a connection as specified by the data source (1) can be established, and if the **Location** attribute of the **dataSource** element refers to a trusted location (1). Otherwise, the server (2) MUST return **FALSE**.
- Any errors that occur while making a connection as specified by the data source (1) MUST NOT result in a SOAP fault, and MUST result in a return value of **FALSE**.

Error code	Description
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#)

### 3.1.4.66.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>TestConnectionSoapIn</b>	The request WSDL message for the <b>TestConnection</b> WSDL operation.
<b>TestConnectionSoapOut</b>	The response WSDL message for the <b>TestConnection</b> WSDL operation.

#### 3.1.4.66.1.1 TestConnectionSoapIn

The request WSDL message for the **TestConnection** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TestConnection
```

The SOAP body contains the **TestConnection** element.

#### 3.1.4.66.1.2 TestConnectionSoapOut

The response WSDL message for the **TestConnection** WSDL operation.

The SOAP body contains the **TestConnectionResponse** element.

### 3.1.4.66.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>TestConnection</b>	The input data for the <b>TestConnection</b> WSDL operation.
<b>TestConnectionResponse</b>	The result data for the <b>TestConnection</b> WSDL operation.

#### 3.1.4.66.2.1 TestConnection

The **TestConnection** element specifies the input data for the **TestConnection** WSDL operation.

```
<xs:element name="TestConnection" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

**dataSource:** The data source (1) to be tested. See the **DataSource** complex type (section [2.2.4.85](#)) for specification. This element MUST NOT be empty.

### 3.1.4.66.2 TestConnectionResponse

The **TestConnectionResponse** element specifies the result data for the **TestConnection** WSDL operation.

```
<xs:element name="TestConnectionResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="TestConnectionResult" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**TestConnectionResult:** Set to **TRUE** if the connection specified by the data source (1) can be made; otherwise, this element is **FALSE**.

### 3.1.4.66.3 Complex Types

None.

### 3.1.4.66.4 Simple Types

None.

### 3.1.4.66.5 Attributes

None.

### 3.1.4.66.6 Groups

None.

### 3.1.4.66.7 Attribute Groups

None.

### 3.1.4.67 TrimAnnotationByOwner

The **TrimAnnotationByOwner** operation removes all the **Annotation** complex types (section [2.2.4.18](#)) that are owned by a specific user.

The following is the WSDL port type specification of the **TrimAnnotationByOwner** WSDL operation.

```
<wsdl:operation name="TrimAnnotationByOwner" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TrimAnnotationByOwnerSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByOwnerSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationByOwnerSoapIn** request message (section [3.1.4.67.1.1](#)), and the server (2) responds with a **TrimAnnotationByOwnerSoapOut** response message (section [3.1.4.67.1.2](#)) as follows:

- The protocol client MUST send the name of a user as the **Owner** property of the **TrimAnnotationByOwner** element (section [3.1.4.67.2.1](#)).
- The server (2) MUST delete all **Annotations** for which the **Owner** element equals the **Owner** element of the passed in **TrimAnnotationByOwner** element. The server (2) MUST ignore case when comparing the strings.

Error code	Description
<b>InvalidPermissionAdmin</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.67.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>TrimAnnotationByOwnerSoapIn</b>	The request WSDL message for the <b>TrimAnnotationByOwner</b> WSDL operation.
<b>TrimAnnotationByOwnerSoapOut</b>	The response WSDL message for the <b>TrimAnnotationByOwner</b> WSDL operation.

#### 3.1.4.67.1.1 TrimAnnotationByOwnerSoapIn

The request WSDL message for the **TrimAnnotationByOwner** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByOwner
```

The SOAP body contains the **TrimAnnotationByOwner** element.

#### 3.1.4.67.1.2 TrimAnnotationByOwnerSoapOut

The response WSDL message for the **TrimAnnotationByOwner** WSDL operation.

The SOAP body contains the **TrimAnnotationByOwnerResponse** element.

### 3.1.4.67.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>TrimAnnotationByOwner</b>	The input data for the <b>TrimAnnotationByOwner</b> WSDL operation.
<b>TrimAnnotationByOwnerResponse</b>	The result data for the <b>TrimAnnotationByOwner</b> WSDL operation.

Element	Description
	operation.

### 3.1.4.67.2.1 TrimAnnotationByOwner

The **TrimAnnotationByOwner** element specifies the input data for the **TrimAnnotationByOwner** WSDL operation.

```
<xs:element name="TrimAnnotationByOwner" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Owner" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**Owner:** Specifies the name of the user. This element **MUST** be present and **MUST** have a length greater than zero.

### 3.1.4.67.2.2 TrimAnnotationByOwnerResponse

The **TrimAnnotationByOwnerResponse** element specifies the result data for the **TrimAnnotationByOwner** WSDL operation.

```
<xs:element name="TrimAnnotationByOwnerResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.67.3 Complex Types

None.

### 3.1.4.67.4 Simple Types

None.

### 3.1.4.67.5 Attributes

None.

### 3.1.4.67.6 Groups

None.

### 3.1.4.67.7 Attribute Groups

None.

### 3.1.4.68 TrimAnnotationByScorecardLocation

The **TrimAnnotationByScorecardLocation** operation removes all the annotations that belong to a scorecard at a specific location.

The following is the WSDL port type specification of the **TrimAnnotationByScorecardLocation** WSDL operation.

```
<wsdl:operation name="TrimAnnotationByScorecardLocation"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TrimAnnotationByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByScorecardLocationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationByScorecardLocationSoapIn** request message (section [3.1.4.68.1.1](#)), and the server (2) responds with a **TrimAnnotationByScorecardLocationSoapOut** response message (section [3.1.4.68.1.2](#)) as follows:

- The protocol client MUST send the location of a scorecard as the **scorecardLocation** property of the **TrimAnnotationByScorecardLocation** element (section [3.1.4.68.2.1](#)).
- The server (2) MUST delete all **Annotation** complex types (section [2.2.4.18](#)) for which the **ScorecardLocation** element's **ItemUrl** attribute, as specified by **RepositoryLocation** complex type (section [2.2.4.161](#)), equals the **ItemUrl** attribute of the passed in **scorecardLocation** element.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.68.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>TrimAnnotationByScorecardLocationSoapIn</b>	The request WSDL message for the <b>TrimAnnotationByScorecardLocation</b> WSDL operation.
<b>TrimAnnotationByScorecardLocationSoapOut</b>	The response WSDL message for the <b>TrimAnnotationByScorecardLocation</b> WSDL operation.

#### 3.1.4.68.1.1 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.

### 3.1.4.68.1.2 TrimAnnotationByScorecardLocationSoapOut

The response WSDL message for the **TrimAnnotationByScorecardLocation** WSDL operation.

The SOAP body contains the **TrimAnnotationByScorecardLocationResponse** element.

### 3.1.4.68.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>TrimAnnotationByScorecardLocation</b>	The input data for the <b>TrimAnnotationByScorecardLocation</b> WSDL operation.
<b>TrimAnnotationByScorecardLocationResponse</b>	The result data for the <b>TrimAnnotationByScorecardLocation</b> WSDL operation.

#### 3.1.4.68.2.1 TrimAnnotationByScorecardLocation

The **TrimAnnotationByScorecardLocation** element specifies the input data for the **TrimAnnotationByScorecardLocation** WSDL operation.

```
<xs:element name="TrimAnnotationByScorecardLocation"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
        type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** Specifies the location of the scorecard for which all annotations will be deleted. This element **MUST** conform to the schema of the **RepositoryLocation** complex type (section [2.2.4.161](#)), **MUST** be present, and the **ItemType** attribute **MUST NOT** equal **TempReportView**, as specified in the **FirstClassObjectType** complex type (section [2.2.5.20](#)).

#### 3.1.4.68.2.2 TrimAnnotationByScorecardLocationResponse

The **TrimAnnotationByScorecardLocationResponse** element specifies the result data for the **TrimAnnotationByScorecardLocation** WSDL operation.

```
<xs:element name="TrimAnnotationByScorecardLocationResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.68.3 Complex Types

None.

### 3.1.4.68.4 Simple Types

None.

### 3.1.4.68.5 Attributes

None.

### 3.1.4.68.6 Groups

None.

### 3.1.4.68.7 Attribute Groups

None.

### 3.1.4.69 TrimAnnotationUntouchedSince

The **TrimAnnotationUntouchedSince** operation removes all the **Annotation** complex types (section [2.2.4.18](#)) that haven't been updated since the specified date.

The following is the WSDL port type specification of the **TrimAnnotationUntouchedSince** WSDL operation.

```
<wsdl:operation name="TrimAnnotationUntouchedSince"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:TrimAnnotationUntouchedSinceSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationUntouchedSinceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationUntouchedSinceSoapIn** request message (section [3.1.4.69.1.1](#)), and the server (2) responds with a **TrimAnnotationUntouchedSinceSoapOut** response message (section [3.1.4.69.1.2](#)) as follows:

- The protocol client MUST send the last modified date as the **untouchedSince** property of the **TrimAnnotationUntouchedSince** element (section [3.1.4.69.2.1](#)).
- The server (2) MUST delete all the **Annotations** for which the date specified by **LastUpdatedOn** property is before or equal to the date specified by the client.

Error code	Description
<b>InvalidPermissionAdmin</b>	User does not have sufficient administration permissions to complete the request.

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.69.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.



Message	Description
<b>TrimAnnotationUntouchedSinceSoapIn</b>	The request WSDL message for the <b>TrimAnnotationUntouchedSince</b> WSDL operation.
<b>TrimAnnotationUntouchedSinceSoapOut</b>	The response WSDL message for the <b>TrimAnnotationUntouchedSince</b> WSDL operation.

### 3.1.4.69.1.1 TrimAnnotationUntouchedSinceSoapIn

The request WSDL message for the **TrimAnnotationUntouchedSince** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationUntouchedSince
```

The SOAP body contains the **TrimAnnotationUntouchedSince** element.

### 3.1.4.69.1.2 TrimAnnotationUntouchedSinceSoapOut

The response WSDL message for the **TrimAnnotationUntouchedSince** WSDL operation.

The SOAP body contains the **TrimAnnotationUntouchedSinceResponse** element.

### 3.1.4.69.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>TrimAnnotationUntouchedSince</b>	The input data for the <b>TrimAnnotationUntouchedSince</b> WSDL operation.
<b>TrimAnnotationUntouchedSinceResponse</b>	The result data for the <b>TrimAnnotationUntouchedSince</b> WSDL operation.

#### 3.1.4.69.2.1 TrimAnnotationUntouchedSince

The **TrimAnnotationUntouchedSince** element specifies the input data for the **TrimAnnotationUntouchedSince** WSDL operation.

```
<xs:element name="TrimAnnotationUntouchedSince" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="untouchedSince" type="xs:dateTime"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**untouchedSince:** Specifies the last modified date of the **Annotation** complex types (section [2.2.4.18](#)) which MUST be deleted. This element MUST be present and MUST be a valid dateTime.

### 3.1.4.69.2.2 TrimAnnotationUntouchedSinceResponse

The **TrimAnnotationUntouchedSinceResponse** element specifies the result data for the **TrimAnnotationUntouchedSince** WSDL operation.

```
<xs:element name="TrimAnnotationUntouchedSinceResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.69.3 Complex Types

None.

### 3.1.4.69.4 Simple Types

None.

### 3.1.4.69.5 Attributes

None.

### 3.1.4.69.6 Groups

None.

### 3.1.4.69.7 Attribute Groups

None.

### 3.1.4.70 UpdateAnnotation

The **UpdateAnnotation** operation updates an existing **Annotation** complex type (section [2.2.4.18](#)).

The following is the WSDL port type specification of the **UpdateAnnotation** WSDL operation.

```
<wsdl:operation name="UpdateAnnotation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateAnnotationSoapIn"/>
  <wsdl:output message="tns:UpdateAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateAnnotationSoapIn** request message (section [3.1.4.70.1.1](#)), and the server (2) responds with an **UpdateAnnotationSoapOut** response message (section [3.1.4.70.1.2](#)) as follows:

- The protocol client MUST send a valid **Annotation** object that specifies the new state of the annotation that is being updated.
- The server (2) MUST validate the **Annotation** object following the schema of the **Annotation**.
- The server (2) MUST verify that the **Annotation** object exists by using the **AnnotationId** property (see section [3.1.4.23.2.1](#)), and MUST verify that the **Annotation** object is unchanged since received by the client by comparing the **LastModifiedOn** value. If the **LastModifiedOn**

value is not the same, which means the **Annotation** object has been changed since it was received by the client, the update **MUST** be ignored and an application error raised using the **Unknown** error code.

- The server (2) **MUST** update the stored copy of the **Annotation** object and **SHOULD** generate a new **LastModifiedOn** date value with the server (2) current date. **MUST NOT** update the **CreatedOn** value and **MUST** ignore the value if changed by the protocol client.
- The server (2) **MUST** return the updated copy of the **Annotation** object, including the updated **LastModifiedOn** value.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidAnnotation</b>	The updated annotation did not validate to the conforming schema.
<b>InvalidTextLength</b>	A string attribute is null, empty or exceeds its specified maximum length.
<b>InvalidCharacters</b>	The updated <b>annotation</b> properties did not validate to the conforming schema.
<b>InvalidComment</b>	The updated <b>annotation</b> comments did not validate to the conforming schema.
<b>AnnotationNotEnabled</b>	Annotations are not enabled in the server (2).
<b>AnnotationDeleteNotEnabled</b>	If Annotation Delete is not enabled in the server (2), but this request, which would delete comments, is received, the comments will not be changed on the server (2) and the <b>AnnotationDeleteNotEnabled</b> error code will be returned.

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.70.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateAnnotationSoapIn</b>	The request WSDL message for the <b>UpdateAnnotation</b> WSDL operation.
<b>UpdateAnnotationSoapOut</b>	The response WSDL message for the <b>UpdateAnnotation</b> WSDL operation.

#### 3.1.4.70.1.1 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.

### 3.1.4.70.1.2 UpdateAnnotationSoapOut

The response WSDL message for the **UpdateAnnotation** WSDL operation.

The SOAP body contains the **UpdateAnnotationResponse** element.

### 3.1.4.70.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateAnnotation</b>	The input data for the <b>UpdateAnnotation</b> WSDL operation.
<b>UpdateAnnotationResponse</b>	The result data for the <b>UpdateAnnotation</b> WSDL operation.

#### 3.1.4.70.2.1 UpdateAnnotation

The **UpdateAnnotation** element specifies the input data for the **UpdateAnnotation** WSDL operation.

```
<xs:element name="UpdateAnnotation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="annotation" type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**annotation:** The updated **Annotation** complex type (section [2.2.4.18](#)). This element MUST NOT be null and MUST conform to the schema of the **Annotation**. It MUST contain the original **AnnotationId** and **LastModifiedOn** values.

#### 3.1.4.70.2.2 UpdateAnnotationResponse

The **UpdateAnnotationResponse** element specifies the result data for the **UpdateAnnotation** WSDL operation.

```
<xs:element name="UpdateAnnotationResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateAnnotationResult"
        type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateAnnotationResult:** The updated **Annotation** complex type object (section [2.2.4.18](#)). This element MUST be a copy of the updated **Annotation** with the new **LastModifiedOn** value, as stored in the server (2).

### 3.1.4.70.3 Complex Types

None.

### 3.1.4.70.4 Simple Types

None.

### 3.1.4.70.5 Attributes

None.

### 3.1.4.70.6 Groups

None.

### 3.1.4.70.7 Attribute Groups

None.

### 3.1.4.71 UpdateDashboard

The **UpdateDashboard** operation updates an existing **Dashboard** complex type (section [2.2.4.79](#)).

The following is the WSDL port type specification of the **UpdateDashboard** WSDL operation.

```
<wsdl:operation name="UpdateDashboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateDashboardSoapIn"/>
  <wsdl:output message="tns:UpdateDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateDashboardSoapIn** request message (section [3.1.4.71.1.1](#)), and the server (2) responds with an **UpdateDashboardSoapOut** response message (section [3.1.4.71.1.2](#)) as follows:

- The protocol client MUST send a valid **Dashboard** object that specifies the new state of the dashboard that is being updated.
- The server (2) MUST validate the **Dashboard** following the schema of the **Dashboard**.
- The server (2) MUST verify that the **Dashboard** exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)).
- The server (2) MUST update the stored copy of the **Dashboard**.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the dashboard was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the **current version** of the dashboard object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).

- The other properties of the dashboard SHOULD be equal to the **Dashboard** object submitted to the server (2).
- The server (2) MUST return a copy of the updated **Dashboard** object.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedNameCollision</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.71.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateDashboardSoapIn</b>	The request WSDL message for the <b>UpdateDashboard</b> WSDL operation.
<b>UpdateDashboardSoapOut</b>	The response WSDL message for the <b>UpdateDashboard</b> WSDL operation.

#### 3.1.4.71.1.1 UpdateDashboardSoapIn

The request WSDL message for the **UpdateDashboard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard
```

The SOAP body contains the **UpdateDashboard** element.

#### 3.1.4.71.1.2 UpdateDashboardSoapOut

The response WSDL message for the **UpdateDashboard** WSDL operation.

The SOAP body contains the **UpdateDashboardResponse** element.

### 3.1.4.71.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateDashboard</b>	The input data for the <b>UpdateDashboard</b> WSDL operation.
<b>UpdateDashboardResponse</b>	The result data for the <b>UpdateDashboard</b> WSDL operation.

#### 3.1.4.71.2.1 UpdateDashboard

The **UpdateDashboard** element specifies the input data for the **UpdateDashboard** WSDL operation.

```
<xs:element name="UpdateDashboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dashboard" type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dashboard:** The updated dashboard. This element **MUST NOT** be null and **MUST** conform to the schema of the **Dashboard** complex type (section [2.2.4.79](#)).

#### 3.1.4.71.2.2 UpdateDashboardResponse

The **UpdateDashboardResponse** element specifies the result data for the **UpdateDashboard** WSDL operation.

```
<xs:element name="UpdateDashboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateDashboardResult"
type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateDashboardResult:** The updated **Dashboard** complex type object (section [2.2.4.79](#)). This element **MUST** be a copy of the updated dashboard, as stored in the server (2).

### 3.1.4.71.3 Complex Types

None.

### 3.1.4.71.4 Simple Types

None.

### 3.1.4.71.5 Attributes

None.

### 3.1.4.71.6 Groups

None.

### 3.1.4.71.7 Attribute Groups

None.

### 3.1.4.72 UpdateDataSource

The **UpdateDataSource** operation updates an existing **DataSource** complex type (section [2.2.4.85](#)).

The following is the WSDL port type specification of the **UpdateDataSource** WSDL operation.

```
<wsdl:operation name="UpdateDataSource" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateDataSourceSoapIn"/>
  <wsdl:output message="tns:UpdateDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateDataSourceSoapIn** request message (section [3.1.4.72.1.1](#)), and the server (2) responds with an **UpdateDataSourceSoapOut** response message (section [3.1.4.72.1.2](#)) as follows:

- The protocol client MUST send a valid **DataSource** object that specifies the new state of the data source (1) that is being updated.
- The server (2) MUST validate the **DataSource** following the schema of the **DataSource**.
- The server (2) MUST verify that the **DataSource** exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)).
- The server (2) MUST update the stored copy of the **DataSource**. MUST NOT update the **SourceName** value and MUST ignore the value if changed by the protocol client.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the data source (1) was updated on the server (2) storage.
  - **Version** SHOULD be updated by the server (2) with the current version of the **DataSource** object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
- The other properties of the data source (1) SHOULD be equal to the data source (1) submitted to the server (2).
- The server (2) MUST return a copy of the updated **DataSource** object.



Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidDataSource</b>	The updated data source (1) did not validate to the conforming schema.
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedNameCollision</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.72.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateDataSourceSoapIn</b>	The request WSDL message for the <b>UpdateDataSource</b> WSDL operation.
<b>UpdateDataSourceSoapOut</b>	The response WSDL message for the <b>UpdateDataSource</b> WSDL operation.

#### 3.1.4.72.1.1 UpdateDataSourceSoapIn

The request WSDL message for the **UpdateDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource
```

The SOAP body contains the **UpdateDataSource** element.

#### 3.1.4.72.1.2 UpdateDataSourceSoapOut

The response WSDL message for the **UpdateDataSource** WSDL operation.

The SOAP body contains the **UpdateDataSourceResponse** element.

### 3.1.4.72.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateDataSource</b>	The input data for the <b>UpdateDataSource</b> WSDL operation.
<b>UpdateDataSourceResponse</b>	The result data for the <b>UpdateDataSource</b> WSDL operation.

#### 3.1.4.72.2.1 UpdateDataSource

The **UpdateDataSource** element specifies the input data for the **UpdateDataSource** WSDL operation.

```
<xs:element name="UpdateDataSource" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The updated **datasource**. This element **MUST NOT** be null and **MUST** conform to the schema of the **DataSource** complex type (section [2.2.4.85](#)).

#### 3.1.4.72.2.2 UpdateDataSourceResponse

The **UpdateDataSourceResponse** element specifies the result data for the **UpdateDataSource** WSDL operation.

```
<xs:element name="UpdateDataSourceResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateDataSourceResult"
type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateDataSourceResult:** The updated **DataSource** complex type (section [2.2.4.85](#)). This element **MUST** be a copy of the updated **datasource** as stored in the server (2).

### 3.1.4.72.3 Complex Types

None.

### 3.1.4.72.4 Simple Types

None.

### 3.1.4.72.5 Attributes

None.

### 3.1.4.72.6 Groups

None.

### 3.1.4.72.7 Attribute Groups

None.

### 3.1.4.73 UpdateFilter

The **UpdateFilter** operation is used to update the existing filter as specified by the **Filter** complex type object (section [2.2.4.98](#)) in the **UpdateFilter** input element (section [3.1.4.73.2.1](#)).

The following is the WSDL port type specification of the **UpdateFilter** WSDL operation.

```
<wsdl:operation name="UpdateFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateFilterSoapIn"/>
  <wsdl:output message="tns:UpdateFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateFilterSoapIn** request message (section [3.1.4.73.1.1](#)), and the server (2) responds with an **UpdateFilterSoapOut** response message (section [3.1.4.73.1.2](#)) as follows:

- The protocol client MUST send a valid **Filter** object instance that specifies the new state of the filter.
- The server (2) MUST validate the filter following the schema of the **Filter**.
- The server (2) MUST verify that the filter exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the filter.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the filter was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the current version of the filter object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - The other properties of the filter SHOULD be equal to the **Filter** object submitted to the server (2).
- The server (2) MUST return a new **Filter** object instance that represents the updated filter.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.73.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateFilterSoapIn</b>	The request WSDL message for the <b>UpdateFilter</b> WSDL operation.
<b>UpdateFilterSoapOut</b>	The response WSDL message for the <b>UpdateFilter</b> WSDL operation.

#### 3.1.4.73.1.1 UpdateFilterSoapIn

The request WSDL message for the **UpdateFilter** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateFilter
```

The SOAP body contains the **UpdateFilter** element.

#### 3.1.4.73.1.2 UpdateFilterSoapOut

The response WSDL message for the **UpdateFilter** WSDL operation.

The SOAP body contains the **UpdateFilterResponse** element.

### 3.1.4.73.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateFilter</b>	The input data for the <b>UpdateFilter</b> WSDL operation.
<b>UpdateFilterResponse</b>	The result data for the <b>UpdateFilter</b> WSDL operation.

### 3.1.4.73.2.1 UpdateFilter

The **UpdateFilter** element specifies the input data for the **UpdateFilter** WSDL operation.

```
<xs:element name="UpdateFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**filter:** A **Filter** complex type object (section [2.2.4.98](#)) instance that specifies the new state of the filter that is being updated.

### 3.1.4.73.2.2 UpdateFilterResponse

The **UpdateFilterResponse** element specifies the result data for the **UpdateFilter** WSDL operation.

```
<xs:element name="UpdateFilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateFilterResult" type="tns:Filter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateFilterResult:** A **Filter** complex type object (section [2.2.4.98](#)) instance that specifies the updated filter.

### 3.1.4.73.3 Complex Types

None.

### 3.1.4.73.4 Simple Types

None.

### 3.1.4.73.5 Attributes

None.

### 3.1.4.73.6 Groups

None.

### 3.1.4.73.7 Attribute Groups

None.

### 3.1.4.74 UpdateIndicator

The **UpdateIndicator** operation is used to update the existing **Indicator** as specified by the **Indicator** complex type object (section [2.2.4.125](#)) in the **UpdateIndicator** input element (section [3.1.4.74.2.1](#)).

The following is the WSDL port type specification of the **UpdateIndicator** WSDL operation.

```
<wsdl:operation name="UpdateIndicator" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateIndicatorSoapIn"/>
  <wsdl:output message="tns:UpdateIndicatorSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateIndicatorSoapIn** request message (section [3.1.4.74.1.1](#)), and the server (2) responds with an **UpdateIndicatorSoapOut** response message (section [3.1.4.74.1.2](#)) as follows:

- The protocol client MUST send a valid **Indicator** object instance that specifies the new state of the **indicator**.
- The server (2) MUST validate the **indicator** following the schema of the **Indicator**.
- The server (2) MUST verify that the **indicator** exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the **indicator**.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the **indicator** was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the current version of the **indicator** object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - **CreatedBy** SHOULD be updated by the server (2).
  - **CreatedDate** SHOULD be updated by the server (2).
  - The other properties of the **indicator** SHOULD be equal to the **Indicator** object submitted to the server (2).
- The server (2) MUST return a new **Indicator** object instance that represents the updated **indicator**.

Error code	Description
<b>InvalidBuiltinIndicatorOperation</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

Error code	Description
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidIndicator</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidIndicatorBand</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidSetting</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.74.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateIndicatorSoapIn</b>	The request WSDL message for the <b>UpdateIndicator</b> WSDL operation.
<b>UpdateIndicatorSoapOut</b>	The response WSDL message for the <b>UpdateIndicator</b> WSDL operation.

#### 3.1.4.74.1.1 UpdateIndicatorSoapIn

The request WSDL message for the **UpdateIndicator** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateIndicator
```

The SOAP body contains the **UpdateIndicator** element.

#### 3.1.4.74.1.2 UpdateIndicatorSoapOut

The response WSDL message for the **UpdateIndicator** WSDL operation.

The SOAP body contains the **UpdateIndicatorResponse** element.

### 3.1.4.74.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateIndicator</b>	The input data for the <b>UpdateIndicator</b> WSDL operation.
<b>UpdateIndicatorResponse</b>	The result data for the <b>UpdateIndicator</b> WSDL operation.

#### 3.1.4.74.2.1 UpdateIndicator

The **UpdateIndicator** element specifies the input data for the **UpdateIndicator** WSDL operation.

```
<xs:element name="UpdateIndicator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**indicator:** An **Indicator** complex type object (section [2.2.4.125](#)) instance that specifies the new state of the indicator that is being updated.

#### 3.1.4.74.2.2 UpdateIndicatorResponse

The **UpdateIndicatorResponse** element specifies the result data for the **UpdateIndicator** WSDL operation.

```
<xs:element name="UpdateIndicatorResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateIndicatorResult"
type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateIndicatorResult:** An **Indicator** complex type object (section [2.2.4.125](#)) instance that specifies the updated indicator.

### 3.1.4.74.3 Complex Types

None.

### 3.1.4.74.4 Simple Types

None.

### 3.1.4.74.5 Attributes

None.



### 3.1.4.74.6 Groups

None.

### 3.1.4.74.7 Attribute Groups

None.

### 3.1.4.75 UpdateKpi

The **UpdateKpi** operation is used to update the existing KPI as specified by the **Kpi** complex type object (section [2.2.4.128](#)) in the **UpdateKpi** input element (section [3.1.4.75.2.1](#)).

The following is the WSDL port type specification of the **UpdateKpi** WSDL operation.

```
<wsdl:operation name="UpdateKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateKpiSoapIn"/>
  <wsdl:output message="tns:UpdateKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateKpiSoapIn** request message (section [3.1.4.75.1.1](#)), and the server (2) responds with an **UpdateKpiSoapOut** response message (section [3.1.4.75.1.2](#)) as follows:

- The protocol client MUST send a valid **Kpi** object instance that specifies the new state of the KPI.
- The server (2) MUST validate the KPI following the schema of the **Kpi**.
- The server (2) MUST verify that the KPI exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the KPI.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the KPI was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the current version of the KPI object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - The other properties of the KPI SHOULD be equal to the **Kpi** object submitted to the server (2).
- The server (2) MUST return a new **Kpi** object instance that represents the updated KPI.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

Error code	Description
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidKpi</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.75.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateKpiSoapIn</b>	The request WSDL message for the <b>UpdateKpi</b> WSDL operation.
<b>UpdateKpiSoapOut</b>	The response WSDL message for the <b>UpdateKpi</b> WSDL operation.

#### 3.1.4.75.1.1 UpdateKpiSoapIn

The request WSDL message for the **UpdateKpi** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateKpi
```

The SOAP body contains the **UpdateKpi** element.

#### 3.1.4.75.1.2 UpdateKpiSoapOut

The response WSDL message for the **UpdateKpi** WSDL operation.

The SOAP body contains the **UpdateKpiResponse** element.

### 3.1.4.75.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateKpi</b>	The input data for the <b>UpdateKpi</b> WSDL operation.

Element	Description
<b>UpdateKpiResponse</b>	The result data for the <b>UpdateKpi</b> WSDL operation.

### 3.1.4.75.2.1 UpdateKpi

The **UpdateKpi** element specifies the input data for the **UpdateKpi** WSDL operation.

```
<xs:element name="UpdateKpi" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="kpi" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**kpi:** A **Kpi** complex type object (section [2.2.4.128](#)) instance that specifies the new state of the KPI that is being updated.

### 3.1.4.75.2.2 UpdateKpiResponse

The **UpdateKpiResponse** element specifies the result data for the **UpdateKpi** WSDL operation.

```
<xs:element name="UpdateKpiResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateKpiResult:** A **Kpi** complex type object (section [2.2.4.128](#)) instance that specifies the updated KPI.

### 3.1.4.75.3 Complex Types

None.

### 3.1.4.75.4 Simple Types

None.

### 3.1.4.75.5 Attributes

None.

### 3.1.4.75.6 Groups

None.

### 3.1.4.75.7 Attribute Groups

None.

### 3.1.4.76 UpdateReportView

The **UpdateReportView** operation is used to update the existing report view as specified by the **ReportView** complex type object (section [2.2.4.160](#)) in the **UpdateReportView** input element (section [3.1.4.76.2.1](#)).

The following is the WSDL port type specification of the **UpdateReportView** WSDL operation.

```
<wsdl:operation name="UpdateReportView" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateReportViewSoapIn"/>
  <wsdl:output message="tns:UpdateReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateReportViewSoapIn** request message (section [3.1.4.76.1.1](#)), and the server (2) responds with an **UpdateReportViewSoapOut** response message (section [3.1.4.76.1.2](#)) as follows:

- The protocol client MUST send a valid **ReportView** object instance that specifies the new state of the report view.
- The server (2) MUST validate the report view following the schema of the **ReportView**.
- The server (2) MUST verify that the report view exists by using the **Location** attribute as specified in the base class **FirstClassElement** complex type (section [2.2.4.99](#)) and that the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the report view.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the report view was updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the current version of the report view object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
  - The other properties of the report view SHOULD be equal to the **Indicator** complex type object (section [2.2.4.125](#)) submitted to the server (2).

The server (2) MUST return a new **ReportView** object instance that represents the updated report view.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidReportView</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

Error code	Description
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

### 3.1.4.76.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateReportViewSoapIn</b>	The request WSDL message for the <b>UpdateReportView</b> WSDL operation.
<b>UpdateReportViewSoapOut</b>	The response WSDL message for the <b>UpdateReportView</b> WSDL operation.

#### 3.1.4.76.1.1 UpdateReportViewSoapIn

The request WSDL message for the **UpdateReportView** WSDL operation.

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/UpdateReportView`

The SOAP body contains the **UpdateReportView** element.

#### 3.1.4.76.1.2 UpdateReportViewSoapOut

The response WSDL message for the **UpdateReportView** WSDL operation.

The SOAP body contains the **UpdateReportViewResponse** element.

### 3.1.4.76.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateReportView</b>	The input data for the <b>UpdateReportView</b> WSDL operation.
<b>UpdateReportViewResponse</b>	The result data for the <b>UpdateReportView</b> WSDL operation.

### 3.1.4.76.2.1 UpdateReportView

The **UpdateReportView** element specifies the input data for the **UpdateReportView** WSDL operation.

```
<xs:element name="UpdateReportView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**reportView:** A **ReportView** complex type object (section [2.2.4.160](#)) instance that specifies the new state of the report view that is being updated.

### 3.1.4.76.2.2 UpdateReportViewResponse

The **UpdateReportViewResponse** element specifies the result data for the **UpdateReportView** WSDL operation.

```
<xs:element name="UpdateReportViewResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateReportViewResult:** A **ReportView** complex type object (section [2.2.4.160](#)) instance that specifies the updated report view.

### 3.1.4.76.3 Complex Types

None.

### 3.1.4.76.4 Simple Types

None.

### 3.1.4.76.5 Attributes

None.

### 3.1.4.76.6 Groups

None.

### 3.1.4.76.7 Attribute Groups

None.

### 3.1.4.77 UpdateScorecard

The **UpdateScorecard** operation is used to update the existing scorecard as specified by the **Scorecard** complex type object (section [2.2.4.162](#)) in the **UpdateScorecard** input element (section [3.1.4.77.2.1](#)).

The following is the WSDL port type specification of the **UpdateScorecard** WSDL operation.

```
<wsdl:operation name="UpdateScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:UpdateScorecardSoapIn"/>
  <wsdl:output message="tns:UpdateScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateScorecardSoapIn** request message (section [3.1.4.77.1.1](#)), and the server (2) responds with an **UpdateScorecardSoapOut** response message (section [3.1.4.77.1.2](#)) as follows:

- The scorecard to be updated MUST be a valid **Scorecard**.
- The **Location** of the scorecard (see [FirstClassElement](#) section 2.2.4.99) MUST exist.
- The current user MUST have read and write permissions to the **Location** (FirstClassElement) of the scorecard.
- The **Location** of the scorecard MUST support storing objects of type **Scorecard**.
- The stored copy on the server (2) MUST be updated with the scorecard provided by the protocol client in the **UpdateScorecardSoapIn** request message.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.2.1.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.2.1.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.2.1](#).

#### 3.1.4.77.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>UpdateScorecardSoapIn</b>	The request WSDL message for the <b>UpdateScorecard</b> WSDL operation.
<b>UpdateScorecardSoapOut</b>	The response WSDL message for the <b>UpdateScorecard</b> WSDL operation.

### 3.1.4.77.1.1 UpdateScorecardSoapIn

The request WSDL message for the **UpdateScorecard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateScorecard
```

The SOAP body contains the **UpdateScorecard** element.

### 3.1.4.77.1.2 UpdateScorecardSoapOut

The response WSDL message for the **UpdateScorecard** WSDL operation.

The SOAP body contains the **UpdateScorecardResponse** element.

### 3.1.4.77.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>UpdateScorecard</b>	The input data for the <b>UpdateScorecard</b> WSDL operation.
<b>UpdateScorecardResponse</b>	The result data for the <b>UpdateScorecard</b> WSDL operation.

#### 3.1.4.77.2.1 UpdateScorecard

The **UpdateScorecard** element specifies the input data for the **UpdateScorecard** WSDL operation.

```
<xs:element name="UpdateScorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecard:** The scorecard to be updated, which MUST be a valid **Scorecard** complex type (section [2.2.4.162](#)). The **UpdateScorecard** operation (section [3.1.4.77](#)) is used to update the existing scorecard as specified by **Scorecard**.

#### 3.1.4.77.2.2 UpdateScorecardResponse

The **UpdateScorecardResponse** element specifies the result data for the **UpdateScorecard** WSDL operation.



```

<xs:element name="UpdateScorecardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateScorecardResult"
type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**UpdateScorecardResult:** The original scorecard object submitted to the server (2), modified as follows:

- **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
- **LastModified** SHOULD be updated by the server (2) with the date and time of when the scorecard was last updated on the server (2) storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
- **Version** SHOULD be updated by the server (2) with the current version of the scorecard object. If **Version** is updated by the server (2), it MUST NOT be null and MUST be a valid **ElementVersion** complex type object (section [2.2.4.92](#)).
- The other properties of the scorecard SHOULD be equal to the original scorecard submitted to the server (2).

### 3.1.4.77.3 Complex Types

None.

### 3.1.4.77.4 Simple Types

None.

### 3.1.4.77.5 Attributes

None.

### 3.1.4.77.6 Groups

None.

### 3.1.4.77.7 Attribute Groups

None.

### 3.1.4.78 ValidateKpi

The **ValidateKpi** operation checks whether a KPI stored on the server (2) is valid.

The following is the WSDL port type specification of the **ValidateKpi** WSDL operation.

```

<wsdl:operation name="ValidateKpi" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ValidateKpiSoapIn"/>
  <wsdl:output message="tns:ValidateKpiSoapOut"/>

```

</wsdl:operation>

The protocol client sends a **ValidateKpiSoapIn** request message (section [3.1.4.78.1.1](#)), and the server (2) responds with a **ValidateKpiSoapOut** response message (section [3.1.4.78.1.2](#)), as follows:

- If the KPI contains any **Actuals** (see section [2.2.4.128](#)), each MUST be a valid **KpiMeasure** complex type (section [2.2.4.129](#)) as follows:
  - If the **DataSourceLocation** field of **KpiMeasure** is not empty, it MUST refer to an existing data source (1) element (see section [2.2.4.85](#)), and the connection to the data source MUST be successful.
  - If the data source at **DataSourceLocation** is of type ADOMD.NET (see section [2.2.4.85](#)), each **DefaultDimensionSetting** (section [2.2.4.87](#)) MUST be valid as follows:
    - If the **DefaultDimensionSetting** contains any **Members** elements, a **Member** complex type (section [2.2.4.134](#)) for each MUST exist in the data source.
- If the KPI contains any **Targets** elements, each MUST be a valid Target complex type (section [2.2.4.170](#)) as follows:
  - If the property **RelatedActualId** is not empty, it MUST refer to an existing **Actual**, which MUST be valid according to the **Actuals** description in the **ValidateKPI** operation (section [3.1.4.76](#)).
  - The **Target** itself MUST be a valid **KpiMeasure** complex type (section [2.2.4.129](#)) according to the **Actuals** description in the **ValidateKPI** operation (section [3.1.4.76](#)).
  - If the property **IndicatorLocation** is not empty, it MUST refer to an existing **Indicator**.
  - If the property **StatedScore** is not empty, it MUST be a valid **KpiMeasure** complex type (section [2.2.4.129](#)) according to the **Actuals** description in the **ValidateKPI** operation (section [3.1.4.76](#)).

### 3.1.4.78.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>ValidateKpiSoapIn</b>	The request WSDL message for the <b>ValidateKpi</b> WSDL operation.
<b>ValidateKpiSoapOut</b>	The response WSDL message for the <b>ValidateKpi</b> WSDL operation.

#### 3.1.4.78.1.1 ValidateKpiSoapIn

The request WSDL message for the **ValidateKpi** WSDL operation.

The SOAP action value is:

`http://www.microsoft.com/performancepoint/scorecards/ValidateKpi`

The SOAP body contains the **ValidateKpi** element.

### 3.1.4.78.1.2 ValidateKpiSoapOut

The response WSDL message for the **ValidateKpi** WSDL operation.

The SOAP body contains the **ValidateKpiResponse** element.

### 3.1.4.78.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>ValidateKpi</b>	The input data for the <b>ValidateKpi</b> WSDL operation.
<b>ValidateKpiResponse</b>	The result data for the <b>ValidateKpi</b> WSDL operation.

#### 3.1.4.78.2.1 ValidateKpi

The **ValidateKpi** element specifies the input data for the **ValidateKpi** WSDL operation.

```
<xs:element name="ValidateKpi" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** Location of the KPI to be validated (see [RepositoryLocation](#) section 2.2.4.161).

#### 3.1.4.78.2.2 ValidateKpiResponse

The **ValidateKpiResponse** element specifies the result data for the **ValidateKpi** WSDL operation.

```
<xs:element name="ValidateKpiResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ValidateKpiResult"
type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**ValidateKpiResult:** An array of strings. If the KPI is valid, this array MUST be empty. Otherwise, this array SHOULD contain one localized error message per validation failure.

#### 3.1.4.78.3 Complex Types

None.

#### 3.1.4.78.4 Simple Types

None.

#### 3.1.4.78.5 Attributes

None.

#### 3.1.4.78.6 Groups

None.

#### 3.1.4.78.7 Attribute Groups

None.

#### 3.1.4.79 ValidateScorecard

The **ValidateScorecard** operation checks if a scorecard stored on the server (2) is valid.

The following is the WSDL port type specification of the **ValidateScorecard** WSDL operation.

```
<wsdl:operation name="ValidateScorecard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ValidateScorecardSoapIn"/>
  <wsdl:output message="tns:ValidateScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **ValidateScorecardSoapIn** request message (section [3.1.4.79.1.1](#)), and the server (2) responds with a **ValidateScorecardSoapOut** response message (section [3.1.4.79.1.2](#)) as follows:

- If the scorecard contains one or more KPIs, each KPI MUST be valid according to the specification in the [ValidateKPI](#) operation (section [3.1.4.78](#)).
- If the scorecard contains any **ConfiguredView** complex types (section [2.2.4.77](#)), each MUST be valid as follows:
  - If the **DataSourceLocation** field is not empty, it MUST refer to an existing data source element (section [2.2.4.85](#)) and the connection to the data source MUST be successful.
  - The column and row headers defined in the **GridViewDefinition** (section [2.2.4.122](#)) and [GridHeaderItem](#) (section [2.2.4.116](#)) complex types MUST be valid according to the following:
    - Each column or row header that is of complex type **Member** (section [2.2.4.134](#)) MUST refer to a valid member in the data source.
    - Each column or row header that is of complex type **NamedSet** (section [2.2.4.147](#)) MUST be a well-formed named set MDX.

##### 3.1.4.79.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>ValidateScorecardSoapIn</b>	The request WSDL message for the <b>ValidateScorecard</b> WSDL operation.
<b>ValidateScorecardSoapOut</b>	The response WSDL message for the <b>ValidateScorecard</b> WSDL operation.

### 3.1.4.79.1.1 ValidateScorecardSoapIn

The request WSDL message for the **ValidateScorecard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateScorecard
```

The SOAP body contains the **ValidateScorecard** element.

### 3.1.4.79.1.2 ValidateScorecardSoapOut

The response WSDL message for the **ValidateScorecard** WSDL operation.

The SOAP body contains the **ValidateScorecardResponse** element.

### 3.1.4.79.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>ValidateScorecard</b>	The input data for the <b>ValidateScorecard</b> WSDL operation.
<b>ValidateScorecardResponse</b>	The result data for the <b>ValidateScorecard</b> WSDL operation.

#### 3.1.4.79.2.1 ValidateScorecard

The **ValidateScorecard** element specifies the input data for the **ValidateScorecard** WSDL operation.

```
<xs:element name="ValidateScorecard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** Location of the scorecard to be validated (see [RepositoryLocation](#) section 2.2.4.161).

#### 3.1.4.79.2.2 ValidateScorecardResponse

The **ValidateScorecardResponse** element specifies the result data for the **ValidateScorecard** WSDL operation.

```

<xs:element name="ValidateScorecardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ValidateScorecardResult"
type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**ValidateScorecardResult:** An array of strings. If the scorecard is valid, this array MUST be empty. Otherwise, this array SHOULD contain one localized error message per validation failure.

### 3.1.4.79.3 Complex Types

None.

### 3.1.4.79.4 Simple Types

None.

### 3.1.4.79.5 Attributes

None.

### 3.1.4.79.6 Groups

None.

### 3.1.4.79.7 Attribute Groups

None.

## 3.1.4.80 ValidateSiteCollection

The **ValidateSiteCollection** operation is used to check if the context site has the server (2) feature installed.

The following is the WSDL port type specification of the **ValidateSiteCollection** WSDL operation.

```

<wsdl:operation name="ValidateSiteCollection" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input message="tns:ValidateSiteCollectionSoapIn"/>
  <wsdl:output message="tns:ValidateSiteCollectionSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **ValidateSiteCollectionSoapIn** request message (section [3.1.4.80.1.1](#)), and the server (2) responds with a **ValidateSiteCollectionSoapOut** response message (section [3.1.4.80.1.2](#)) as follows:

- If the user-defined context site is the top-level site (2) of a site collection that has the server (2) feature installed, the **ValidateSiteCollectionResult** attribute MUST be "SiteCollection".
- If the user-defined context site is a subsite of a site collection that has the server (2) feature installed, **ValidateSiteCollectionResult** MUST be "Site".

- If the user-defined context site is null, **ValidateSiteCollectionResult** MUST be "NonexistentSiteCollection".
- If the user-defined context site is not a valid site (2) or a site collection and the **siteCollectionUrl** attribute derived from the user-defined context site is not empty, **ValidateSiteCollectionResult** MUST be "Nonexistentsite".
- If the user-defined context site is not a valid site (2) or a site collection and **siteCollectionUrl** derived from the user-defined context site is empty, **ValidateSiteCollectionResult** MUST be "NonexistentSiteCollection".
- If the site collection of the user-defined context site does not have the server (2) feature installed, **ValidateSiteCollectionResult** MUST be "PPSNotActivatedOnSiteCollection".
- **ValidateSiteCollectionResult** MUST NOT have any other values from the **URLValidationResult** enumeration (section [3.1.4.80.4.1](#)) other than those enumerated in the preceding items.

### 3.1.4.80.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
<b>ValidateSiteCollectionSoapIn</b>	The request WSDL message for the <b>ValidateSiteCollection</b> WSDL operation.
<b>ValidateSiteCollectionSoapOut</b>	The response WSDL message for the <b>ValidateSiteCollection</b> WSDL operation.

#### 3.1.4.80.1.1 ValidateSiteCollectionSoapIn

The request WSDL message for the **ValidateSiteCollection** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection
```

The SOAP body contains the **ValidateSiteCollection** element.

#### 3.1.4.80.1.2 ValidateSiteCollectionSoapOut

The response WSDL message for the **ValidateSiteCollection** WSDL operation.

The SOAP body contains the **ValidateSiteCollectionResponse** element.

### 3.1.4.80.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
<b>ValidateSiteCollection</b>	The input data for the <b>ValidateSiteCollection</b> WSDL operation.
<b>ValidateSiteCollectionResponse</b>	The result data for the <b>ValidateSiteCollection</b> WSDL operation.

### 3.1.4.80.2.1 ValidateSiteCollection

The **ValidateSiteCollection** element specifies the input data for the **ValidateSiteCollection** WSDL operation.

```
<xs:element name="ValidateSiteCollection" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.80.2.2 ValidateSiteCollectionResponse

The **ValidateSiteCollectionResponse** element specifies the result data for the **ValidateSiteCollection** WSDL operation.

```
<xs:element name="ValidateSiteCollectionResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="ValidateSiteCollectionResult"
type="tns:URLValidationResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="siteCollectionUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="siteUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**ValidateSiteCollectionResult:** A value of type **URLValidationResult** indicating the result of the validation process. See the definition of the **URLValidationResult** simple type (section [3.1.4.80.4.1](#)) for more details.

**siteCollectionUrl:** The site collection URL of the context site.

**siteUrl:** The URL of the context site.

### 3.1.4.80.3 Complex Types

None.

### 3.1.4.80.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
<b>URLValidationResult</b>	Specifies the possible results of URL validation.



### 3.1.4.80.4.1 URLValidationResult

**Namespace:** http://www.microsoft.com/performancepoint/scorecards

The **URLValidationResult** is an enumeration used to specify the possible results of URL validation.

```
<xs:simpleType name="URLValidationResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SiteCollectionOrSite"/>
    <xs:enumeration value="SiteCollection"/>
    <xs:enumeration value="Site"/>
    <xs:enumeration value="List"/>
    <xs:enumeration value="DocumentLibrary"/>
    <xs:enumeration value="InvalidURL"/>
    <xs:enumeration value="AlreadyExists"/>
    <xs:enumeration value="NonexistentSiteCollection"/>
    <xs:enumeration value="NonexistentSite"/>
    <xs:enumeration value="PPSNotActivatedOnSiteCollection"/>
    <xs:enumeration value="URLZoneNotAllowed"/>
    <xs:enumeration value="NoAccess"/>
    <xs:enumeration value="InvalidSiteVersion"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for the **URLValidationResult** simple type.

Value	Meaning
SiteCollectionOrSite	The 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 (2) feature installed.
Site	The context site is a subsite of a site collection and the site collection has the protocol <b>feature</b> installed.
List	The context site is a 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 (2) feature activated.
URLZoneNotAllowed	The URL is not in the following <b>security zones</b> : Local, Intranet, or Trusted.
NoAccess	The user has insufficient rights to access the context site.
InvalidSiteVersion	The context site version is not compatible with the current server (2) feature.

### **3.1.4.80.5 Attributes**

None.

### **3.1.4.80.6 Groups**

None.

### **3.1.4.80.7 Attribute Groups**

None.

## **3.1.5 Timer Events**

No timer events are required on the server (2) beyond those required by the underlying RPC transport.

## **3.1.6 Other Local Events**

None.

## 4 Protocol Examples

The following subsections contain examples of this protocol's usage.

### 4.1 Scorecard Update

In this example, a protocol client creates a new KPI, adds that KPI to an existing scorecard, gets the result data set for that scorecard, and deletes the scorecard.

The example assumes that the following objects are known to the server (2) with the following identifiers:

Type	Name	Path	ID
Scorecard	New <b>Scorecard.</b>	/PerformancePoint/Lists/Dashboard Content	8_.000
KPI	<b>InternetSales.</b>	/PerformancePoint/Lists/Dashboard Content	4_.000
DataSource	New <b>DataSource.</b>	/PerformancePoint/Data Sources	1_.000

#### 4.1.1 CreateKpi

To create a new KPI, the protocol client calls **CreateKpi** operation (section [3.1.4.6](#)). This call will create a KPI with an Analysis Services actual value using the Internet Sales Amount measure. The target value is a fixed data source with a value of one. The KPI will use a built-in indicator and normalized banding type.

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateKpi xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <listUrl>/PerformancePoint/Lists/Dashboard Content</listUrl>
      <kpi Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:13:06"
Content Type="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-7cla350ce3e2"
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" />
    <DataSourceLocation ItemUrl="/%%fixedvalues%%" />
    <DefaultDimensionSettings />
    <OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
    <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_000" />
    <Banding Type="Normalized" ActualWorst="0" SpreadMinimum="0" SpreadMaximum="1.2">

```

```

    <CustomBoundary>
      <decimal>0.50</decimal>
      <decimal>1</decimal>
    </CustomBoundary>
  </Banding>
  <RelatedActualId>6b25b5bc-ffed-4f36-823c-d919b9f4716f</RelatedActualId>
</Target>
</Targets>
</kpi>
</CreateKpi>
</soap:Body>
</soap:Envelope>

```

The server (2) responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateKpiResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <CreateKpiResult Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:14:28"
ContentTypes="PpsKpi" LastModified="2009-05-21T13:14:28" ModifiedBy="Sample User"
CheckedOutTo="">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="InternetSales" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="1" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000" ItemType="Kpi"
ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
a268-4cf1-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="f1a4falf-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-
a268-4cf1-a9fc-76d4b2ddabe0" />
        <ConfiguredViews>
          <ConfiguredView Guid="7675ef55-d456-469e-9381-8c1eddd94c1d" AllowStatusFilter="true"
AllowFilter="true" AllowSort="true" AllowAnnotations="true" EmptyRowsFilterMode="None"
AllowShowDetails="true" ShowInfoToolTips="false" EnableTextwrap="false"
MaintainMemberLevelDepth="true" AllowDynamicRowMemberExpansion="true"
AllowDynamicColumnMemberExpansion="true" AllowRowDrill="true" AllowColumnDrill="true"

```

```

AlwaysShowAnnotationCellFlags="false" ExpandToFitWidth="false" HideScorecard="false"
ShowStatusFiltersByDefault="false">
  <Properties>
    <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Default View" />
    <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
    <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
  </Properties>
  <Comments />
  <ToolBarOptions ShowInlineText="true" ShowToolBar="false" ShowPageFilters="true"
ShowRefresh="true" ShowStatusFilter="true" ShowToolTips="true" ShowCollapse="true"
ShowMode="true" ShowPrint="true" ShowExpand="true" ShowCellSelection="false"
AnnotationOnByDefault="true" ShowPageFiltersByDefault="false"
ShowStatusFilterByDefault="false" ShowToolBarItemsLabel="false" ShowDefaultRollup="true"
ShowWorstChildRollup="true" ShowIndicatorCount="true" />
  <DataSourceLocation ItemUrl="/%%fixedvalues%%" />
  <GridViewDefinition EmptyCell="" InvalidCell="Error" ShowGridLines="true"
ShowHiddenHeaders="false" ShowMetricHeaders="true" ShowPlusMinus="true">
  <CornerCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
  <BackColor A="0" R="235" G="243" B="255" />
  </CornerCellFormatInfo>
  <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="94d89bc7-7ald-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
  <BpmProperties />
  <TrendIndicatorLocation ItemUrl="" />
  </GridHeaderItem>
  </Children>
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="" />
  <BpmProperties />
  <TrendIndicatorLocation ItemUrl="" />

```



```

</RootRowHeader>
<RootColumnHeader Id="0" Guid="ab5c8048-cae2-4054-88bb-917449fda92e"
DefinitionGuid="ab5c8048-cae2-4054-88bb-917449fda92e" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children>
    <GridHeaderItem Id="1" Guid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5"
DefinitionGuid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5" DisplayText="Actual"
DimensionName="Scorecard Measures__" DimensionValue="Actual" HeaderType="KpiActual"
GroupId="-2" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Actual" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />
      <BpmProperties />
      <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
        <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
        <FilterEmptyRows>false</FilterEmptyRows>
        <Position>NotDisplayed</Position>
        <PositionActual>NotDisplayed</PositionActual>
        <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
          <Position>Center</Position>
        </IndicatorSettings>
      </TargetSettings>
      <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
    <GridHeaderItem Id="2" Guid="a6d178eb-68d9-430a-a3ba-0b4cbef77511"
DefinitionGuid="a6d178eb-68d9-430a-a3ba-0b4cbef77511" DisplayText="Target"
DimensionName="Scorecard Measures__" DimensionValue="Target" HeaderType="KpiTarget"
GroupId="-3" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Target" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />
      <BpmProperties />
      <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
        <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right" />

```

```

    <FilterEmptyRows>false</FilterEmptyRows>
    <Position>Left</Position>
    <PositionActual>NotDisplayed</PositionActual>
    <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
    <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
        <Position>Center</Position>
    </IndicatorSettings>
</TargetSettings>
    <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
    <OverrideIndicatorLocation ItemUrl="" />
    <LinkedKpiLocation ItemUrl="" />
    <BpmProperties />
    <TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
    <DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
    <DefaultRollupIndicatorLocation ItemUrl="" />
    <CellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>
</ConfiguredView>
</ConfiguredViews>
<EndPoints>
    <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
date-time" AcceptsMultipleFilterLinks="true" />
</EndPoints>
<BeginPoints>
<ParameterDefinition>
    <ParameterUniqueName>2833def6-63f3-43d5-9bfd-ebd371113b27</ParameterUniqueName>
    <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
            <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                    <xs:choice minOccurs="0" maxOccurs="unbounded">
                        <xs:element name="ParameterData" msdata:Locale="en-US">
                            <xs:complexType>
                                <xs:sequence>
                                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                                    <xs:element name="KpiId" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                    <xs:element name="Name" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                </xs:sequence>
                            </xs:complexType>
                        </xs:element>
                    </xs:choice>
                </xs:complexType>
            </xs:element>
        </xs:schema>
    </DisplayValues>

```

```

        <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-1aa-8c5d6729e7de</ParameterUniqueName>
    <DisplayValues>
      <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
        xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true"
        msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
          <xs:complexType>
            <xs:choice minOccurs="0" maxOccurs="unbounded">
              <xs:element name="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
                    minOccurs="0" />
                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                    <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
                    minOccurs="0" />
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:choice>
          </xs:complexType>
        </xs:element>
      </xs:schema>
      <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
        xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
    </DisplayValues>
    <CustomDefinition>BeginPoint_ScorecardRowMember</CustomDefinition>
    <ParameterProviderId>ParameterScorecardRowMemberProvider</ParameterProviderId>
    <DisplayName>Row Member</DisplayName>
    <EmitterType>ParameterEmitter</EmitterType>
    <KeyColumn>Key</KeyColumn>
    <ParentKeyColumn>ParentKey</ParentKeyColumn>
    <DisplayColumn>DisplayValue</DisplayColumn>
    <IsDefaultColumn>IsDefault</IsDefaultColumn>
    <DefaultPostFormula />
  </ParameterDefinition>
  <ParameterDefinition>
    <ParameterUniqueName>957d3ae6-c5db-4d06-a432-0f5df8d07ce7</ParameterUniqueName>
    <DisplayValues>
      <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
        xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true"
        msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
          <xs:complexType>
            <xs:choice minOccurs="0" maxOccurs="unbounded">
              <xs:element name="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />

```

```

        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
        <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
    </xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_ScorecardColumnMember</CustomDefinition>
<ParameterProviderId>ParameterScorecardColumnMemberProvider</ParameterProviderId>
<DisplayName>Column Member</DisplayName>
<EmitterType>ParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
</BeginPoints>
</GetScorecardResult>
</GetScorecardResponse>
</soap:Body>
</soap:Envelope>

```

### 4.1.3 UpdateScorecard

The protocol client then calls **UpdateScorecard**. The **GridHeaderItem** section with ID set to 2 has been added to the scorecard returned in the **GetScorecard** example.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <UpdateScorecard xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <scorecard Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:10:54"
Content="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="" />
        </Properties>
      </scorecard>
    </UpdateScorecard>
  </soap:Body>
</soap:Envelope>

```

```

    <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
  </Properties>
  <Comments />
  <Version Major="2" Minor="0" />
  <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/2_.000" ItemType="Scorecard"
ItemGuid="22dd6dc3-247c-43b1-b246-6ab222e9001e" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
a268-4cf1-a9fc-76d4b2ddabe0" />
  <ConfiguredViews>
    <ConfiguredView Guid="9bb8d042-eff9-415c-baa4-3d0c5507e441" AllowStatusFilter="true"
AllowFilter="true" AllowSort="true" AllowAnnotations="true" EmptyRowsFilterMode="None"
AllowShowDetails="true" ShowInfoToolTips="false" EnableTextwrap="false"
MaintainMemberLevelDepth="true" AllowDynamicRowMemberExpansion="true"
AllowDynamicColumnMemberExpansion="true" AllowRowDrill="true" AllowColumnDrill="true"
AlwaysShowAnnotationCellFlags="false" ExpandToFitWidth="false" HideScorecard="false"
ShowStatusFiltersByDefault="false">
      <Properties>
        <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Default View" />
        <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
        <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
      </Properties>
      <Comments />
      <ToolbarOptions ShowInlineText="true" ShowToolbar="false" ShowPageFilters="true"
ShowRefresh="true" ShowStatusFilter="true" ShowToolTips="true" ShowCollapse="true"
ShowMode="true" ShowPrint="true" ShowExpand="true" ShowCellSelection="false"
AnnotationOnByDefault="true" ShowPageFiltersByDefault="false"
ShowStatusFilterByDefault="false" ShowToolbarItemsLabel="false" ShowDefaultRollup="true"
ShowWorstChildRollup="true" ShowIndicatorCount="true" />
      <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000"
ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
      <GridViewDefinition EmptyCell="" InvalidCell="Error" ShowGridLines="true"
ShowHiddenHeaders="false" ShowMetricHeaders="true" ShowPlusMinus="true">
        <CornerCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
          <BackColor A="0" R="235" G="243" B="255" />
        </CornerCellFormatInfo>
        <RootRowHeader Id="0" Guid="fd56bee3-dba4-400b-99e2-f1e14f5956a3"
DefinitionGuid="fd56bee3-dba4-400b-99e2-f1e14f5956a3" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
          <Children>
            <GridHeaderItem Id="1" Guid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d"
DefinitionGuid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d" DisplayText=""
DimensionName="Scorecard_" DimensionValue="/PerformancePoint/Lists/Dashboard Content/1_.000"
HeaderType="Kpi" GroupId="-1" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"

```

```

MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children />
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/1_.000"
ItemType="Kpi" ItemGuid="87b809c4-bda0-4670-9c5d-3fbcac4102ab"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7ald-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cfl-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="94d89bc7-7ald-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="09055f3f-77da-4fb0-9482-d434fa95f81c"
DefinitionGuid="09055f3f-77da-4fb0-9482-d434fa95f81c" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children>
    <GridHeaderItem Id="1" Guid="13c063f8-e3ba-459d-a7f9-526fdc3b29de"
DefinitionGuid="13c063f8-e3ba-459d-a7f9-526fdc3b29de" DisplayText="Actual"
DimensionName="Scorecard_Measures__" DimensionValue="Actual" HeaderType="KpiActual"
GroupId="-3" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Actual" AggregationType="None">
    <Children />

```

```

        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
            <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
            <FilterEmptyRows>false</FilterEmptyRows>
            <Position>NotDisplayed</Position>
            <PositionActual>NotDisplayed</PositionActual>
            <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
            <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
                <Position>Center</Position>
            </IndicatorSettings>
        </TargetSettings>
        <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
    <GridHeaderItem Id="2" Guid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f"
DefinitionGuid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f" DisplayText="Target"
DimensionName="Scorecard_Measures__" DimensionValue="Target" HeaderType="KpiTarget"
GroupId="-4" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Target" AggregationType="None">
        <Children />
        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
            <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right" />
            <FilterEmptyRows>false</FilterEmptyRows>
            <Position>Left</Position>
            <PositionActual>NotDisplayed</PositionActual>
            <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
            <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
                <Position>Center</Position>
            </IndicatorSettings>
        </TargetSettings>
        <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
<DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
    <DefaultRollupIndicatorLocation ItemUrl="" />
    <CellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>

```



```

    </ConfiguredView>
  </ConfiguredViews>
  <EndPoints>
    <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
    AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
    AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
    AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
    AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
    date-time" AcceptsMultipleFilterLinks="true" />
  </EndPoints>
  <BeginPoints>
    <ParameterDefinition>
      <ParameterUniqueName>0f6ca5f9-e8d9-4fd9-bf4e-d6aa03f2d745</ParameterUniqueName>
      <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
        xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
        com:xml-msprop">
          <xs:element name="NewDataSet" msdata:IsDataSet="true"
          msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
            <xs:complexType>
              <xs:choice minOccurs="0" maxOccurs="unbounded">
                <xs:element name="ParameterData" msdata:Locale="en-US">
                  <xs:complexType>
                    <xs:sequence>
                      <xs:element name="Key" type="xs:string" minOccurs="0" />
                      <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                      <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
                      minOccurs="0" />
                      <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                      <xs:element name="KpiId" msprop:NotShowColumnForCondVisibility="True"
                      msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
                      <xs:element name="Name" msprop:NotShowColumnForCondVisibility="True"
                      msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
                      <xs:element name="Description" msprop:NotShowColumnForCondVisibility="True"
                      msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
                      <xs:element name="Person_x0020_Responsible"
                      msprop:NotShowColumnForCondVisibility="True" msprop:ShowColumn="True" type="xs:string"
                      minOccurs="0" />
                    </xs:sequence>
                  </xs:complexType>
                </xs:element>
              </xs:choice>
            </xs:complexType>
          </xs:element>
        </xs:schema>
        <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
        xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
      </DisplayValues>
      <CustomDefinition>BeginPoint_Kpi</CustomDefinition>
      <ParameterProviderId>ParameterScorecardKpiProvider</ParameterProviderId>
      <DisplayName>KPI</DisplayName>
      <EmitterType>BothAConditionalVisibilityAndParameterEmitter</EmitterType>
      <KeyColumn>Key</KeyColumn>
      <ParentKeyColumn>ParentKey</ParentKeyColumn>
      <DisplayColumn>DisplayValue</DisplayColumn>
      <IsDefaultColumn>IsDefault</IsDefaultColumn>
    </ParameterDefinition>
  </BeginPoints>

```

```

    <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:sequence>
                </xs:complexType>
              </xs:element>
            </xs:choice>
          </xs:complexType>
        </xs:element>
      </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_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"
ContentTypes="PpsScorecard" LastModified="2009-05-21T15:39:11" ModifiedBy="Sample User"
CheckedOutTo="" TemplateType="General"
RendererClassName="Microsoft.PerformancePoint.Scorecards.ServerRendering.ScorecardCtrl,
Microsoft.PerformancePoint.Scorecards.ServerRendering, Version=14.0.0.0, Culture=neutral,
PublicKeyToken=94de0004b6e3fcc5">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="MyScorecard" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="3" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/2_000" ItemType="Scorecard"
ItemGuid="22dd6dc3-247c-43b1-b246-6ab222e9001e" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
a268-4cf1-a9fc-76d4b2ddabe0" />
        <ConfiguredViews>
          <ConfiguredView Guid="9bb8d042-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>
<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-a268-4cfl-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="94d89bc7-7ald-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
  <BpmProperties />
  <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootRowHeader>
<RootColumnHeader Id="0" Guid="09055f3f-77da-4fb0-9482-d434fa95f81c"
DefinitionGuid="09055f3f-77da-4fb0-9482-d434fa95f81c" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children>
    <GridHeaderItem Id="1" Guid="13c063f8-e3ba-459d-a7f9-526fdc3b29de"
DefinitionGuid="13c063f8-e3ba-459d-a7f9-526fdc3b29de" DisplayText="Actual"
DimensionName="Scorecard_Measures__" DimensionValue="Actual" HeaderType="KpiActual"
GroupId="-3" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Actual" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />
      <BpmProperties />
      <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
        <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
        <FilterEmptyRows>false</FilterEmptyRows>
        <Position>NotDisplayed</Position>
        <PositionActual>NotDisplayed</PositionActual>
        <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
          <Position>Center</Position>
        </IndicatorSettings>
      </TargetSettings>
      <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
    <GridHeaderItem Id="2" Guid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f"
DefinitionGuid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f" DisplayText="Target"
DimensionName="Scorecard_Measures__" DimensionValue="Target" HeaderType="KpiTarget"
GroupId="-4" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"

```

```

IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Target" AggregationType="None">
  <Children />
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="" />
  <BpmProperties />
  <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
  <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right" />
  <FilterEmptyRows>false</FilterEmptyRows>
  <Position>Left</Position>
  <PositionActual>NotDisplayed</PositionActual>
  <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
  <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
  <Position>Center</Position>
  </IndicatorSettings>
</TargetSettings>
  <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="" />
  <BpmProperties />
  <TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
  <DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
  <DefaultRollupIndicatorLocation ItemUrl="" />
  <CellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>
</ConfiguredView>
</ConfiguredViews>
<EndPoints>
  <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
AcceptsMultipleFilterLinks="true" />
  <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
AcceptsMultipleFilterLinks="false" />
  <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
AcceptsMultipleFilterLinks="false" />
  <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
AcceptsMultipleFilterLinks="true" />
  <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
date-time" AcceptsMultipleFilterLinks="true" />
</EndPoints>
<BeginPoints>
<ParameterDefinition>
  <ParameterUniqueName>0f6ca5f9-e8d9-4fd9-bf4e-d6aa03f2d745</ParameterUniqueName>
<DisplayValues>
  <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
    <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
      <xs:complexType>
        <xs:choice minOccurs="0" maxOccurs="unbounded">
          <xs:element name="ParameterData" msdata:Locale="en-US">
            <xs:complexType>
              <xs:sequence>

```

```

        <xs:element name="Key" type="xs:string" minOccurs="0" />
        <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
        <xs:element name="KpiId" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
        <xs:element name="Name" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
        <xs:element name="Description" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
        <xs:element name="Person_x0020_Responsible" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
    </xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_Kpi</CustomDefinition>
<ParameterProviderId>ParameterScorecardKpiProvider</ParameterProviderId>
<DisplayName>KPI</DisplayName>
<EmitterType>BothAConditionalVisibilityAndParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
<ParameterUniqueName>c9b6e4c4-4f13-4d17-99b9-1b7f77fafd34</ParameterUniqueName>
<DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
            <xs:complexType>
                <xs:choice minOccurs="0" maxOccurs="unbounded">
                    <xs:element name="ParameterData" msdata:Locale="en-US">
                        <xs:complexType>
                            <xs:sequence>
                                <xs:element name="Key" type="xs:string" minOccurs="0" />
                                <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                                <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                                <xs:element name="CellDisplay" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                            </xs:sequence>
                        </xs:complexType>
                    </xs:element>
                </xs:choice>
            </xs:complexType>
        </xs:element>
    </xs:schema>

```



```

    <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
  </DisplayValues>
  <CustomDefinition>BeginPoint_ScorecardCell</CustomDefinition>
  <ParameterProviderId>ParameterScorecardCellProvider</ParameterProviderId>
  <DisplayName>Cell</DisplayName>
  <EmitterType>ParameterEmitter</EmitterType>
  <KeyColumn>Key</KeyColumn>
  <ParentKeyColumn>ParentKey</ParentKeyColumn>
  <DisplayColumn>DisplayValue</DisplayColumn>
  <IsDefaultColumn>IsDefault</IsDefaultColumn>
  <DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>cb138e38-09b0-42e1-8219-b26d3ffba337</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="ParameterData" msdata:Locale="en-US">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="Key" type="xs:string" minOccurs="0" />
                  <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                  <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                  <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs: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>
        </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>

```

```
</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" TIFFormula="" TICurrentDateTime="">
        <Cells>
          <Table>
            <Keys>
              <string>/PerformancePoint/Lists/Dashboard
Content/4_.000:/PerformancePoint/Lists/Dashboard Content/4_.0001_Actual:Actual1_</string>
              <string>/PerformancePoint/Lists/Dashboard
Content/4_.000:/PerformancePoint/Lists/Dashboard Content/4_.0001_Target:Target2_</string>
              <string>Actual:Actual1_</string>
              <string>Target:Target2_</string>
            </Keys>
            <Values>
              <GridCell Value="29358677.2207" ActualValue="29358677.2207" Score="0" Weight="1"
BestChildScore="0" WorstChildScore="0" IsValueInError="false" HasAnnotation="false"
IsRollupScore="false" ValueSource="SourceData" IsValidScore="true">
                <Properties>
                  <Keys />
                  <Values />
                </Properties>
                <DisplayElements>
                  <GridDisplayElement xsi:type="GridDisplayElementActual" Status="0"
Value="29358677.2207" OverrideValue="29358677.2207">
                    <Text>$29,358,677.22</Text>
                    <TooltipText />
                  </GridDisplayElement>
                </DisplayElements>
                <IndicatorLocation ItemUrl="" />
                <InBand>-1</InBand>
              </GridCell>
              <GridCell Value="1" ActualValue="29358677.2207" Score="100" Weight="1"
BestChildScore="100" WorstChildScore="100" IsValueInError="false" HasAnnotation="false"
IsRollupScore="false" ValueSource="SourceData" IsValidScore="true">
                <Properties>
                  <Keys />
                  <Values />
                </Properties>
                <DisplayElements>
                  <GridDisplayElement xsi:type="GridDisplayElementTarget" Status="0" Value="1"
OverrideValue="1">
                    <Text>1</Text>
                    <TooltipText />
                  </GridDisplayElement>
                  <GridDisplayElement xsi:type="GridDisplayElementIndicator" Status="0"
IndicatorBand="3">
                    <Text>On Target</Text>
                    <TooltipText>On Target</TooltipText>
```

```

        <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_.000" />
    </GridDisplayElement>
    <GridDisplayElement xsi:type="GridDisplayElementVariance" Status="0"
Value="29358676.2207" OverrideValue="2935867622">
        <Text>2,935,867,622%</Text>
        <TooltipText />
    </GridDisplayElement>
</DisplayElements>
    <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_.000" />
    <InBand>3</InBand>
</GridCell>
    <GridCell Value="0" ActualValue="0" Score="0" Weight="1" BestChildScore="0"
WorstChildScore="0" IsValueInError="false" HasAnnotation="false" IsRollupScore="false"
ValueSource="Default" IsValidScore="true">
        <Properties>
            <Keys />
            <Values />
        </Properties>
        <DisplayElements />
        <IndicatorLocation ItemUrl="" />
    </InBand>-1</InBand>
</GridCell>
    <GridCell Value="0" ActualValue="0" Score="0" Weight="1" BestChildScore="0"
WorstChildScore="0" IsValueInError="false" HasAnnotation="false" IsRollupScore="false"
ValueSource="Default" IsValidScore="true">
        <Properties>
            <Keys />
            <Values />
        </Properties>
        <DisplayElements />
        <IndicatorLocation ItemUrl="" />
    </InBand>-1</InBand>
</GridCell>
</Values>
</Table>
</Cells>
    <RootRowHeader Id="0" Guid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f"
DefinitionGuid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
        <Children>
            <GridHeaderItem Id="1" Guid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3"
DefinitionGuid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3" DisplayText="InternetSales"
DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard Content/4_.000"
HeaderType="Kpi" GroupId="-4" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
                <Children />
            <OverrideIndicatorLocation ItemUrl="" />
        </Children>
    </RootRowHeader>

```

```

    <LinkedKpiLocation 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-a268-4cfl-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="94d89bc7-7ald-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cfl-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>

```

```

</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>

```

```
</soap:Envelope>
```

## 4.2 Create and Use a DataSource

This scenario involves the creation of a **DataSource** complex type (section [2.2.4.85](#)). The protocol client creates a **DataSource**, tests connectivity to that **DataSource**, and retrieves dimension (1) data from the **DataSource**.

It is assumed that an analysis server (2) (cubes3) exists with a database (Adventure Works DW) and a cube (Adventure Works).

### 4.2.1 CreateDataSource

The protocol client calls the **CreateDataSource** operation (section [3.1.4.3](#)) to create a new **DataSource** complex type (section [2.2.4.85](#)).

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateDataSource xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <listUrl>/PerformancePoint/Data Sources</listUrl>
      <dataSource Folder="" CreatedBy="" CreatedDate="2009-05-21T12:59:13"
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>
    </CreateDataSource>
  </soap:Body>
</soap:Envelope>
```



```

    </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 (1) 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 (1).

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 (1).

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" encoding="UTF-8"?>
<wsdl:definitions xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
xmlns:s1="http://microsoft.com/wsdl/types/"
xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema xmlns:qdata="http://performancepoint.microsoft.com/OLAPQueryData"
xmlns:query="http://schemas.microsoft.com/performancepoint/2007/03/query"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards">
      <xs: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>
</wsdl:definitions>
```

```

<xs:complexType name="FirstClassElement" abstract="true">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Element">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Version"
type="tns:ElementVersion"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Location"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="Folder" type="xs:string"/>
      <xs:attribute name="CreatedBy" type="xs:string"/>
      <xs:attribute name="CreatedDate" type="xs:dateTime" use="required"/>
      <xs:attribute name="ContentType" type="tns:FCOContentType" use="required"/>
      <xs:attribute name="LastModified" type="xs:dateTime" use="required"/>
      <xs:attribute name="ModifiedBy" type="xs:string"/>
      <xs:attribute name="CheckedOutTo" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="Element" abstract="true">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Properties"
type="tns:ArrayOfBpmProperty"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Comments" type="tns:ArrayOfComment"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfBpmProperty">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="BpmProperty" nillable="true"
type="tns:BpmProperty"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="BpmProperty" abstract="true">
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="DisplayName" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
  <xs:attribute name="Required" type="xs:boolean" use="required"/>
  <xs:attribute name="Visible" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="BpmPropertyUser">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Login" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyLinkBase">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmProperty">
      <xs:attribute name="Hyperlink" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyHyperlink">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmPropertyLinkBase"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="BpmPropertyHyperlink2">

```

```

    <xs:complexContent mixed="false">
      <xs:extension base="tns:BpmPropertyLinkBase"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="BpmPropertyDate">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:BpmProperty">
        <xs:attribute name="Date" type="xs:dateTime" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="BpmPropertyLongText">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:BpmProperty">
        <xs:attribute name="Text" type="xs:string"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="BpmPropertyText">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:BpmProperty">
        <xs:attribute name="Text" type="xs:string"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="BpmPropertyDecimal">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:BpmProperty">
        <xs:attribute name="Decimal" type="xs:decimal" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="BpmPropertyList">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:BpmProperty">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="ListItems"
type="tns:ArrayOfBpmPropertyListItem"/>
        </xs:sequence>
        <xs:attribute name="SelectedIndex" type="xs:int" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfBpmPropertyListItem">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="BpmPropertyListItem"
nillable="true" type="tns:BpmPropertyListItem"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="BpmPropertyListItem">
    <xs:attribute name="Name" type="xs:string"/>
    <xs:attribute name="Value" type="xs:string"/>
  </xs:complexType>
  <xs:complexType name="BpmPropertyBool">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:BpmProperty">
        <xs:attribute name="Value" type="xs:boolean" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>

```

```

</xs:complexType>
<xs:complexType name="ArrayOfComment">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Comment" nillable="true"
type="tns:Comment"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Comment">
  <xs:attribute name="Guid" type="s1:guid" use="required"/>
  <xs:attribute name="CreatedBy" type="xs:string"/>
  <xs:attribute name="CreateDate" 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:enumeration value="Organization"/>
    <xs:enumeration value="Other"/>
  </xs:restriction>
</xs:simpleType>

```

```

        <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:attribute name="ValueSource" type="tns:ValueSources" use="required"/>
        </xs:extension>
    </xs:complexContent>

```

```

    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="SecondClassElement" abstract="true">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:Element">
        <xs:attribute name="Guid" type="s1:guid" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfDefaultDimensionSetting">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="DefaultDimensionSetting"
nillable="true" type="tns:DefaultDimensionSetting"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="DefaultDimensionSetting">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:Dimension">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="unbounded" name="Members"
type="tns:Member"/>
        </xs:sequence>
        <xs:attribute name="IsVisible" type="xs:boolean" use="required"/>
        <xs:attribute name="ShowAsSlider" type="xs:boolean" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="Dimension">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:NameInfo">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="MeasureGroupNames"
type="tns:ArrayOfString"/>
          <xs:element minOccurs="1" maxOccurs="1" name="Type"
type="tns:DimensionTypeEnum"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Hierarchies"
type="tns:ArrayOfHierarchy"/>
          <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
        </xs:sequence>
        <xs:attribute name="IsMeasureDimension" type="xs:boolean" use="required"/>
        <xs:attribute name="DefaultMemberName" type="xs:string"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="NameInfo">
    <xs:attribute name="DisplayName" type="xs:string"/>
    <xs:attribute name="UniqueName" type="xs:string"/>
    <xs:attribute name="Description" type="xs:string"/>
  </xs:complexType>
  <xs:complexType name="Level">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:NameInfo">
        <xs:attribute name="DimensionUniqueName" type="xs:string"/>
        <xs:attribute name="HierarchyUniqueName" type="xs:string"/>
        <xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
        <xs:attribute name="LevelNumber" type="xs:int" use="required"/>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>

```



```

<xs:complexType name="Hierarchy">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:NameInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
      </xs:sequence>
      <xs:attribute name="DefaultMemberName" type="xs:string"/>
      <xs:attribute name="DimensionUniqueName" type="xs:string"/>
      <xs:attribute name="DisplayFolder" type="xs:string"/>
      <xs:attribute name="HierarchyOrigin" type="tns:HierarchyOrigin" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfLevel">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Level" nillable="true"
type="tns:Level"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="HierarchyOrigin">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AttributeHierarchy"/>
    <xs:enumeration value="ParentChildHierarchy"/>
    <xs:enumeration value="UserHierarchy"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfString">
  <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="MemberOperationHide">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MemberOperationDrillUp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MemberOperationChildren">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MemberOperationAllDescendants">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>
<xs:simpleType name="MemberType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Regular"/>
        <xs:enumeration value="Operation"/>
        <xs:enumeration value="Default"/>
        <xs:enumeration value="Formula"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="KpiNumberFormatProperties">
    <xs:attribute name="Multiplier" type="xs:decimal" use="required"/>
    <xs:attribute name="FormatType" type="tns:FormatType" use="required"/>
    <xs:attribute name="CurrencySymbol" type="xs:string"/>
    <xs:attribute name="DecimalPlaces" type="xs:int" use="required"/>
    <xs:attribute name="NegativeSymbol" type="tns:FormatNegativeSymbol" use="required"/>
    <xs:attribute name="ShowZeroAs" type="xs:string"/>
    <xs:attribute name="UseThousandsSeparator" type="xs:boolean" use="required"/>
    <xs:attribute name="AdditionalTextLeft" type="xs:string"/>
    <xs:attribute name="AdditionalTextRight" type="xs:string"/>
</xs:complexType>
<xs:simpleType name="FormatType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Default"/>
        <xs:enumeration value="Number"/>
        <xs:enumeration value="Currency"/>
        <xs:enumeration value="Percentage"/>
        <xs:enumeration value="Unknown"/>
    </xs:restriction>
</xs:simpleType>

```

```

<xs:simpleType name="FormatNegativeSymbol">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NegativeSign"/>
    <xs:enumeration value="Parenthesis"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CalculatedFormulaInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AliasInfoCollection"
type="tns:ArrayOfAliasInfo"/>
  </xs:sequence>
  <xs:attribute name="Formula" type="xs:string"/>
</xs:complexType>
<xs:complexType name="ArrayOfAliasInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="AliasInfo" nillable="true"
type="tns:AliasInfo"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="AliasInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AliasCalculationInfo"
type="tns:KpiMeasure"/>
  </xs:sequence>
  <xs:attribute name="AliasName" type="xs:string"/>
</xs:complexType>
<xs:simpleType name="AggregateTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="Minimum"/>
    <xs:enumeration value="Maximum"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Average"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="KpiPattern">
  <xs:restriction base="xs:string">
    <xs:enumeration value="IncreasingIsBetter"/>
    <xs:enumeration value="DecreasingIsBetter"/>
    <xs:enumeration value="CloserToTargetIsBetter"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ValueSources">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Default"/>
    <xs:enumeration value="NoValue"/>
    <xs:enumeration value="SourceData"/>
    <xs:enumeration value="Text"/>
    <xs:enumeration value="AverageRollup"/>
    <xs:enumeration value="MinRollup"/>
    <xs:enumeration value="MaxRollup"/>
    <xs:enumeration value="TotalRollup"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="Target">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:KpiMeasure">
      <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="StatedScore"
type="tns:KpiMeasure"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RelatedActualId" type="s1:guid"/>
    </xs:sequence>
    <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="Banding">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomBoundary"
type="tns:ArrayOfDecimal"/>
    </xs:sequence>
    <xs:attribute name="Type" type="tns:BandType" use="required"/>
    <xs:attribute name="BandValue" type="xs:string"/>
    <xs:attribute name="ActualWorst" type="xs:decimal" use="required"/>
    <xs:attribute name="SpreadMinimum" type="xs:decimal" use="required"/>
    <xs:attribute name="SpreadMaximum" type="xs:decimal" use="required"/>
</xs:complexType>
<xs:complexType name="ArrayOfDecimal">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="decimal" type="xs:decimal"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="BandType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Normalized"/>
        <xs:enumeration value="Actual"/>
        <xs:enumeration value="StatedScore"/>
    </xs:restriction>
</xs:simpleType>
<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: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="s1:guid" use="required"/>
    <xs:attribute name="BandIndex" type="xs:int" use="required"/>
  </xs:complexType>

```

```

<xs:complexType name="ToolbarOptions">
  <xs:attribute name="ShowInlineText" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowStatusFilter" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolTips" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowCollapse" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowMode" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowExpand" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowToolbarItemsLabel" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowDefaultRollup" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowWorstChildRollup" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowIndicatorCount" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="GridViewDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CornerCellFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DefaultRollupIndicatorId"
type="s1:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreQueryTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PostQueryTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreRenderTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PerUserTransforms"
type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellBorderColor"
type="tns:GridColor"/>
  </xs:sequence>
  <xs:attribute name="EmptyCell" type="xs:string"/>
  <xs:attribute name="InvalidCell" type="xs:string"/>
  <xs:attribute name="ShowGridLines" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowHiddenHeaders" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowMetricHeaders" type="xs:boolean" use="required"/>
  <xs:attribute name="ShowPlusMinus" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="GridFormatInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FontInfo" type="tns:GridFontInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ForeColor" type="tns:GridColor"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="tns:GridColor"/>
  </xs:sequence>
  <xs:attribute name="TextWrap" type="tns:Trinary" use="required"/>
  <xs:attribute name="VerticalAlignment" type="tns:VerticalAlignments" use="required"/>
  <xs:attribute name="HorizontalAlignment" type="tns:HorizontalAlignments"
use="required"/>
</xs:complexType>
<xs:complexType name="GridFontInfo">
  <xs:attribute name="FamilyName" type="xs:string"/>
  <xs:attribute name="SizeInPoints" type="xs:float" use="required"/>
  <xs:attribute name="Bold" type="tns:Trinary" use="required"/>
  <xs:attribute name="Italic" type="tns:Trinary" use="required"/>
  <xs:attribute name="Underline" type="tns:Trinary" use="required"/>

```

```

    <xs:attribute name="Strikeout" type="tns:Trinary" use="required"/>
  </xs:complexType>
  <xs:simpleType name="Trinary">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Undefined"/>
      <xs:enumeration value="False"/>
      <xs:enumeration value="True"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="GridColor">
    <xs:attribute name="A" type="xs:unsignedByte" use="required"/>
    <xs:attribute name="R" type="xs:unsignedByte" use="required"/>
    <xs:attribute name="G" type="xs:unsignedByte" use="required"/>
    <xs:attribute name="B" type="xs:unsignedByte" use="required"/>
  </xs:complexType>
  <xs:simpleType name="VerticalAlignments">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Undefined"/>
      <xs:enumeration value="Top"/>
      <xs:enumeration value="Middle"/>
      <xs:enumeration value="Bottom"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="HorizontalAlignments">
    <xs:restriction base="xs:string">
      <xs:enumeration value="Undefined"/>
      <xs:enumeration value="Left"/>
      <xs:enumeration value="Center"/>
      <xs:enumeration value="Right"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="GridHeaderItem">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="HeaderFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="CellFormatInfo"
type="tns:GridFormatInfo"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Children"
type="tns:ArrayOfGridHeaderItem"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SerializeTag"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DimensionMember" type="tns:Member"/>
      <xs:element minOccurs="0" maxOccurs="1" name="OverrideIndicatorLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Banding" type="tns:Banding"/>
      <xs:element minOccurs="0" maxOccurs="1" name="LinkedKpiLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="BpmProperties"
type="tns:ArrayOfBpmProperty"/>
      <xs:element minOccurs="0" maxOccurs="1" name="TargetSettings"
type="tns:GridTargetSettings"/>
      <xs:element minOccurs="0" maxOccurs="1" name="TrendIndicatorLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
    <xs:attribute name="Id" type="xs:int" use="required"/>
    <xs:attribute name="Guid" type="s1:guid" use="required"/>
    <xs:attribute name="DefinitionGuid" type="s1:guid" use="required"/>
    <xs:attribute name="DisplayText" type="xs:string"/>
    <xs:attribute name="DimensionName" type="xs:string"/>
    <xs:attribute name="DimensionValue" type="xs:string"/>
    <xs:attribute name="HeaderType" type="tns:ScorecardNodeTypes" use="required"/>
  </xs:complexType>

```



```

<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="s1:char"/>
    <xs:element minOccurs="1" maxOccurs="1" name="int" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="double" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="string" nillable="true"
type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="dateTime" type="xs:dateTime"/>
  </xs:choice>
</xs:complexType>

```

```

        <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMemberTransform"
nillable="true" type="tns:ArrayOfMemberTransform"/>
        <xs:element minOccurs="1" maxOccurs="1" name="guid" type="s1:guid"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfString" nillable="true"
type="tns:ArrayOfString"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMember" nillable="true"
type="tns:ArrayOfMember"/>
        <xs:element minOccurs="1" maxOccurs="1" name="decimal" type="xs:decimal"/>
    </xs:choice>
</xs:complexType>
<xs:complexType name="ArrayOfMemberTransform">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="MemberTransform"
nillable="true" type="tns:MemberTransform"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="MemberTransform">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GroupId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CellPath" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Type"
type="tns:MemberTransformType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Operation"
type="tns:MemberTransformOperation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="MemberTransformType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Row"/>
        <xs:enumeration value="Column"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MemberTransformOperation">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Replace"/>
        <xs:enumeration value="DrillUp"/>
        <xs:enumeration value="DrillDown"/>
        <xs:enumeration value="Expand"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfMember">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Member" nillable="true"
type="tns:Member"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="ScorecardEmptyRowsFilterMode">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="AllValuesAreEmpty"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfEndPoint">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="EndPoint" nillable="true"
type="tns:EndPoint"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="EndPoint">

```

```

    <xs:attribute name="Category" type="tns:EndPointCategory" use="required"/>
    <xs:attribute name="UniqueName" type="xs:string"/>
    <xs:attribute name="DisplayName" type="xs:string"/>
    <xs:attribute name="AcceptsMultipleFilterLinks" type="xs:boolean" use="required"/>
  </xs:complexType>
  <xs:simpleType name="EndPointCategory">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="Axis"/>
      <xs:enumeration value="ColumnHierarchy"/>
      <xs:enumeration value="RowHierarchy"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:complexType name="ArrayOfParameterDefinition">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="ParameterDefinition"
nillable="true" type="tns:ParameterDefinition"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ParameterDefinition">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ParameterUniqueName"
type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DisplayValues">
        <xs:complexType>
          <xs:sequence>
            <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
            <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element minOccurs="0" maxOccurs="1" name="CustomDefinition" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ParameterProviderId"
type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="EmitterType"
type="tns:BeginPointEmitterType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="KeyColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ParentKeyColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DisplayColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="IsDefaultColumn" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DefaultPostFormula"
type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:simpleType name="BeginPointEmitterType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="BothAConditionalVisibilityAndParameterEmitter"/>
      <xs:enumeration value="ConditionalVisibilityEmitter"/>
      <xs:enumeration value="ParameterEmitter"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="CreateScorecardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CreateScorecardResult"
type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

```

```

    </xs:complexType>
  </xs:element>
  <xs:element name="UpdateScorecard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="UpdateScorecardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="UpdateScorecardResult"
type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetScorecard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetScorecardResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetScorecardResult"
type="tns:Scorecard"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="DeleteScorecard">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="DeleteScorecardResponse">
    <xs:complexType/>
  </xs:element>
  <xs:element name="CreateFilter">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="Filter">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:FirstClassElement">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="EndPoints"
type="tns:ArrayOfEndPoint"/>
    </xs:sequence>
    <xs:attribute name="SubTypeId" type="xs:string"/>
    <xs:attribute name="ReadOnly" type="xs:boolean" use="required"/>
    <xs:attribute name="SelectionMode" type="tns:FilterSelectionMode"
use="required"/>
    <xs:attribute name="Visualization" type="xs:string"/>
    <xs:attribute name="RendererClassName" type="xs:string"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:simpleType name="FilterSelectionMode">
    <xs:restriction base="xs:string">
        <xs:enumeration value="SingleSelect"/>
        <xs:enumeration value="MultiSelect"/>
    </xs:restriction>
</xs:simpleType>
<xs:element name="CreateFilterResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CreateFilterResult"
type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateFilterResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateFilterResult"
type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetFilterResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetFilterResult"
type="tns:Filter"/>
        </xs:sequence>
    </xs:complexType>

```

```

</xs:element>
<xs:element name="DeleteFilter">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteFilterResponse">
  <xs:complexType/>
</xs:element>
<xs:element name="CreateIndicator">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="Indicator">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="NoDataIndicatorBand"
type="tns:IndicatorBand"/>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorBands"
type="tns:ArrayOfIndicatorBand"/>
      </xs:sequence>
      <xs:attribute name="IndicatorType" type="tns:IndicatorType" use="required"/>
      <xs:attribute name="IsBuiltIn" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="IndicatorBand">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ImageData" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Color" type="xs:string"/>
  <xs:attribute name="BackColor" type="xs:string"/>
  <xs:attribute name="ToolTip" type="xs:string"/>
</xs:complexType>
<xs:complexType name="ArrayOfIndicatorBand">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="IndicatorBand"
nillable="true" type="tns:IndicatorBand"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="IndicatorType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Standard"/>
    <xs:enumeration value="Centered"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="CreateIndicatorResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateIndicatorResult"
type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>

```



```

        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateIndicator">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateIndicatorResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateIndicatorResult"
type="tns:Indicator"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetIndicator">
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    <xs:attribute name="ConfiguredViewId" type="s1:guid" use="required"/>
    <xs:attribute name="SubTypeId" type="xs:string"/>
    <xs:attribute name="RendererClassName" type="xs:string"/>
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type="tns:ReportView"/>
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type="tns:RepositoryLocation"/>
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type="tns:ReportView"/>
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type="s1:guid"/>
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name="GetLatestAnalyticReportVersionResult" type="xs:int"/>
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type="xs:string"/>

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type="tns:ArrayOfBpmProperty"/>
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type="tns:RepositoryLocation"/>
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  </xs:restriction>
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type="tns:RepositoryLocation"/>
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name="GetAllAnnotationsByScorecardLocationResult" type="tns:ArrayOfAnnotation"/>
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type="tns:RepositoryLocation"/>
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      <xs:attribute name="DisplayFolder" type="xs:string"/>
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```



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type="tns:ArrayOfNameInfo"/>
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```

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  </xs:complexType>
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<xs:element name="GetDimensionsResponse">
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  <xs:element name="QueryDimensionRootMembersFromDataSource">
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type="tns:ArrayOfMember"/>
        <xs:element minOccurs="1" maxOccurs="1" name="transformType"
type="tns:QueryTransformMembersType"/>
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      <xs:enumeration value="Parents"/>
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        <xs:enumeration value="AscendantsIntersect"/>
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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>
            <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:element name="QueryChildMembersByRangeFromDataSourceResponse">
    <xs:complexType>

```

```

        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1"
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"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryRelatedMemberFromDataSourceResponse">
      <xs:complexType>
        <xs:sequence>
          <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>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
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">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="QueryNamedSetsFromDataSourceResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="QueryNamedSetsFromDataSourceResult"
type="tns:ArrayOfNamedSet"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetAnnotationSetting">
    <xs:complexType/>
</xs:element>
<xs:complexType name="AnnotationSetting">
    <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>
            <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationSettingResult"
type="tns:AnnotationSetting"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ValidateKpi">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation"/>
        </xs:sequence>
    </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>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
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">
        <xs:enumeration value="SiteCollectionOrSite"/>
        <xs:enumeration value="SiteCollection"/>
        <xs:enumeration value="Site"/>
        <xs:enumeration value="List"/>
        <xs:enumeration value="DocumentLibrary"/>
        <xs:enumeration value="InvalidURL"/>
        <xs:enumeration value="AlreadyExists"/>
        <xs:enumeration value="NonexistentSiteCollection"/>
        <xs:enumeration value="NonexistentSite"/>
        <xs:enumeration value="PPSNotActivatedOnSiteCollection"/>
        <xs:enumeration value="URLZoneNotAllowed"/>
        <xs:enumeration value="NoAccess"/>
        <xs:enumeration value="InvalidSiteVersion"/>
    </xs:restriction>
</xs:simpleType>
<xs:element name="GetCurrentCultureLcid">
    <xs:complexType/>
</xs:element>
<xs:element name="GetCurrentCultureLcidResponse">
    <xs:complexType>
        <xs:sequence>

```

```

        <xs:element minOccurs="1" maxOccurs="1" name="GetCurrentCultureLcidResult"
type="xs:int"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="GetCurrentUserInfo">
    <xs:complexType/>
</xs:element>
<xs:element name="GetCurrentUserInfoResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="userName" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="userDisplayName" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GenerateView">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pageFilters"
type="tns:ArrayOfMember"/>
            <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="DictionaryWrapperOfStringPropertyBag">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Values"
type="tns:ArrayOfPropertyBag"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfPropertyBag">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="PropertyBag" nillable="true"
type="tns:PropertyBag"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="GridViewData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Cells" type="tns:GridCellSet"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader"
type="tns:GridHeaderItem"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PreQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PostQueryTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PreRenderTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PerUserTransforms"
type="tns:ArrayOfGridViewTransformReference"/>
    </xs:sequence>
</xs:complexType>

```



```

        <xs:element minOccurs="0" maxOccurs="1" name="PageFilters"
type="tns:ArrayOfMember"/>
    </xs:sequence>
    <xs:attribute name="ScorecardViewId" type="s1:guid" use="required"/>
    <xs:attribute name="Cached" type="xs:boolean" use="required"/>
    <xs:attribute name="CacheExpiration" type="xs:dateTime" use="required"/>
    <xs:attribute name="DefaultRollupIndicatorId" type="s1:guid" use="required"/>
    <xs:attribute name="EmptyCell" type="xs:string"/>
    <xs:attribute name="InvalidCell" type="xs:string"/>
    <xs:attribute name="TIFormula" type="xs:string"/>
    <xs:attribute name="TICurrentDateTime" type="xs:string"/>
</xs:complexType>
<xs:complexType name="GridCellSet">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Table"
type="tns:DictionaryWrapperOfStringGridCell"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="DictionaryWrapperOfStringGridCell">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Keys" type="tns:ArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfGridCell"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfGridCell">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="GridCell" nillable="true"
type="tns:GridCell"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="GridCell">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="FormatInfo"
type="tns:GridFormatInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Properties" type="tns:PropertyBag"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayElements"
type="tns:ArrayOfGridDisplayElement"/>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="InBand" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CellAnnotation"
type="tns:Annotation"/>
    </xs:sequence>
    <xs:attribute name="Value" type="xs:decimal" use="required"/>
    <xs:attribute name="ActualValue" type="xs:decimal" use="required"/>
    <xs:attribute name="Score" type="xs:decimal" use="required"/>
    <xs:attribute name="Weight" type="xs:decimal" use="required"/>
    <xs:attribute name="BestChildScore" type="xs:decimal" use="required"/>
    <xs:attribute name="WorstChildScore" type="xs:decimal" use="required"/>
    <xs:attribute name="IsValueInError" type="xs:boolean" use="required"/>
    <xs:attribute name="HasAnnotation" type="xs:boolean" use="required"/>
    <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
    <xs:attribute name="ValueSource" type="tns:ValueSources" use="required"/>
    <xs:attribute name="IsValidScore" type="xs:boolean" use="required"/>
</xs:complexType>
<xs:complexType name="ArrayOfGridDisplayElement">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="GridDisplayElement"
nillable="true" type="tns:GridDisplayElement"/>
    </xs:sequence>

```

```

</xs:complexType>
<xs:complexType name="GridDisplayElement" abstract="true">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Text" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TooltipText" type="xs:string"/>
  </xs:sequence>
  <xs:attribute name="Status" type="tns:GridCellElementStatus" use="required"/>
</xs:complexType>
<xs:simpleType name="GridCellElementStatus">
  <xs:restriction base="xs:string">
    <xs:enumeration value="0"/>
    <xs:enumeration value="1"/>
    <xs:enumeration value="2"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="GridDisplayElementHyperLink">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement">
      <xs:attribute name="LinkUrl" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementIndicator">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementText">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementIndicatorText">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementText">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="IndicatorLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="IndicatorBand" type="xs:int" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementNumber" abstract="true">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement">
      <xs:attribute name="Value" type="xs:decimal" use="required"/>
      <xs:attribute name="OverrideValue" type="xs:decimal" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementActual">
  <xs:complexContent mixed="false">

```

```

        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementTarget">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementVariance">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementScore">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementAggregation">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:GridDisplayElementNumber"/>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfGridViewTransformReference">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="GridViewTransformReference"
nillable="true" type="tns:GridViewTransformReference"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="GenerateViewResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GenerateViewResult"
type="tns:GridViewData"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GenerateViewDirect">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard"/>
            <xs:element minOccurs="0" maxOccurs="1" name="kpis" type="tns:ArrayOfKpi"/>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSources"
type="tns:ArrayOfDataSource"/>
            <xs:element minOccurs="0" maxOccurs="1" name="indicators"
type="tns:ArrayOfIndicator"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pageFilters"
type="tns:ArrayOfMember"/>
            <xs:element minOccurs="0" maxOccurs="1" name="propertyBags"
type="tns:DictionaryWrapperOfStringPropertyBag"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="ArrayOfDataSource">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="DataSource" nillable="true"
type="tns:DataSource"/>
    </xs:sequence>
</xs:complexType>

```

```

<xs:complexType name="ArrayOfIndicator">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Indicator" nillable="true"
type="tns:Indicator"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="GenerateViewDirectResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GenerateViewDirectResult"
type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetAsKpis">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetAsKpisResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAsKpisResult"
type="tns:ArrayOfKpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="CreateDashboard">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dashboard" type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="Dashboard">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Pages"
type="tns:ArrayOfDashboardElement"/>
      </xs:sequence>
      <xs:attribute name="TemplateType" type="xs:string"/>
      <xs:attribute name="DeploymentPath" type="xs:string"/>
      <xs:attribute name="SitePath" type="xs:string"/>
      <xs:attribute name="MasterPagePath" type="xs:string"/>
      <xs:attribute name="MasterPageDisplayName" type="xs:string"/>
      <xs:attribute name="PageList" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfDashboardElement">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="DashboardElement"
nillable="true" type="tns:DashboardElement"/>
  </xs:sequence>

```

```

</xs:complexType>
<xs:complexType name="DashboardElement" abstract="true">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SecondClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Height"
type="tns:DashboardElementSize"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Width"
type="tns:DashboardElementSize"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="DashboardElementSize">
  <xs:attribute name="Measurement" type="xs:int" use="required"/>
  <xs:attribute name="Units" type="tns:SizeType" use="required"/>
</xs:complexType>
<xs:simpleType name="SizeType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="AutoSize"/>
    <xs:enumeration value="Absolute"/>
    <xs:enumeration value="Percent"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="DashboardItem">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:DashboardElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="InboundParameters"
type="tns:ArrayOfParameterMapping"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UnderlyingElementLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="UnderlyingElementTypeName" type="xs:string"/>
      <xs:attribute name="AutoSizeWidth" type="xs:boolean" use="required"/>
      <xs:attribute name="AutoSizeHeight" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfParameterMapping">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ParameterMapping"
nillable="true" type="tns:ParameterMapping"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ParameterMapping">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ConditionalData">
      <xs:complexType>
        <xs:sequence>
          <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
          <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
  <xs:attribute name="EndPointUniqueName" type="xs:string"/>

```

```

<xs:attribute name="Id" type="sl:guid" use="required"/>
<xs:attribute name="SourceColumnName" type="xs:string"/>
<xs:attribute name="DashboardItemId" type="sl:guid" use="required"/>
<xs:attribute name="ParameterUniqueName" type="xs:string"/>
<xs:attribute name="PostFormula" type="xs:string"/>
<xs:attribute name="IsConditionalDataEnabled" type="xs:boolean" use="required"/>
<xs:attribute name="IsDefaultVisibility" type="xs:boolean" use="required"/>
</xs:complexType>
<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: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/>

```

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</xs:element>
<xs:element name="GetParameterDisplayData">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterDefinition"
type="tns:ParameterDefinition"/>
      <xs:element minOccurs="0" maxOccurs="1" name="parameterSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="gridViewData"
type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetParameterDisplayDataResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetParameterDisplayDataResult">
        <xs:complexType>
          <xs:sequence>
            <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax"/>
            <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax"/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="QueryTimeIntelligence">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="1" maxOccurs="1" name="currentTime" type="xs:dateTime"/>
      <xs: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" type="tns:ListLocation"/>
      <xs:element minOccurs="1" maxOccurs="1" name="SupportedTypes"
type="tns:FCOContentType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="Title" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ListId" type="s1:guid"/>
    </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"
use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute default="00000000-0000-0000-0000-000000000000"
name="SpSiteCollectionGuid" use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpSiteGuid"
use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
      <xs:attribute default="00000000-0000-0000-0000-000000000000" name="SpListGuid"
use="optional">
        <xs:simpleType>
          <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
          </xs:restriction>
        </xs:simpleType>
      </xs:attribute>
    </xs:complexType>

```

```

    <xs: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: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: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:restriction>
</xs:simpleType>

```

```

        <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" mixed="true">
    <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: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>
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type="tns:Parameter"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Parameter">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DefaultValue" type="xs:string"/>
    </xs:sequence>
    <xs:attribute name="Name" type="xs:string"/>
</xs:complexType>
<xs:complexType name="QueryState">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Axes" type="tns:ArrayOfAxis"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsEnabled" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UnknownFilterParameter"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShowDataSourceFormatting"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
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</xs:complexType>
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    <xs:sequence>
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  </xs:complexType>
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type="tns:AnalyticGridReportView"/>
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    <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="s1:guid" use="required"/>
    <xs:attribute name="PagePath" type="xs:string"/>
    <xs:attribute name="ConfigOptions" type="xs:string"/>
  </xs:complexType>
  <xs:element name="SqlReportViewData" nillable="true" type="tns:SqlReportViewData"/>
  <xs:complexType name="SqlReportViewData">
    <xs:attribute name="ReportName" type="xs:string"/>
    <xs:attribute name="ServerAddress" type="xs:string"/>
    <xs:attribute name="ServerUrl" type="xs:string"/>
    <xs:attribute name="ReportPath" type="xs:string"/>
    <xs:attribute name="ReportUrl" type="xs:string"/>
    <xs:attribute name="ReportMode" type="tns:SqlReportViewDataServerMode"
use="required"/>
    <xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowParameters" type="xs:boolean" use="required"/>
    <xs:attribute name="ShowDocMap" type="xs:boolean" use="required"/>
    <xs:attribute name="DocMapId" type="xs:string"/>
    <xs:attribute name="Zoom" type="xs:string"/>
    <xs:attribute name="Section" type="xs:string"/>
    <xs:attribute name="Format" type="xs:string"/>
  </xs:complexType>
  <xs:simpleType name="SqlReportViewDataServerMode">
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      <xs:enumeration value="SharepointIntegrated"/>
      <xs:enumeration value="ReportCenter"/>
    </xs:restriction>
  </xs:simpleType>

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</xs:simpleType>
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  <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"/>
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<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:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

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        <xs:enumeration value="AllowRecalculation"/>
        <xs:enumeration value="ShowVisibleItemButton"/>
    </xs:restriction>
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</xs:list>
</xs:simpleType>
<xs:element name="ListLocation" nillable="true" type="tns:ListLocation"/>
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    </xs:sequence>
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</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>

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<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"/>
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      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
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    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDescendantsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation">
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        <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>

```

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<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>
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<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"/>
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</xs:complexType>
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<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>

```

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        <xs:element minOccurs="0" maxOccurs="1" name="ReferenceDimension"
type="tns:Dimension"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ReferenceLevel"
type="tns:DateAggregationTypes"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ReferenceMember"
type="tns:Member"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ReferenceDateTime"
type="xs:dateTime"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelBindings"
type="tns:ArrayOfTimeIntelligenceLevelBinding"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="TimeIntelligenceSettings" abstract="true">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Enabled" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfTimeIntelligenceLevelBinding">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeIntelligenceLevelBinding"
nillable="true" type="tns:TimeIntelligenceLevelBinding"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeIntelligenceLevelBinding">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Level"
type="tns:DateAggregationTypes"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeIntelligencePostFormulaDefinition">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource"
type="tns:DataSource"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSources"
type="tns:ArrayOfDataSource"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="GraphicsUnit">
    <xs:restriction base="xs:string">
        <xs:enumeration value="World"/>
        <xs:enumeration value="Display"/>
        <xs:enumeration value="Pixel"/>
        <xs:enumeration value="Point"/>
        <xs:enumeration value="Inch"/>
        <xs:enumeration value="Document"/>
        <xs:enumeration value="Millimeter"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FontStyle">
    <xs:list>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="Regular"/>
                <xs:enumeration value="Bold"/>
                <xs:enumeration value="Italic"/>
                <xs:enumeration value="Underline"/>
                <xs:enumeration value="Strikeout"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
</xs:simpleType>

```

```

        </xs:restriction>
    </xs:simpleType>
</xs:list>
</xs:simpleType>
<xs:import namespace="http://microsoft.com/wsdl/types/" />
<xs:import namespace="http://www.w3.org/2001/XMLSchema" />
</xs:schema>
<xs:schema elementFormDefault="qualified"
targetNamespace="http://microsoft.com/wsdl/types/">
    <xs:simpleType name="guid">
        <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-
9a-fA-F]{12}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="char">
        <xs:restriction base="xs:unsignedShort"/>
    </xs:simpleType>
</xs:schema>
</wsdl:types>
<wsdl:portType name="PPSAuthoringServiceSoap">
    <wsdl:operation name="CreateDataSource">
        <wsdl:input message="tns:CreateDataSourceSoapIn"/>
        <wsdl:output message="tns:CreateDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="UpdateDataSource">
        <wsdl:input message="tns:UpdateDataSourceSoapIn"/>
        <wsdl:output message="tns:UpdateDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetDataSource">
        <wsdl:input message="tns:GetDataSourceSoapIn"/>
        <wsdl:output message="tns:GetDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="DeleteDataSource">
        <wsdl:input message="tns>DeleteDataSourceSoapIn"/>
        <wsdl:output message="tns>DeleteDataSourceSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="CreateKpi">
        <wsdl:input message="tns:CreateKpiSoapIn"/>
        <wsdl:output message="tns:CreateKpiSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="UpdateKpi">
        <wsdl:input message="tns:UpdateKpiSoapIn"/>
        <wsdl:output message="tns:UpdateKpiSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetKpisFromScorecard">
        <wsdl:input message="tns:GetKpisFromScorecardSoapIn"/>
        <wsdl:output message="tns:GetKpisFromScorecardSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetKpi">
        <wsdl:input message="tns:GetKpiSoapIn"/>
        <wsdl:output message="tns:GetKpiSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="DeleteKpi">
        <wsdl:input message="tns>DeleteKpiSoapIn"/>
        <wsdl:output message="tns>DeleteKpiSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="CreateScorecard">
        <wsdl:input message="tns:CreateScorecardSoapIn"/>

```

```

    <wsdl:output message="tns:CreateScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateScorecard">
    <wsdl:input message="tns:UpdateScorecardSoapIn"/>
    <wsdl:output message="tns:UpdateScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetScorecard">
    <wsdl:input message="tns:GetScorecardSoapIn"/>
    <wsdl:output message="tns:GetScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteScorecard">
    <wsdl:input message="tns:DeleteScorecardSoapIn"/>
    <wsdl:output message="tns:DeleteScorecardSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateFilter">
    <wsdl:input message="tns:CreateFilterSoapIn"/>
    <wsdl:output message="tns:CreateFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateFilter">
    <wsdl:input message="tns:UpdateFilterSoapIn"/>
    <wsdl:output message="tns:UpdateFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetFilter">
    <wsdl:input message="tns:GetFilterSoapIn"/>
    <wsdl:output message="tns:GetFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteFilter">
    <wsdl:input message="tns:DeleteFilterSoapIn"/>
    <wsdl:output message="tns:DeleteFilterSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateIndicator">
    <wsdl:input message="tns:CreateIndicatorSoapIn"/>
    <wsdl:output message="tns:CreateIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateIndicator">
    <wsdl:input message="tns:UpdateIndicatorSoapIn"/>
    <wsdl:output message="tns:UpdateIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetIndicator">
    <wsdl:input message="tns:GetIndicatorSoapIn"/>
    <wsdl:output message="tns:GetIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteIndicator">
    <wsdl:input message="tns:DeleteIndicatorSoapIn"/>
    <wsdl:output message="tns:DeleteIndicatorSoapOut"/>
</wsdl:operation>
<wsdl:operation name="CreateReportView">
    <wsdl:input message="tns:CreateReportViewSoapIn"/>
    <wsdl:output message="tns:CreateReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="UpdateReportView">
    <wsdl:input message="tns:UpdateReportViewSoapIn"/>
    <wsdl:output message="tns:UpdateReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetReportView">
    <wsdl:input message="tns:GetReportViewSoapIn"/>
    <wsdl:output message="tns:GetReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="DeleteReportView">

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    <wsdl:input message="tns:DeleteReportViewSoapIn"/>
    <wsdl:output message="tns:DeleteReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetAnalyticReportView">
    <wsdl:input message="tns:GetAnalyticReportViewSoapIn"/>
    <wsdl:output message="tns:GetAnalyticReportViewSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetLatestAnalyticReportVersion">
    <wsdl:input message="tns:GetLatestAnalyticReportVersionSoapIn"/>
    <wsdl:output message="tns:GetLatestAnalyticReportVersionSoapOut"/>
</wsdl:operation>
<wsdl:operation name="SaveTemporaryAnalyticReport">
    <wsdl:input message="tns:SaveTemporaryAnalyticReportSoapIn"/>
    <wsdl:output message="tns:SaveTemporaryAnalyticReportSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetQueryResultMembers">
    <wsdl:input message="tns:GetQueryResultMembersSoapIn"/>
    <wsdl:output message="tns:GetQueryResultMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetAnnotation">
    <wsdl:input message="tns:GetAnnotationSoapIn"/>
    <wsdl:output message="tns:GetAnnotationSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetAnnotationByID">
    <wsdl:input message="tns:GetAnnotationByIDS SoapIn"/>
    <wsdl:output message="tns:GetAnnotationByIDS SoapOut"/>
</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>

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<wsdl:operation name="GetMdx">
  <wsdl:input message="tns:GetMdxSoapIn"/>
  <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:GetCubeMetaDataSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeMetaDataForDataSource">
  <wsdl:input message="tns:GetCubeMetaDataForDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataForDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetDimensions">
  <wsdl:input message="tns:GetDimensionsSoapIn"/>
  <wsdl:output message="tns:GetDimensionsSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetDimensionsFromDataSource">
  <wsdl:input message="tns:GetDimensionsFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDimensionsFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCube">
  <wsdl:input message="tns:GetCubeSoapIn"/>
  <wsdl:output message="tns:GetCubeSoapOut"/>
</wsdl:operation>
<wsdl:operation name="GetCubeFromDataSource">
  <wsdl:input message="tns:GetCubeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryDimensionRootMembers">
  <wsdl:input message="tns:QueryDimensionRootMembersSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryDimensionRootMembersFromDataSource">
  <wsdl:input message="tns:QueryDimensionRootMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryTransformMembers">
  <wsdl:input message="tns:QueryTransformMembersSoapIn"/>
  <wsdl:output message="tns:QueryTransformMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryChildMembers">
  <wsdl:input message="tns:QueryChildMembersSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersFromDataSource">
  <wsdl:input message="tns:QueryChildMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersFromDataSourceSoapOut"/>

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</wsdl:operation>
<wsdl:operation name="QueryChildMembersByRangeFromDataSource">
  <wsdl:input message="tns:QueryChildMembersByRangeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersByRangeFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryRelatedMember">
  <wsdl:input message="tns:QueryRelatedMemberSoapIn"/>
  <wsdl:output message="tns:QueryRelatedMemberSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryRelatedMemberFromDataSource">
  <wsdl:input message="tns:QueryRelatedMemberFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryRelatedMemberFromDataSourceSoapOut"/>
</wsdl:operation>
<wsdl:operation name="QueryNamedSets">
  <wsdl:input message="tns:QueryNamedSetsSoapIn"/>
  <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"/>

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        <wsdl:output message="tns:CreateDashboardSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="UpdateDashboard">
        <wsdl:input message="tns:UpdateDashboardSoapIn"/>
        <wsdl:output message="tns:UpdateDashboardSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetDashboard">
        <wsdl:input message="tns:GetDashboardSoapIn"/>
        <wsdl:output message="tns:GetDashboardSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="DeleteDashboard">
        <wsdl:input message="tns>DeleteDashboardSoapIn"/>
        <wsdl:output message="tns>DeleteDashboardSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="ImportDashboard">
        <wsdl:input message="tns:ImportDashboardSoapIn"/>
        <wsdl:output message="tns:ImportDashboardSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="ExportDashboard">
        <wsdl:input message="tns:ExportDashboardSoapIn"/>
        <wsdl:output message="tns:ExportDashboardSoapOut"/>
    </wsdl:operation>
    <wsdl:operation name="GetParameterDisplayData">
        <wsdl:input message="tns:GetParameterDisplayDataSoapIn"/>
        <wsdl:output message="tns:GetParameterDisplayDataSoapOut"/>
    </wsdl:operation>
    <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>

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    </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"/>

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    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="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"/>

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```

    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="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>

```



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        </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/GetLatestAnalyticReportVersi
on" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SaveTemporaryAnalyticReport">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetQueryResultMembers">

```

```

    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetQueryResultMembers"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnnotation">
    <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"/>

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        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteAnnotation">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteAnnotation"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="TrimAnnotationByScorecardLocation">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByScorecardLoc
ation" style="document"/>
        <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>

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    <wsdl:operation name="GetMdx">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetMdx" style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeNameInfos">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetPreviewDataSet">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetPreviewDataSet"
style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <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"/>

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    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetDimensions">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensions"
style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetDimensionsFromDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource"
style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetCube">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCube" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetCubeFromDataSource">
    <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">

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    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryTransformMembers">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryChildMembers">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers"
style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersFromDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersByRangeFromDataSource">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFromDataSource" style="document"/>
    <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"/>

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        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryRelatedMemberFromDataSource">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSo
urce" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryNamedSets">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets"
style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryNamedSetsFromDataSource">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSoure
" 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>

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    <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>

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        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </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>

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```

</wsdl:operation>
<wsdl:operation name="ImportDashboard">
  <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ImportDashboard"
style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ExportDashboard">
  <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"/>

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        <wsdl:input>
          <soap:body use="literal"/>
        </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  <wsdl:operation name="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:operation>

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        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteDataSource">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDataSource"
style="document"/>
        <wsdl:input>
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateKpi">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateKpi"
style="document"/>
        <wsdl:input>
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateKpi">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateKpi"
style="document"/>
        <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/GetLatestAnalyticReportVersi
on" style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="SaveTemporaryAnalyticReport">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetQueryResultMembers">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetQueryResultMembers"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetAnnotation">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotation"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>

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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/GetDatabaseNamesFromDataSour
ce" 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"/>

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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="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>

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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"/>

```

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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="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>

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```

        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCurrentCultureLcid">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid"
style="document"/>
        <wsdl:input>
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCurrentUserInfo">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo"
style="document"/>
        <wsdl:input>
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GenerateView">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateView"
style="document"/>
        <wsdl:input>
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GenerateViewDirect">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect"
style="document"/>
        <wsdl:input>
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAsKpis">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAsKpis"
style="document"/>
        <wsdl:input>
            <soap12:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal"/>
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateDashboard">

```

```

    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="UpdateDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="DeleteDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ImportDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ImportDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal"/>
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ExportDashboard">
    <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ExportDashboard"
style="document"/>
    <wsdl:input>
        <soap12:body use="literal"/>

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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>

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```

    <wsdl:operation name="GetDependentElements">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDependentElements"
style="document"/>
      <wsdl:input>
        <soap12:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal"/>
      </wsdl:output>
    </wsdl:operation>
  </wsdl:binding>
  <wsdl:message name="CreateAnnotationSoapIn">
    <wsdl:part name="parameters" element="tns:CreateAnnotation"/>
  </wsdl:message>
  <wsdl:message name="CreateAnnotationSoapOut">
    <wsdl:part name="parameters" element="tns:CreateAnnotationResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateDashboardSoapIn">
    <wsdl:part name="parameters" element="tns:CreateDashboard"/>
  </wsdl:message>
  <wsdl:message name="CreateDashboardSoapOut">
    <wsdl:part name="parameters" element="tns:CreateDashboardResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateDataSourceSoapIn">
    <wsdl:part name="parameters" element="tns:CreateDataSource"/>
  </wsdl:message>
  <wsdl:message name="CreateDataSourceSoapOut">
    <wsdl:part name="parameters" element="tns:CreateDataSourceResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateFilterSoapIn">
    <wsdl:part name="parameters" element="tns:CreateFilter"/>
  </wsdl:message>
  <wsdl:message name="CreateFilterSoapOut">
    <wsdl:part name="parameters" element="tns:CreateFilterResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateIndicatorSoapIn">
    <wsdl:part name="parameters" element="tns:CreateIndicator"/>
  </wsdl:message>
  <wsdl:message name="CreateIndicatorSoapOut">
    <wsdl:part name="parameters" element="tns:CreateIndicatorResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateKpiSoapIn">
    <wsdl:part name="parameters" element="tns:CreateKpi"/>
  </wsdl:message>
  <wsdl:message name="CreateKpiSoapOut">
    <wsdl:part name="parameters" element="tns:CreateKpiResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateReportViewSoapIn">
    <wsdl:part name="parameters" element="tns:CreateReportView"/>
  </wsdl:message>
  <wsdl:message name="CreateReportViewSoapOut">
    <wsdl:part name="parameters" element="tns:CreateReportViewResponse"/>
  </wsdl:message>
  <wsdl:message name="CreateScorecardSoapIn">
    <wsdl:part name="parameters" element="tns:CreateScorecard"/>
  </wsdl:message>
  <wsdl:message name="CreateScorecardSoapOut">
    <wsdl:part name="parameters" element="tns:CreateScorecardResponse"/>
  </wsdl:message>

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```

</wsdl:message>
<wsdl:message name="DeleteAnnotationSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteAnnotation"/>
</wsdl:message>
<wsdl:message name="DeleteAnnotationSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteAnnotationResponse"/>
</wsdl:message>
<wsdl:message name="DeleteDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteDashboard"/>
</wsdl:message>
<wsdl:message name="DeleteDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteDashboardResponse"/>
</wsdl:message>
<wsdl:message name="DeleteDataSourceSoapIn">
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</wsdl:message>
<wsdl:message name="DeleteDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="DeleteFilterSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteFilter"/>
</wsdl:message>
<wsdl:message name="DeleteFilterSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteFilterResponse"/>
</wsdl:message>
<wsdl:message name="DeleteIndicatorSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteIndicator"/>
</wsdl:message>
<wsdl:message name="DeleteIndicatorSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteIndicatorResponse"/>
</wsdl:message>
<wsdl:message name="DeleteKpiSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteKpi"/>
</wsdl:message>
<wsdl:message name="DeleteKpiSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteKpiResponse"/>
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<wsdl:message name="DeleteReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteReportView"/>
</wsdl:message>
<wsdl:message name="DeleteReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteReportViewResponse"/>
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<wsdl:message name="DeleteScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:DeleteScorecard"/>
</wsdl:message>
<wsdl:message name="DeleteScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:DeleteScorecardResponse"/>
</wsdl:message>
<wsdl:message name="ExportDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:ExportDashboard"/>
</wsdl:message>
<wsdl:message name="ExportDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:ExportDashboardResponse"/>
</wsdl:message>
<wsdl:message name="GenerateViewDirectSoapIn">
  <wsdl:part name="parameters" element="tns:GenerateViewDirect"/>
</wsdl:message>
<wsdl:message name="GenerateViewDirectSoapOut">

```

```

    <wsdl:part name="parameters" element="tns:GenerateViewDirectResponse"/>
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</wsdl:message>
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    <wsdl:part name="parameters" element="tns:GenerateViewResponse"/>
</wsdl:message>
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    <wsdl:part name="parameters" element="tns:GetAllAnnotationsByScorecardLocation"/>
</wsdl:message>
<wsdl:message name="GetAllAnnotationsByScorecardLocationSoapOut">
    <wsdl:part name="parameters" element="tns:GetAllAnnotationsByScorecardLocationResponse"/>
</wsdl:message>
<wsdl:message name="GetAnalyticReportViewSoapIn">
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</wsdl:message>
<wsdl:message name="GetAnalyticReportViewSoapOut">
    <wsdl:part name="parameters" element="tns:GetAnalyticReportViewResponse"/>
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</wsdl:message>
<wsdl:message name="GetAnnotationByIDSoapOut">
    <wsdl:part name="parameters" element="tns:GetAnnotationByIDResponse"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingHttpGetIn">
<wsdl:message name="GetAnnotationSettingHttpGetOut">
    <wsdl:part name="Body" element="tns:AnnotationSetting"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingHttpPostIn">
<wsdl:message name="GetAnnotationSettingHttpPostOut">
    <wsdl:part name="Body" element="tns:AnnotationSetting"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingSoapIn">
    <wsdl:part name="parameters" element="tns:GetAnnotationSetting"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSettingSoapOut">
    <wsdl:part name="parameters" element="tns:GetAnnotationSettingResponse"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSoapIn">
    <wsdl:part name="parameters" element="tns:GetAnnotation"/>
</wsdl:message>
<wsdl:message name="GetAnnotationSoapOut">
    <wsdl:part name="parameters" element="tns:GetAnnotationResponse"/>
</wsdl:message>
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    <wsdl:part name="parameters" element="tns:GetAsKpis"/>
</wsdl:message>
<wsdl:message name="GetAsKpisSoapOut">
    <wsdl:part name="parameters" element="tns:GetAsKpisResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeFromDataSourceSoapIn">
    <wsdl:part name="parameters" element="tns:GetCubeFromDataSource"/>
</wsdl:message>
<wsdl:message name="GetCubeFromDataSourceSoapOut">
    <wsdl:part name="parameters" element="tns:GetCubeFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataForDataSourceSoapIn">

```

```

    <wsdl:part name="parameters" element="tns:GetCubeMetaDataForDataSource"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataForDataSourceSoapOut">
    <wsdl:part name="parameters" element="tns:GetCubeMetaDataForDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataSoapIn">
    <wsdl:part name="parameters" element="tns:GetCubeMetaData"/>
</wsdl:message>
<wsdl:message name="GetCubeMetaDataSoapOut">
    <wsdl:part name="parameters" element="tns:GetCubeMetaDataResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeNameInfosSoapIn">
    <wsdl:part name="parameters" element="tns:GetCubeNameInfos"/>
</wsdl:message>
<wsdl:message name="GetCubeNameInfosSoapOut">
    <wsdl:part name="parameters" element="tns:GetCubeNameInfosResponse"/>
</wsdl:message>
<wsdl:message name="GetCubeSoapIn">
    <wsdl:part name="parameters" element="tns:GetCube"/>
</wsdl:message>
<wsdl:message name="GetCubeSoapOut">
    <wsdl:part name="parameters" element="tns:GetCubeResponse"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidHttpGetIn"/>
<wsdl:message name="GetCurrentCultureLcidHttpGetOut">
    <wsdl:part name="Body" element="tns:int"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidHttpPostIn"/>
<wsdl:message name="GetCurrentCultureLcidHttpPostOut">
    <wsdl:part name="Body" element="tns:int"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidSoapIn">
    <wsdl:part name="parameters" element="tns:GetCurrentCultureLcid"/>
</wsdl:message>
<wsdl:message name="GetCurrentCultureLcidSoapOut">
    <wsdl:part name="parameters" element="tns:GetCurrentCultureLcidResponse"/>
</wsdl:message>
<wsdl:message name="GetCurrentUserInfoSoapIn">
    <wsdl:part name="parameters" element="tns:GetCurrentUserInfo"/>
</wsdl:message>
<wsdl:message name="GetCurrentUserInfoSoapOut">
    <wsdl:part name="parameters" element="tns:GetCurrentUserInfoResponse"/>
</wsdl:message>
<wsdl:message name="GetDashboardSoapIn">
    <wsdl:part name="parameters" element="tns:GetDashboard"/>
</wsdl:message>
<wsdl:message name="GetDashboardSoapOut">
    <wsdl:part name="parameters" element="tns:GetDashboardResponse"/>
</wsdl:message>
<wsdl:message name="GetDatabaseNamesFromDataSourceSoapIn">
    <wsdl:part name="parameters" element="tns:GetDatabaseNamesFromDataSource"/>
</wsdl:message>
<wsdl:message name="GetDatabaseNamesFromDataSourceSoapOut">
    <wsdl:part name="parameters" element="tns:GetDatabaseNamesFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetDataSourceSoapIn">
    <wsdl:part name="parameters" element="tns:GetDataSource"/>
</wsdl:message>
<wsdl:message name="GetDataSourceSoapOut">

```

```

    <wsdl:part name="parameters" element="tns:GetDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetDependentElementsSoapIn">
  <wsdl:part name="parameters" element="tns:GetDependentElements"/>
</wsdl:message>
<wsdl:message name="GetDependentElementsSoapOut">
  <wsdl:part name="parameters" element="tns:GetDependentElementsResponse"/>
</wsdl:message>
<wsdl:message name="GetDimensionsFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:GetDimensionsFromDataSource"/>
</wsdl:message>
<wsdl:message name="GetDimensionsFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:GetDimensionsFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="GetDimensionsSoapIn">
  <wsdl:part name="parameters" element="tns:GetDimensions"/>
</wsdl:message>
<wsdl:message name="GetDimensionsSoapOut">
  <wsdl:part name="parameters" element="tns:GetDimensionsResponse"/>
</wsdl:message>
<wsdl:message name="GetFilterSoapIn">
  <wsdl:part name="parameters" element="tns:GetFilter"/>
</wsdl:message>
<wsdl:message name="GetFilterSoapOut">
  <wsdl:part name="parameters" element="tns:GetFilterResponse"/>
</wsdl:message>
<wsdl:message name="GetIndicatorSoapIn">
  <wsdl:part name="parameters" element="tns:GetIndicator"/>
</wsdl:message>
<wsdl:message name="GetIndicatorSoapOut">
  <wsdl:part name="parameters" element="tns:GetIndicatorResponse"/>
</wsdl:message>
<wsdl:message name="GetKpisFromScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:GetKpisFromScorecard"/>
</wsdl:message>
<wsdl:message name="GetKpisFromScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:GetKpisFromScorecardResponse"/>
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<wsdl:message name="GetKpiSoapIn">
  <wsdl:part name="parameters" element="tns:GetKpi"/>
</wsdl:message>
<wsdl:message name="GetKpiSoapOut">
  <wsdl:part name="parameters" element="tns:GetKpiResponse"/>
</wsdl:message>
<wsdl:message name="GetLatestAnalyticReportVersionSoapIn">
  <wsdl:part name="parameters" element="tns:GetLatestAnalyticReportVersion"/>
</wsdl:message>
<wsdl:message name="GetLatestAnalyticReportVersionSoapOut">
  <wsdl:part name="parameters" element="tns:GetLatestAnalyticReportVersionResponse"/>
</wsdl:message>
<wsdl:message name="GetListItemsHttpGetIn">
  <wsdl:part name="listUrl" type="xs:string"/>
</wsdl:message>
<wsdl:message name="GetListItemsHttpGetOut">
  <wsdl:part name="Body" element="tns:ArrayOfFirstClassElement"/>
</wsdl:message>
<wsdl:message name="GetListItemsHttpPostIn">
  <wsdl:part name="listUrl" type="xs:string"/>
</wsdl:message>

```

```

<wsdl:message name="GetListItemsHttpPostOut">
  <wsdl:part name="Body" element="tns:ArrayOfFirstClassElement"/>
</wsdl:message>
<wsdl:message name="GetListItemsSoapIn">
  <wsdl:part name="parameters" element="tns:GetListItems"/>
</wsdl:message>
<wsdl:message name="GetListItemsSoapOut">
  <wsdl:part name="parameters" element="tns:GetListItemsResponse"/>
</wsdl:message>
<wsdl:message name="GetMdxSoapIn">
  <wsdl:part name="parameters" element="tns:GetMdx"/>
</wsdl:message>
<wsdl:message name="GetMdxSoapOut">
  <wsdl:part name="parameters" element="tns:GetMdxResponse"/>
</wsdl:message>
<wsdl:message name="GetParameterDisplayDataSoapIn">
  <wsdl:part name="parameters" element="tns:GetParameterDisplayData"/>
</wsdl:message>
<wsdl:message name="GetParameterDisplayDataSoapOut">
  <wsdl:part name="parameters" element="tns:GetParameterDisplayDataResponse"/>
</wsdl:message>
<wsdl:message name="GetPreviewDataSetSoapIn">
  <wsdl:part name="parameters" element="tns:GetPreviewDataSet"/>
</wsdl:message>
<wsdl:message name="GetPreviewDataSetSoapOut">
  <wsdl:part name="parameters" element="tns:GetPreviewDataSetResponse"/>
</wsdl:message>
<wsdl:message name="GetQueryResultMembersSoapIn">
  <wsdl:part name="parameters" element="tns:GetQueryResultMembers"/>
</wsdl:message>
<wsdl:message name="GetQueryResultMembersSoapOut">
  <wsdl:part name="parameters" element="tns:GetQueryResultMembersResponse"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpGetIn">
  <wsdl:part name="type" type="xs:string"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpGetOut">
  <wsdl:part name="Body" element="tns:ArrayOfCustomFCODefinition"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpPostIn">
  <wsdl:part name="type" type="xs:string"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsHttpPostOut">
  <wsdl:part name="Body" element="tns:ArrayOfCustomFCODefinition"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsSoapIn">
  <wsdl:part name="parameters" element="tns:GetRegisteredCustomFCOs"/>
</wsdl:message>
<wsdl:message name="GetRegisteredCustomFCOsSoapOut">
  <wsdl:part name="parameters" element="tns:GetRegisteredCustomFCOsResponse"/>
</wsdl:message>
<wsdl:message name="GetReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:GetReportView"/>
</wsdl:message>
<wsdl:message name="GetReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:GetReportViewResponse"/>
</wsdl:message>
<wsdl:message name="GetScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:GetScorecard"/>

```

```

</wsdl:message>
<wsdl:message name="GetScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:GetScorecardResponse"/>
</wsdl:message>
<wsdl:message name="ImportDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:ImportDashboard"/>
</wsdl:message>
<wsdl:message name="ImportDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:ImportDashboardResponse"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersByRangeFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryChildMembersByRangeFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersByRangeFromDataSourceSoapOut">
  <wsdl:part name="parameters"
element="tns:QueryChildMembersByRangeFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryChildMembersFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryChildMembersFromDataSourceResponse"/>
</wsdl:message>
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  <wsdl:part name="parameters" element="tns:QueryChildMembers"/>
</wsdl:message>
<wsdl:message name="QueryChildMembersSoapOut">
  <wsdl:part name="parameters" element="tns:QueryChildMembersResponse"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryDimensionRootMembersFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersFromDataSourceSoapOut">
  <wsdl:part name="parameters"
element="tns:QueryDimensionRootMembersFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersSoapIn">
  <wsdl:part name="parameters" element="tns:QueryDimensionRootMembers"/>
</wsdl:message>
<wsdl:message name="QueryDimensionRootMembersSoapOut">
  <wsdl:part name="parameters" element="tns:QueryDimensionRootMembersResponse"/>
</wsdl:message>
<wsdl:message name="QueryNamedSetsFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryNamedSetsFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryNamedSetsFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryNamedSetsFromDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="QueryNamedSetsSoapIn">
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</wsdl:message>
<wsdl:message name="QueryNamedSetsSoapOut">
  <wsdl:part name="parameters" element="tns:QueryNamedSetsResponse"/>
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<wsdl:message name="QueryRelatedMemberFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryRelatedMemberFromDataSource"/>
</wsdl:message>
<wsdl:message name="QueryRelatedMemberFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryRelatedMemberFromDataSourceResponse"/>

```



```

</wsdl:message>
<wsdl:message name="QueryRelatedMemberSoapIn">
  <wsdl:part name="parameters" element="tns:QueryRelatedMember"/>
</wsdl:message>
<wsdl:message name="QueryRelatedMemberSoapOut">
  <wsdl:part name="parameters" element="tns:QueryRelatedMemberResponse"/>
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  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceDirect"/>
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceDirectSoapOut">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceDirectResponse"/>
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligence"/>
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceResponse"/>
</wsdl:message>
<wsdl:message name="QueryTransformMembersSoapIn">
  <wsdl:part name="parameters" element="tns:QueryTransformMembers"/>
</wsdl:message>
<wsdl:message name="QueryTransformMembersSoapOut">
  <wsdl:part name="parameters" element="tns:QueryTransformMembersResponse"/>
</wsdl:message>
<wsdl:message name="SaveTemporaryAnalyticReportSoapIn">
  <wsdl:part name="parameters" element="tns:SaveTemporaryAnalyticReport"/>
</wsdl:message>
<wsdl:message name="SaveTemporaryAnalyticReportSoapOut">
  <wsdl:part name="parameters" element="tns:SaveTemporaryAnalyticReportResponse"/>
</wsdl:message>
<wsdl:message name="TestConnectionSoapIn">
  <wsdl:part name="parameters" element="tns:TestConnection"/>
</wsdl:message>
<wsdl:message name="TestConnectionSoapOut">
  <wsdl:part name="parameters" element="tns:TestConnectionResponse"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerHttpGetIn">
  <wsdl:part name="Owner" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerHttpGetOut"/>
<wsdl:message name="TrimAnnotationByOwnerHttpPostIn">
  <wsdl:part name="Owner" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerHttpPostOut"/>
<wsdl:message name="TrimAnnotationByOwnerSoapIn">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByOwner"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByOwnerSoapOut">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByOwnerResponse"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByScorecardLocationSoapIn">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByScorecardLocation"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationByScorecardLocationSoapOut">
  <wsdl:part name="parameters" element="tns:TrimAnnotationByScorecardLocationResponse"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpGetIn">
  <wsdl:part name="untouchedSince" type="xs:string"/>

```

```

</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpGetOut"/>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpPostIn">
  <wsdl:part name="untouchedSince" type="xs:string"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceHttpPostOut"/>
<wsdl:message name="TrimAnnotationUntouchedSinceSoapIn">
  <wsdl:part name="parameters" element="tns:TrimAnnotationUntouchedSince"/>
</wsdl:message>
<wsdl:message name="TrimAnnotationUntouchedSinceSoapOut">
  <wsdl:part name="parameters" element="tns:TrimAnnotationUntouchedSinceResponse"/>
</wsdl:message>
<wsdl:message name="UpdateAnnotationSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateAnnotation"/>
</wsdl:message>
<wsdl:message name="UpdateAnnotationSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateAnnotationResponse"/>
</wsdl:message>
<wsdl:message name="UpdateDashboardSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateDashboard"/>
</wsdl:message>
<wsdl:message name="UpdateDashboardSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateDashboardResponse"/>
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  <wsdl:part name="parameters" element="tns:UpdateDataSource"/>
</wsdl:message>
<wsdl:message name="UpdateDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateDataSourceResponse"/>
</wsdl:message>
<wsdl:message name="UpdateFilterSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateFilter"/>
</wsdl:message>
<wsdl:message name="UpdateFilterSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateFilterResponse"/>
</wsdl:message>
<wsdl:message name="UpdateIndicatorSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateIndicator"/>
</wsdl:message>
<wsdl:message name="UpdateIndicatorSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateIndicatorResponse"/>
</wsdl:message>
<wsdl:message name="UpdateKpiSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateKpi"/>
</wsdl:message>
<wsdl:message name="UpdateKpiSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateKpiResponse"/>
</wsdl:message>
<wsdl:message name="UpdateReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateReportView"/>
</wsdl:message>
<wsdl:message name="UpdateReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateReportViewResponse"/>
</wsdl:message>
<wsdl:message name="UpdateScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:UpdateScorecard"/>
</wsdl:message>
<wsdl:message name="UpdateScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:UpdateScorecardResponse"/>

```

```
</wsdl:message>
<wsdl:message name="ValidateKpiSoapIn">
  <wsdl:part name="parameters" element="tns:ValidateKpi"/>
</wsdl:message>
<wsdl:message name="ValidateKpiSoapOut">
  <wsdl:part name="parameters" element="tns:ValidateKpiResponse"/>
</wsdl:message>
<wsdl:message name="ValidateScorecardSoapIn">
  <wsdl:part name="parameters" element="tns:ValidateScorecard"/>
</wsdl:message>
<wsdl:message name="ValidateScorecardSoapOut">
  <wsdl:part name="parameters" element="tns:ValidateScorecardResponse"/>
</wsdl:message>
<wsdl:message name="ValidateSiteCollectionSoapIn">
  <wsdl:part name="parameters" element="tns:ValidateSiteCollection"/>
</wsdl:message>
<wsdl:message name="ValidateSiteCollectionSoapOut">
  <wsdl:part name="parameters" element="tns:ValidateSiteCollectionResponse"/>
</wsdl:message>
</wsdl:definitions>
```

## 7 Appendix B: Full XML Schema

Schema name	Prefix	Section
http://performancepoint.microsoft.com/OLAPQueryData	qdata	<a href="#">7.1</a>
http://schemas.microsoft.com/performancepoint/2007/03/query	query	<a href="#">7.2</a>
http://www.microsoft.com/performancepoint/scorecards/Analytics	Unassigned	<a href="#">7.3</a>

For ease of implementation, the following sections provide the full XML schema for this protocol.

### 7.1 http://performancepoint.microsoft.com/OLAPQueryData Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://performancepoint.microsoft.com/OLAPQueryData"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://www.microsoft.com/performancepoint/scorecards"/>
  <xs:complexType name="OLAPQueryData">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:ArrayOfParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="MDX" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

### 7.2 http://schemas.microsoft.com/performancepoint/2007/03/query Schema

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/performancepoint/2007/03/query"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://www.microsoft.com/performancepoint/scorecards"/>
  <xs:complexType name="QueryState">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Axes" type="tns:ArrayOfAxis"/>
      <xs:element minOccurs="1" maxOccurs="1" name="IsEnabled" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="UnknownFilterParameter"
type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="ShowDataSourceFormatting"
type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

### 7.3 http://www.microsoft.com/performancepoint/scorecards/Analytics Schema

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<xs:schema xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards/Analytics"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://www.microsoft.com/performancepoint/scorecards"/>
  <xs:complexType name="Tuple">
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="memberDictionary"
type="tns:SerializableDictionary"/>
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

## 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:

- PerformancePoint Services in Microsoft SharePoint Server 2010
- Microsoft SharePoint Server 2010
- Microsoft SharePoint Server 2013

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

[<1> Section 2.2.2.1.3:](#) The content store refers to a SharePoint Server 2010 list.

[<2> Section 2.2.2.1.3:](#) Data sources are stored in document libraries in SharePoint Server 2010.

[<3> Section 2.2.2.1.3:](#) The content store refers to a SharePoint Server 2010 list.

[<4> Section 2.2.2.1.3:](#) The content store refers to a SharePoint Server 2010 list.

[<5> Section 2.2.2.1.3:](#) The content store refers to a SharePoint Server 2010 list.

[<6> Section 2.2.2.1.3:](#) The content store refers to a SharePoint Server 2010 list.

[<7> Section 2.2.2.1.3:](#) The content store refers to a SharePoint Server 2010 list.

[<8> Section 2.2.4:](#) This type is available only in SharePoint Server 2013.

[<9> Section 2.2.4:](#) This type is available only in SharePoint Server 2013.

[<10> Section 2.2.4:](#) This type is available only in SharePoint Server 2013.

[<11> Section 2.2.4.48:](#) This type is available only in SharePoint Server 2013.

[<12> Section 2.2.4.75:](#) This type is available only in SharePoint Server 2013.

[<13> Section 2.2.4.83:](#) The values for **UnderlyingElementName** for the built-in element types in PerformancePoint Services 2010 are:

Type	Value
<b>Scorecard</b>	Microsoft.PerformancePoint.Scorecards.Scorecard, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c
<b>ReportView</b>	Microsoft.PerformancePoint.Scorecards.ReportView, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c

Type	Value
▪ Filter	Microsoft.PerformancePoint.Scorecards.Filter, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c

<14> [Section 2.2.4.85](#): The list data source refers to a SharePoint Server 2010 list.

<15> [Section 2.2.4.99](#): For SharePoint Server 2010, the content store is a SharePoint list.

<16> [Section 2.2.4.123](#): The registered transforms can be found in the web.config file under the CustomViewTransforms section. The content for the PropertyBag of each transform is determined by what is chosen to be passed in through the parameter.

<17> [Section 2.2.4.167](#): In PerformancePoint Services 2010, the identifier is generated by obtaining the **UTF-8** formatted bytes of the indicator's relative URL, computing an MD5 hash of those bytes and formatting the 16 byte hash to a GUID value format.

<18> [Section 2.2.4.180](#): This type is available only in SharePoint Server 2013.

<19> [Section 2.2.5.6](#): Beta2 or RTM refers to PerformancePoint Services 2010 Beta2 or PerformancePoint Services 2010.

<20> [Section 2.2.5.6](#): Beta1 refers to PerformancePoint Services 2010 Beta1.

<21> [Section 2.2.5.6](#): Microsoft Office PerformancePoint Server 2007

<22> [Section 3.1.2](#): In PerformancePoint Services 2010, the default query timeout is 300 seconds.

<23> [Section 3.1.4](#): This operation is available only in SharePoint Server 2013.

<24> [Section 3.1.4](#): This operation is available only in SharePoint Server 2013.

<25> [Section 3.1.4.16](#): The content store refers to a SharePoint Server 2010 list.

<26> [Section 3.1.4.17](#): This operation is available only in SharePoint Server 2013.

<27> [Section 3.1.4.21](#): PerformancePoint Services 2010 returns a `GetAnalyticReportViewResponse` (see section [3.1.4.44.2.2](#)) containing a null value instead of a report view for failures unrelated to security restrictions.

<28> [Section 3.1.4.33](#): PerformancePoint Services 2010 returns an empty **GetDashboardResponse** (see section [3.1.4.33.2.2](#)) for failures unrelated to security restrictions.

<29> [Section 3.1.4.35](#): PerformancePoint Services 2010 returns a **GetDataSourceResponse** (section [3.1.4.35.2.2](#)) containing a null value instead of a data source (1) for failures unrelated to security restrictions.

<30> [Section 3.1.4.36](#): PerformancePoint Services 2010 returns a **GetDependentElementResponse** (see section [3.1.4.35.2.2](#)) containing an **DependentElementInfo** that contains a **FirstClassElement** collection (see section [2.2.4.34](#)) with null elements for failures unrelated to security restrictions.

<31> [Section 3.1.4.39](#): PerformancePoint Services 2010 returns an empty **GetFilterResponse** element (section [3.1.4.39.2.2](#)) for failures unrelated to security restrictions.

<32> [Section 3.1.4.40](#): PerformancePoint Services 2010 returns a **GetIndicatorResponse** element (section [3.1.4.40.2.2](#)) containing a null value instead of an **Indicator** complex type (section [2.2.4.125](#)) for failures unrelated to security restrictions.

<33> [Section 3.1.4.41](#): PerformancePoint Services 2010 returns a **GetKpiResponse** (see section [3.1.4.44.2.2](#)) containing a null value instead of a **Kpi** for failures unrelated to security restrictions.

<34> [Section 3.1.4.44](#): PerformancePoint Services 2010 returns a **GetListItemsResponse** (see section [3.1.4.44.2.2](#)) containing an **ArrayOfFirstClassElements** (see section [2.2.4.34](#)) with null elements for failures unrelated to security restrictions.

<35> [Section 3.1.4.45](#): PerformancePoint Services 2010 returns a **GetMdxResponse** with an empty **GetMdxResult** for failures unrelated to security restrictions.

<36> [Section 3.1.4.46](#): In PerformancePoint Services 2010, **GetParameterDisplayData** receives the **GridViewData** (section [2.2.4.121](#)) as an untyped object referenced by the **customData** parameter on the **GetParameterDisplayDataIn** message (section [3.1.4.46.1.1](#)).

<37> [Section 3.1.4.47.2.1](#): PerformancePoint Services 2010 supports preview data sets for the following data source types: **ExcelWorkbook**, **ExcelServicesWorkbook**, **SqlTabularDataSource**, and **SPListDataSource**.

<38> [Section 3.1.4.50](#): PerformancePoint Services 2010 returns a **GetReportViewResponse** (see section [3.1.4.44.2.2](#)) containing a null value instead of a report view for failures unrelated to security restrictions.

<39> [Section 3.1.4.51](#): PerformancePoint Services 2010 returns an empty **GetScorecardResponse** (see section [3.1.4.51.2.2](#)) for failures unrelated to security restrictions.

<40> [Section 3.1.4.52](#): This operation is available only in SharePoint Server 2013.

<41> [Section 3.1.4.58](#): PerformancePoint Services 2010 returns a **QueryNamedSetsResponse** (section [3.1.4.58.2.2](#)) containing a **null** value instead of named sets for failures unrelated to security restrictions.

<42> [Section 3.1.4.59](#): PerformancePoint Services 2010 returns a **QueryNamedSetsFromDataSourceResponse** (see section [3.1.4.59.1.2](#)) containing an empty collection of named sets if null is passed in for the data source (1).

<43> [Section 3.1.4.60](#): PerformancePoint Services 2010 returns a **QueryRelatedMemberResponse** (see section [3.1.4.44.2.2](#)) containing null for failures unrelated to security restrictions.

<44> [Section 3.1.4.61](#): PerformancePoint Services 2010 returns a **QueryRelatedMemberFromDataSourceResponse** element (section [3.1.4.61.2.2](#)) containing null, if null is passed in for the data source (1).

<45> [Section 3.1.4.62](#): PerformancePoint Services 2010 returns a **QueryTimeIntelligenceResponse** (see section [3.1.4.44.2.2](#)) containing an Unknown error if an invalid **RepositoryLocation** (see section [2.2.4.161](#)) is passed in.



## 9 Change Tracking

This section identifies changes that were made to the [MS-PPSAS] protocol document between the July 2014 and October 2014 releases. Changes are classified as New, Major, Minor, Editorial, or No change.

The revision class **New** means that a new document is being released.

The revision class **Major** means that the technical content in the document was significantly revised. Major changes affect protocol interoperability or implementation. Examples of major changes are:

- A document revision that incorporates changes to interoperability requirements or functionality.
- The removal of a document from the documentation set.

The revision class **Minor** means that the meaning of the technical content was clarified. Minor changes do not affect protocol interoperability or implementation. Examples of minor changes are updates to clarify ambiguity at the sentence, paragraph, or table level.

The revision class **Editorial** means that the formatting in the technical content was changed. Editorial changes apply to grammatical, formatting, and style issues.

The revision class **No change** means that no new technical changes were introduced. Minor editorial and formatting changes may have been made, but the technical content of the document is identical to the last released version.

Major and minor changes can be described further using the following change types:

- New content added.
- Content updated.
- Content removed.
- New product behavior note added.
- Product behavior note updated.
- Product behavior note removed.
- New protocol syntax added.
- Protocol syntax updated.
- Protocol syntax removed.
- New content added due to protocol revision.
- Content updated due to protocol revision.
- Content removed due to protocol revision.
- New protocol syntax added due to protocol revision.
- Protocol syntax updated due to protocol revision.
- Protocol syntax removed due to protocol revision.

- Obsolete document removed.

Editorial changes are always classified with the change type **Editorially updated**.

Some important terms used in the change type descriptions are defined as follows:

- **Protocol syntax** refers to data elements (such as packets, structures, enumerations, and methods) as well as interfaces.
- **Protocol revision** refers to changes made to a protocol that affect the bits that are sent over the wire.

The changes made to this document are listed in the following table. For more information, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com).

Section	Tracking number (if applicable) and description	Major change (Y or N)	Change type
<a href="#">3.1.4.47.2.2 GetPreviewDataSetResponse</a>	Updated the description of the GetPreviewDataSetResult when the DataSource is invalid.	N	Content updated.
<a href="#">8 Appendix C: Product Behavior</a>	Removed redundant product behavior entry.	N	Product behavior note updated.

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