

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

---

## Intellectual Property Rights Notice for Open Specifications Documentation

- **Technical Documentation.** Microsoft publishes Open Specifications documentation for protocols, file formats, languages, standards as well as overviews of the interaction among each of these technologies.
- **Copyrights.** This documentation is covered by Microsoft copyrights. Regardless of any other terms that are contained in the terms of use for the Microsoft website that hosts this documentation, you may make copies of it in order to develop implementations of the technologies described in the Open Specifications and may distribute portions of it in your implementations using these technologies or your documentation as necessary to properly document the implementation. You may also distribute in your implementation, with or without modification, any schema, IDL's, or code samples that are included in the documentation. This permission also applies to any documents that are referenced in the Open Specifications.
- **No Trade Secrets.** Microsoft does not claim any trade secret rights in this documentation.
- **Patents.** Microsoft has patents that may cover your implementations of the technologies described in the Open Specifications. Neither this notice nor Microsoft's delivery of the documentation grants any licenses under those or any other Microsoft patents. However, a given Open Specification may be covered by Microsoft's Open Specification Promise (available here: <http://www.microsoft.com/interop/osp>) or the Community Promise (available here: <http://www.microsoft.com/interop/cp/default.mspx>). If you would prefer a written license, or if the technologies described in the Open Specifications are not covered by the Open Specifications Promise or Community Promise, as applicable, patent licenses are available by contacting [iplq@microsoft.com](mailto:iplq@microsoft.com).
- **Trademarks.** The names of companies and products contained in this documentation may be covered by trademarks or similar intellectual property rights. This notice does not grant any licenses under those rights.
- **Fictitious Names.** The example companies, organizations, products, domain names, e-mail addresses, logos, people, places, and events depicted in this documentation are fictitious. No association with any real company, organization, product, domain name, email address, logo, person, place, or event is intended or should be inferred.

**Reservation of Rights.** All other rights are reserved, and this notice does not grant any rights other than specifically described above, whether by implication, estoppel, or otherwise.

**Tools.** The Open Specifications do not require the use of Microsoft programming tools or programming environments in order for you to develop an implementation. If you have access to Microsoft programming tools and environments you are free to take advantage of them. Certain Open Specifications are intended for use in conjunction with publicly available standard specifications and network programming art, and assumes that the reader either is familiar with the aforementioned material or has immediate access to it.

## Revision Summary

Date	Revision History	Revision Class	Comments
07/13/2009	0.1	Major	Initial Availability
08/28/2009	0.2	Editorial	Revised and edited the technical content
11/06/2009	0.3	Editorial	Revised and edited the technical content
02/19/2010	1.0	Major	Updated and revised the technical content
03/31/2010	1.01	Editorial	Revised and edited the technical content
04/30/2010	1.02	Editorial	Revised and edited the technical content
06/07/2010	1.03	Editorial	Revised and edited the technical content
06/29/2010	1.04	Editorial	Changed language and formatting in the technical content.
07/23/2010	1.05	Minor	Clarified the meaning of the technical content.
09/27/2010	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
11/15/2010	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
12/17/2010	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
03/18/2011	1.05	No change	No changes to the meaning, language, or formatting of the technical content.
06/10/2011	1.05	No change	No changes to the meaning, language, or formatting of the technical content.

# Table of Contents

<b>1</b>	<b>Introduction .....</b>	<b>23</b>
1.1	Glossary .....	23
1.2	References.....	25
1.2.1	Normative References.....	25
1.2.2	Informative References .....	26
1.3	Protocol Overview (Synopsis) .....	26
1.4	Relationship to Other Protocols.....	27
1.5	Prerequisites/Preconditions .....	27
1.6	Applicability Statement.....	27
1.7	Versioning and Capability Negotiation.....	28
1.8	Vendor-Extensible Fields.....	28
1.9	Standards Assignments .....	28
<b>2</b>	<b>Messages.....</b>	<b>29</b>
2.1	Transport.....	29
2.2	Common Message Syntax .....	29
2.2.1	Namespaces .....	29
2.2.2	Messages .....	30
2.2.3	Elements.....	30
2.2.4	Complex Types .....	30
2.2.4.1	AddAllMembersSetOp .....	42
2.2.4.2	AddCalcMemberSetOp .....	42
2.2.4.3	AddChildrenSetOp .....	42
2.2.4.4	AddDefaultMemberSetOp.....	43
2.2.4.5	AddDescendantsLeavesSetOp.....	43
2.2.4.6	AddDescendantsSetOp .....	43
2.2.4.7	AddDescendantsSubtreeSetOp .....	44
2.2.4.8	AddFilterSetOp .....	44
2.2.4.9	AddFilterTopBottomSetOp.....	44
2.2.4.10	AddMemberSetOp .....	44
2.2.4.11	AddNamedSetSetOp.....	44
2.2.4.12	AddParentSiblingsSetOp .....	45
2.2.4.13	AliasInfo .....	45
2.2.4.14	AnalyticBaseReportViewData .....	45
2.2.4.15	AnalyticChartLegend .....	53
2.2.4.16	AnalyticChartReportViewData .....	54
2.2.4.17	AnalyticGridReportViewData .....	55
2.2.4.18	Annotation .....	56
2.2.4.19	AnnotationComment .....	58
2.2.4.20	ArrayOfAliasInfo .....	58
2.2.4.21	ArrayOfAnnotationComment.....	59
2.2.4.22	ArrayOfAxis.....	59
2.2.4.23	ArrayOfBpmProperty .....	59
2.2.4.24	ArrayOfBpmPropertyListItem .....	60
2.2.4.25	ArrayOfChoice1 .....	60
2.2.4.26	ArrayOfComment .....	61
2.2.4.27	ArrayOfConfiguredView.....	61
2.2.4.28	ArrayOfDashboardElement .....	61
2.2.4.29	ArrayOfDataColumnMapping.....	61
2.2.4.30	ArrayOfDataSource .....	62

2.2.4.31	ArrayOfDecimal .....	62
2.2.4.32	ArrayOfDefaultDimensionSetting .....	62
2.2.4.33	ArrayOfDimension .....	63
2.2.4.34	ArrayOfEndPoint .....	63
2.2.4.35	ArrayOfFirstClassElement .....	63
2.2.4.36	ArrayOfGridCell .....	63
2.2.4.37	ArrayOfGridDisplayElement .....	64
2.2.4.38	ArrayOfGridHeaderItem .....	64
2.2.4.39	ArrayOfGridViewTransformReference .....	64
2.2.4.40	ArrayOfHierarchy .....	64
2.2.4.41	ArrayOfIndicatorBand .....	65
2.2.4.42	ArrayOfKpi .....	65
2.2.4.43	ArrayOfKpiMeasure .....	65
2.2.4.44	ArrayOfLevel .....	66
2.2.4.45	ArrayOfMeasure .....	66
2.2.4.46	ArrayOfMember .....	66
2.2.4.47	ArrayOfMemberTransform .....	66
2.2.4.48	ArrayOfNamedSet .....	67
2.2.4.49	ArrayOfNameInfo .....	67
2.2.4.50	ArrayOfParameter .....	67
2.2.4.51	ArrayOfParameterDefinition .....	67
2.2.4.52	ArrayOfParameterMapping .....	68
2.2.4.53	ArrayOfPropertyBag .....	68
2.2.4.54	ArrayOfSetOperation .....	68
2.2.4.55	ArrayOfString .....	69
2.2.4.56	ArrayOfTarget .....	69
2.2.4.57	ArrayOfTimeIntelligenceDataSource .....	69
2.2.4.58	ArrayOfTimeIntelligenceFormula .....	69
2.2.4.59	ArrayOfTimeIntelligenceLevelBinding .....	70
2.2.4.60	Axis .....	70
2.2.4.61	Banding .....	71
2.2.4.62	BpmException .....	71
2.2.4.63	BpmProperty .....	71
2.2.4.64	BpmPropertyBool .....	72
2.2.4.65	BpmPropertyDate .....	72
2.2.4.66	BpmPropertyDecimal .....	73
2.2.4.67	BpmPropertyHyperlink .....	73
2.2.4.68	BpmPropertyHyperlink2 .....	73
2.2.4.69	BpmPropertyLinkBase .....	73
2.2.4.70	BpmPropertyList .....	74
2.2.4.71	BpmPropertyListItem .....	74
2.2.4.72	BpmPropertyLongText .....	74
2.2.4.73	BpmPropertyText .....	75
2.2.4.74	BpmPropertyUser .....	75
2.2.4.75	CalculatedFormulaInfo .....	75
2.2.4.76	Comment .....	76
2.2.4.77	ConfiguredView .....	76
2.2.4.78	Cube .....	78
2.2.4.79	Dashboard .....	79
2.2.4.80	DashboardElement .....	80
2.2.4.81	DashboardElementContainer .....	81
2.2.4.82	DashboardElementSize .....	81
2.2.4.83	DashboardItem .....	81



2.2.4.84	DataColumnMapping .....	82
2.2.4.85	DataSource .....	83
2.2.4.86	DataTableMapping .....	87
2.2.4.87	DefaultDimensionSetting .....	88
2.2.4.88	DictionaryWrapperOfStringGridCell.....	88
2.2.4.89	DictionaryWrapperOfStringPropertyBag .....	89
2.2.4.90	Dimension .....	89
2.2.4.91	Element.....	90
2.2.4.92	ElementVersion .....	90
2.2.4.93	EliminateDescendantsSetOp .....	91
2.2.4.94	EliminateMemberSetOp .....	91
2.2.4.95	EndPoint .....	91
2.2.4.96	ExcelDataSet.....	92
2.2.4.97	ExcelServicesData.....	92
2.2.4.98	Filter .....	93
2.2.4.99	FirstClassElement .....	95
2.2.4.100	GridCell .....	96
2.2.4.101	GridCellSet.....	98
2.2.4.102	GridColor .....	99
2.2.4.103	GridDisplayElement .....	99
2.2.4.104	GridDisplayElementActual .....	101
2.2.4.105	GridDisplayElementAggregation .....	101
2.2.4.106	GridDisplayElementHyperLink .....	101
2.2.4.107	GridDisplayElementIndicator.....	101
2.2.4.108	GridDisplayElementIndicatorText .....	102
2.2.4.109	GridDisplayElementNumber .....	102
2.2.4.110	GridDisplayElementScore .....	103
2.2.4.111	GridDisplayElementTarget .....	103
2.2.4.112	GridDisplayElementText.....	103
2.2.4.113	GridDisplayElementVariance .....	103
2.2.4.114	GridFontInfo.....	104
2.2.4.115	GridFormatInfo .....	104
2.2.4.116	GridHeaderItem .....	105
2.2.4.117	GridIndicatorSettings.....	109
2.2.4.118	GridScoreSettings .....	109
2.2.4.119	GridTargetSettings .....	109
2.2.4.120	GridVarianceSettings .....	110
2.2.4.121	GridViewData .....	111
2.2.4.122	GridViewDefinition.....	113
2.2.4.123	GridViewTransformReference.....	116
2.2.4.124	Hierarchy .....	116
2.2.4.125	Indicator .....	116
2.2.4.126	IndicatorBand .....	117
2.2.4.127	Item .....	118
2.2.4.128	Kpi .....	118
2.2.4.129	KpiMeasure .....	119
2.2.4.130	KpiNumberFormatProperties.....	120
2.2.4.131	Level .....	121
2.2.4.132	ListLocation .....	122
2.2.4.133	MDXParameterDefinition .....	122
2.2.4.134	Measure.....	122
2.2.4.135	Member .....	123
2.2.4.136	MemberList .....	124

2.2.4.137	MemberOperation .....	124
2.2.4.138	MemberOperationAllDescendants .....	124
2.2.4.139	MemberOperationChildren .....	125
2.2.4.140	MemberOperationDescendants.....	125
2.2.4.141	MemberOperationDrillUp .....	125
2.2.4.142	MemberOperationHide .....	125
2.2.4.143	MemberOperationLeafDescendants.....	126
2.2.4.144	MemberParameterDefinition .....	126
2.2.4.145	MemberSet .....	126
2.2.4.146	MemberSetFormula .....	127
2.2.4.147	MemberTransform .....	127
2.2.4.148	NamedSet .....	128
2.2.4.149	NamedSetParameterDefinition .....	128
2.2.4.150	NameInfo .....	128
2.2.4.151	NumericFormat .....	129
2.2.4.152	NumericFormatsHashtable.....	130
2.2.4.153	OLAPQueryData .....	130
2.2.4.154	OLAPReportViewData.....	130
2.2.4.155	Parameter .....	131
2.2.4.156	ParameterDefinition.....	132
2.2.4.157	ParameterMapping .....	133
2.2.4.158	PasReportViewData .....	134
2.2.4.159	PropertyBag .....	135
2.2.4.160	QueryState.....	135
2.2.4.161	ReportView.....	136
2.2.4.162	RepositoryLocation .....	139
2.2.4.163	Scorecard .....	140
2.2.4.164	SecondClassElement.....	140
2.2.4.165	SerializableDictionary .....	141
2.2.4.166	SetOperation .....	141
2.2.4.167	SqlReportViewData.....	143
2.2.4.168	StatusFilter .....	143
2.2.4.169	StrategyMapViewData.....	144
2.2.4.170	StringCollection .....	144
2.2.4.171	Target .....	144
2.2.4.172	TimeIntelligenceDataSource .....	145
2.2.4.173	TimeIntelligenceDefinition .....	145
2.2.4.174	TimeIntelligenceFormula .....	146
2.2.4.175	TimeIntelligenceLevelBinding .....	146
2.2.4.176	TimeIntelligenceMdxSettings .....	146
2.2.4.177	TimeIntelligencePostFormulaDefinition.....	147
2.2.4.178	TimeIntelligenceSettings .....	147
2.2.4.179	Title .....	148
2.2.4.180	ToolbarOptions .....	148
2.2.4.181	Tuple.....	149
2.2.4.182	XmlFont.....	150
2.2.5	Simple Types .....	150
2.2.5.1	AggregateTypeEnum .....	153
2.2.5.2	AlignmentType .....	154
2.2.5.3	AnalyticChartType.....	154
2.2.5.4	AnalyticLegendLocation .....	155
2.2.5.5	AnalyticMarkerStyle .....	155
2.2.5.6	AnnotationVersions .....	156

2.2.5.7	AxisType .....	157
2.2.5.8	BandType .....	157
2.2.5.9	BeginPointEmitterType .....	158
2.2.5.10	ConnectionContext .....	158
2.2.5.11	DataValuePosition .....	158
2.2.5.12	DateAggregationTypes .....	159
2.2.5.13	DimensionTypeEnum .....	160
2.2.5.14	EndPointCategory .....	161
2.2.5.15	ExcelServicesToolbarOptions .....	161
2.2.5.16	ExcelServicesToolbarType .....	162
2.2.5.17	ExcelServicesViewOptions .....	162
2.2.5.18	FactAggregations .....	163
2.2.5.19	FilterSelectionMode .....	164
2.2.5.20	FirstClassObjectType .....	164
2.2.5.21	FontStyle .....	165
2.2.5.22	FormatNegativeSymbol .....	166
2.2.5.23	FormatType .....	166
2.2.5.24	GraphicsUnit .....	167
2.2.5.25	GridCellElementStatus .....	167
2.2.5.26	HeaderAggregationTypes .....	168
2.2.5.27	HierarchyOrigin .....	168
2.2.5.28	HierarchyType .....	169
2.2.5.29	HorizontalAlignments .....	169
2.2.5.30	IndicatorPosition .....	170
2.2.5.31	IndicatorType .....	170
2.2.5.32	KpiPattern .....	171
2.2.5.33	LayoutOrientation .....	171
2.2.5.34	MappedColumnDataTypes .....	172
2.2.5.35	MappedColumnTypes .....	172
2.2.5.36	MemberRelationship .....	173
2.2.5.37	MemberTransformOperation .....	174
2.2.5.38	MemberTransformType .....	174
2.2.5.39	MemberType .....	174
2.2.5.40	ReportLayout .....	175
2.2.5.41	RollupTypes .....	175
2.2.5.42	ScorecardEmptyRowsFilterMode .....	176
2.2.5.43	ScorecardNamedSetType .....	176
2.2.5.44	ScorecardNodeTypes .....	177
2.2.5.45	ScoreTypes .....	178
2.2.5.46	SizeType .....	178
2.2.5.47	SortType .....	178
2.2.5.48	SqlReportViewDataServerMode .....	179
2.2.5.49	StrategyMapToolbarOptions .....	179
2.2.5.50	Trinary .....	180
2.2.5.51	ValueSources .....	180
2.2.5.52	VarianceDisplayType .....	181
2.2.5.53	VarianceType .....	181
2.2.5.54	VerticalAlignments .....	182
2.2.6	Attributes .....	182
2.2.7	Groups .....	182
2.2.8	Attribute Groups .....	183
2.2.9	Faults .....	183
2.2.9.1	SOAP Fault Detail Element .....	183

2.2.9.2	Full List of Possible Error Codes .....	183
2.2.9.3	Common List of Error Codes.....	187
<b>3</b>	<b>Protocol Details .....</b>	<b>190</b>
3.1	Server Details .....	190
3.1.1	Abstract Data Model .....	190
3.1.2	Timers .....	193
3.1.3	Initialization .....	193
3.1.4	Message Processing Events and Sequencing Rules .....	193
3.1.4.1	CreateAnnotation.....	197
3.1.4.1.1	Messages .....	198
3.1.4.1.1.1	CreateAnnotationSoapIn.....	198
3.1.4.1.1.2	CreateAnnotationSoapOut .....	198
3.1.4.1.2	Elements.....	199
3.1.4.1.2.1	CreateAnnotation .....	199
3.1.4.1.2.2	CreateAnnotationResponse .....	199
3.1.4.1.3	Complex Types .....	199
3.1.4.1.4	Simple Types.....	199
3.1.4.2	CreateDashboard.....	199
3.1.4.2.1	Messages .....	200
3.1.4.2.1.1	CreateDashboardSoapIn.....	201
3.1.4.2.1.2	CreateDashboardSoapOut.....	201
3.1.4.2.2	Elements.....	201
3.1.4.2.2.1	CreateDashboard.....	201
3.1.4.2.2.2	CreateDashboardResponse .....	201
3.1.4.2.3	Complex Types .....	202
3.1.4.2.4	Simple Types.....	202
3.1.4.3	CreateDataSource.....	202
3.1.4.3.1	Messages .....	203
3.1.4.3.1.1	CreateDataSourceSoapIn.....	203
3.1.4.3.1.2	CreateDataSourceSoapOut .....	203
3.1.4.3.2	Elements.....	203
3.1.4.3.2.1	CreateDataSource .....	203
3.1.4.3.2.2	CreateDataSourceResponse .....	204
3.1.4.3.3	Complex Types .....	204
3.1.4.3.4	Simple Types.....	204
3.1.4.4	CreateFilter.....	204
3.1.4.4.1	Messages .....	205
3.1.4.4.1.1	CreateFilterSoapIn.....	205
3.1.4.4.1.2	CreateFilterSoapOut.....	205
3.1.4.4.2	Elements.....	206
3.1.4.4.2.1	CreateFilter.....	206
3.1.4.4.2.2	CreateFilterResponse .....	206
3.1.4.4.3	Complex Types .....	206
3.1.4.4.4	Simple Types.....	206
3.1.4.5	CreateIndicator .....	206
3.1.4.5.1	Messages .....	208
3.1.4.5.1.1	CreateIndicatorSoapIn .....	208
3.1.4.5.1.2	CreateIndicatorSoapOut .....	208
3.1.4.5.2	Elements.....	208
3.1.4.5.2.1	CreateIndicator .....	208
3.1.4.5.2.2	CreateIndicatorResponse .....	208
3.1.4.5.3	Complex Types .....	209

3.1.4.5.4 Simple Types .....	209
3.1.4.6 CreateKpi .....	209
3.1.4.6.1 Messages .....	210
3.1.4.6.1.1 CreateKpiSoapIn .....	210
3.1.4.6.1.2 CreateKpiSoapOut .....	210
3.1.4.6.2 Elements .....	210
3.1.4.6.2.1 CreateKpi .....	211
3.1.4.6.2.2 CreateKpiResponse .....	211
3.1.4.6.3 Complex Types .....	211
3.1.4.6.4 Simple Types .....	211
3.1.4.7 CreateReportView .....	211
3.1.4.7.1 Messages .....	212
3.1.4.7.1.1 CreateReportViewSoapIn .....	212
3.1.4.7.1.2 CreateReportViewSoapOut .....	213
3.1.4.7.2 Elements .....	213
3.1.4.7.2.1 CreateReportView .....	213
3.1.4.7.2.2 CreateReportViewResponse .....	213
3.1.4.7.3 Complex Types .....	214
3.1.4.7.4 Simple Types .....	214
3.1.4.8 CreateScorecard .....	214
3.1.4.8.1 Messages .....	215
3.1.4.8.1.1 CreateScorecardSoapIn .....	215
3.1.4.8.1.2 CreateScorecardSoapOut .....	215
3.1.4.8.2 Elements .....	215
3.1.4.8.2.1 CreateScorecard .....	215
3.1.4.8.2.2 CreateScorecardResponse .....	216
3.1.4.8.3 Complex Types .....	216
3.1.4.8.4 Simple Types .....	216
3.1.4.9 DeleteAnnotation .....	216
3.1.4.9.1 Messages .....	217
3.1.4.9.1.1 DeleteAnnotationSoapIn .....	217
3.1.4.9.1.2 DeleteAnnotationSoapOut .....	217
3.1.4.9.2 Elements .....	217
3.1.4.9.2.1 DeleteAnnotation .....	217
3.1.4.9.2.2 DeleteAnnotationResponse .....	218
3.1.4.9.3 Complex Types .....	218
3.1.4.9.4 Simple Types .....	218
3.1.4.10 DeleteDashboard .....	218
3.1.4.10.1 Messages .....	218
3.1.4.10.1.1 DeleteDashboardSoapIn .....	218
3.1.4.10.1.2 DeleteDashboardSoapOut .....	219
3.1.4.10.2 Elements .....	219
3.1.4.10.2.1 DeleteDashboard .....	219
3.1.4.10.2.2 DeleteDashboardResponse .....	219
3.1.4.10.3 Complex Types .....	219
3.1.4.10.4 Simple Types .....	219
3.1.4.11 DeleteDataSource .....	220
3.1.4.11.1 Messages .....	220
3.1.4.11.1.1 DeleteDataSourceSoapIn .....	220
3.1.4.11.1.2 DeleteDataSourceSoapOut .....	220
3.1.4.11.2 Elements .....	221
3.1.4.11.2.1 DeleteDataSource .....	221
3.1.4.11.2.2 DeleteDataSourceResponse .....	221

3.1.4.11.3	Complex Types .....	221
3.1.4.11.4	Simple Types .....	221
3.1.4.12	DeleteFilter .....	221
3.1.4.12.1	Messages .....	222
3.1.4.12.1.1	DeleteFilterSoapIn .....	222
3.1.4.12.1.2	DeleteFilterSoapOut .....	222
3.1.4.12.2	Elements .....	222
3.1.4.12.2.1	DeleteFilter .....	222
3.1.4.12.2.2	DeleteFilterResponse .....	223
3.1.4.12.3	Complex Types .....	223
3.1.4.12.4	Simple Types .....	223
3.1.4.13	DeleteIndicator .....	223
3.1.4.13.1	Messages .....	223
3.1.4.13.1.1	DeleteIndicatorSoapIn .....	223
3.1.4.13.1.2	DeleteIndicatorSoapOut .....	224
3.1.4.13.2	Elements .....	224
3.1.4.13.2.1	DeleteIndicator .....	224
3.1.4.13.2.2	DeleteIndicatorResponse .....	224
3.1.4.13.3	Complex Types .....	224
3.1.4.13.4	Simple Types .....	224
3.1.4.14	DeleteKpi .....	225
3.1.4.14.1	Messages .....	225
3.1.4.14.1.1	DeleteKpiSoapIn .....	225
3.1.4.14.1.2	DeleteKpiSoapOut .....	225
3.1.4.14.2	Elements .....	226
3.1.4.14.2.1	DeleteKpi .....	226
3.1.4.14.2.2	DeleteKpiResponse .....	226
3.1.4.14.3	Complex Types .....	226
3.1.4.14.4	Simple Types .....	226
3.1.4.15	DeleteReportView .....	226
3.1.4.15.1	Messages .....	227
3.1.4.15.1.1	DeleteReportViewSoapIn .....	227
3.1.4.15.1.2	DeleteReportViewSoapOut .....	227
3.1.4.15.2	Elements .....	227
3.1.4.15.2.1	DeleteReportView .....	227
3.1.4.15.2.2	DeleteReportViewResponse .....	228
3.1.4.15.3	Complex Types .....	228
3.1.4.15.4	Simple Types .....	228
3.1.4.16	DeleteScorecard .....	228
3.1.4.16.1	Messages .....	228
3.1.4.16.1.1	DeleteScorecardSoapIn .....	228
3.1.4.16.1.2	DeleteScorecardSoapOut .....	229
3.1.4.16.2	Elements .....	229
3.1.4.16.2.1	DeleteScorecard .....	229
3.1.4.16.2.2	DeleteScorecardResponse .....	229
3.1.4.16.3	Complex Types .....	229
3.1.4.16.4	Simple Types .....	229
3.1.4.17	GenerateView .....	230
3.1.4.17.1	Messages .....	230
3.1.4.17.1.1	GenerateViewSoapIn .....	230
3.1.4.17.1.2	GenerateViewSoapOut .....	230
3.1.4.17.2	Elements .....	231
3.1.4.17.2.1	GenerateView .....	231

3.1.4.17.2.2	GenerateViewResponse .....	231
3.1.4.17.3	Complex Types .....	231
3.1.4.17.4	Simple Types .....	231
3.1.4.18	GenerateViewDirect .....	232
3.1.4.18.1	Messages .....	232
3.1.4.18.1.1	GenerateViewDirectSoapIn .....	232
3.1.4.18.1.2	GenerateViewDirectSoapOut .....	232
3.1.4.18.2	Elements .....	232
3.1.4.18.2.1	GenerateViewDirect .....	233
3.1.4.18.2.2	GenerateViewDirectResponse .....	233
3.1.4.18.3	Complex Types .....	234
3.1.4.18.3.1	ArrayOfIndicator .....	234
3.1.4.18.4	Simple Types .....	234
3.1.4.19	GetAllAnnotationsByScorecardLocation .....	234
3.1.4.19.1	Messages .....	235
3.1.4.19.1.1	GetAllAnnotationsByScorecardLocationSoapIn .....	235
3.1.4.19.1.2	GetAllAnnotationsByScorecardLocationSoapOut .....	235
3.1.4.19.2	Elements .....	235
3.1.4.19.2.1	GetAllAnnotationsByScorecardLocation .....	235
3.1.4.19.2.2	GetAllAnnotationsByScorecardLocationResponse .....	235
3.1.4.19.3	Complex Types .....	236
3.1.4.19.3.1	ArrayOfAnnotation .....	236
3.1.4.19.4	Simple Types .....	236
3.1.4.20	GetAnalyticReportView .....	236
3.1.4.20.1	Messages .....	237
3.1.4.20.1.1	GetAnalyticReportViewSoapIn .....	237
3.1.4.20.1.2	GetAnalyticReportViewSoapOut .....	237
3.1.4.20.2	Elements .....	237
3.1.4.20.2.1	GetAnalyticReportView .....	237
3.1.4.20.2.2	GetAnalyticReportViewResponse .....	238
3.1.4.20.3	Complex Types .....	238
3.1.4.20.4	Simple Types .....	238
3.1.4.21	GetAnnotation .....	238
3.1.4.21.1	Messages .....	239
3.1.4.21.1.1	GetAnnotationSoapIn .....	239
3.1.4.21.1.2	GetAnnotationSoapOut .....	239
3.1.4.21.2	Elements .....	239
3.1.4.21.2.1	GetAnnotation .....	239
3.1.4.21.2.2	GetAnnotationResponse .....	240
3.1.4.21.3	Complex Types .....	240
3.1.4.21.3.1	ArrayOfTuple .....	240
3.1.4.21.4	Simple Types .....	241
3.1.4.22	GetAnnotationByID .....	241
3.1.4.22.1	Messages .....	241
3.1.4.22.1.1	GetAnnotationByIDSoapIn .....	241
3.1.4.22.1.2	GetAnnotationByIDSoapOut .....	241
3.1.4.22.2	Elements .....	242
3.1.4.22.2.1	GetAnnotationByID .....	242
3.1.4.22.2.2	GetAnnotationByIDResponse .....	242
3.1.4.22.3	Complex Types .....	242
3.1.4.22.4	Simple Types .....	242
3.1.4.23	GetAnnotationSetting .....	242
3.1.4.23.1	Messages .....	243

3.1.4.23.1.1	GetAnnotationSettingSoapIn .....	243
3.1.4.23.1.2	GetAnnotationSettingSoapOut .....	243
3.1.4.23.2	Elements .....	243
3.1.4.23.2.1	GetAnnotationSetting .....	243
3.1.4.23.2.2	GetAnnotationSettingResponse .....	243
3.1.4.23.3	Complex Types .....	244
3.1.4.23.3.1	AnnotationSetting .....	244
3.1.4.23.4	Simple Types .....	244
3.1.4.24	GetAskPis .....	244
3.1.4.24.1	Messages .....	245
3.1.4.24.1.1	GetAskPisSoapIn .....	245
3.1.4.24.1.2	GetAskPisSoapOut .....	245
3.1.4.24.2	Elements .....	245
3.1.4.24.2.1	GetAskPis .....	245
3.1.4.24.2.2	GetAskPisResponse .....	246
3.1.4.24.3	Complex Types .....	246
3.1.4.24.4	Simple Types .....	246
3.1.4.25	GetCube .....	246
3.1.4.25.1	Messages .....	246
3.1.4.25.1.1	GetCubeSoapIn .....	247
3.1.4.25.1.2	GetCubeSoapOut .....	247
3.1.4.25.2	Elements .....	247
3.1.4.25.2.1	GetCube .....	247
3.1.4.25.2.2	GetCubeResponse .....	247
3.1.4.25.3	Complex Types .....	248
3.1.4.25.4	Simple Types .....	248
3.1.4.26	GetCubeFromDataSource .....	248
3.1.4.26.1	Messages .....	248
3.1.4.26.1.1	GetCubeFromDataSourceSoapIn .....	248
3.1.4.26.1.2	GetCubeFromDataSourceSoapOut .....	248
3.1.4.26.2	Elements .....	249
3.1.4.26.2.1	GetCubeFromDataSource .....	249
3.1.4.26.2.2	GetCubeFromDataSourceResponse .....	249
3.1.4.26.3	Complex Types .....	249
3.1.4.26.4	Simple Types .....	249
3.1.4.27	GetCubeMetaData .....	249
3.1.4.27.1	Messages .....	250
3.1.4.27.1.1	GetCubeMetaDataSoapIn .....	250
3.1.4.27.1.2	GetCubeMetaDataSoapOut .....	250
3.1.4.27.2	Elements .....	251
3.1.4.27.2.1	GetCubeMetaData .....	251
3.1.4.27.2.2	GetCubeMetaDataResponse .....	251
3.1.4.27.3	Complex Types .....	251
3.1.4.27.4	Simple Types .....	251
3.1.4.28	GetCubeMetaDataForDataSource .....	251
3.1.4.28.1	Messages .....	252
3.1.4.28.1.1	GetCubeMetaDataForDataSourceSoapIn .....	252
3.1.4.28.1.2	GetCubeMetaDataForDataSourceSoapOut .....	252
3.1.4.28.2	Elements .....	252
3.1.4.28.2.1	GetCubeMetaDataForDataSource .....	253
3.1.4.28.2.2	GetCubeMetaDataForDataSourceResponse .....	253
3.1.4.28.3	Complex Types .....	253
3.1.4.28.4	Simple Types .....	253



3.1.4.29	GetCubeNameInfos .....	253
3.1.4.29.1	Messages .....	254
3.1.4.29.1.1	GetCubeNameInfosSoapIn .....	254
3.1.4.29.1.2	GetCubeNameInfosSoapOut .....	254
3.1.4.29.2	Elements .....	254
3.1.4.29.2.1	GetCubeNameInfos .....	254
3.1.4.29.2.2	GetCubeNameInfosResponse .....	255
3.1.4.29.3	Complex Types .....	255
3.1.4.29.4	Simple Types .....	255
3.1.4.30	GetCurrentCultureLcid .....	255
3.1.4.30.1	Messages .....	255
3.1.4.30.1.1	GetCurrentCultureLcidSoapIn .....	255
3.1.4.30.1.2	GetCurrentCultureLcidSoapOut .....	256
3.1.4.30.2	Elements .....	256
3.1.4.30.2.1	GetCurrentCultureLcid .....	256
3.1.4.30.2.2	GetCurrentCultureLcidResponse .....	256
3.1.4.30.3	Complex Types .....	256
3.1.4.30.4	Simple Types .....	256
3.1.4.31	GetCurrentUserInfo .....	257
3.1.4.31.1	Messages .....	257
3.1.4.31.1.1	GetCurrentUserInfoSoapIn .....	257
3.1.4.31.1.2	GetCurrentUserInfoSoapOut .....	257
3.1.4.31.2	Elements .....	257
3.1.4.31.2.1	GetCurrentUserInfo .....	257
3.1.4.31.2.2	GetCurrentUserInfoResponse .....	258
3.1.4.31.3	Complex Types .....	258
3.1.4.31.4	Simple Types .....	258
3.1.4.32	GetDashboard .....	258
3.1.4.32.1	Messages .....	259
3.1.4.32.1.1	GetDashboardSoapIn .....	259
3.1.4.32.1.2	GetDashboardSoapOut .....	259
3.1.4.32.2	Elements .....	259
3.1.4.32.2.1	GetDashboard .....	259
3.1.4.32.2.2	GetDashboardResponse .....	260
3.1.4.32.3	Complex Types .....	260
3.1.4.32.4	Simple Types .....	260
3.1.4.33	GetDatabaseNamesFromDataSource .....	260
3.1.4.33.1	Messages .....	260
3.1.4.33.1.1	GetDatabaseNamesFromDataSourceSoapIn .....	261
3.1.4.33.1.2	GetDatabaseNamesFromDataSourceSoapOut .....	261
3.1.4.33.2	Elements .....	261
3.1.4.33.2.1	GetDatabaseNamesFromDataSource .....	261
3.1.4.33.2.2	GetDatabaseNamesFromDataSourceResponse .....	261
3.1.4.33.3	Complex Types .....	262
3.1.4.33.4	Simple Types .....	262
3.1.4.34	GetDataSource .....	262
3.1.4.34.1	Messages .....	262
3.1.4.34.1.1	GetDataSourceSoapIn .....	262
3.1.4.34.1.2	GetDataSourceSoapOut .....	263
3.1.4.34.2	Elements .....	263
3.1.4.34.2.1	GetDataSource .....	263
3.1.4.34.2.2	GetDataSourceResponse .....	263
3.1.4.34.3	Complex Types .....	263

3.1.4.34.4 Simple Types .....	263
3.1.4.35 GetDependentElements .....	264
3.1.4.35.1 Messages .....	264
3.1.4.35.1.1 GetDependentElementsSoapIn .....	264
3.1.4.35.1.2 GetDependentElementsSoapOut .....	264
3.1.4.35.2 Elements .....	265
3.1.4.35.2.1 GetDependentElements .....	265
3.1.4.35.2.2 GetDependentElementsResponse .....	265
3.1.4.35.3 Complex Types .....	265
3.1.4.35.3.1 ArrayOfRepositoryLocation .....	265
3.1.4.35.3.2 DependentElementInfo .....	266
3.1.4.35.3.3 ArrayOfRepositoryList .....	266
3.1.4.35.3.4 RepositoryList .....	266
3.1.4.35.4 Simple Types .....	267
3.1.4.35.4.1 FCOContentType .....	267
3.1.4.36 GetDimensions .....	268
3.1.4.36.1 Messages .....	268
3.1.4.36.1.1 GetDimensionsSoapIn .....	268
3.1.4.36.1.2 GetDimensionsSoapOut .....	269
3.1.4.36.2 Elements .....	269
3.1.4.36.2.1 GetDimensions .....	269
3.1.4.36.2.2 GetDimensionsResponse .....	269
3.1.4.36.3 Complex Types .....	269
3.1.4.36.4 Simple Types .....	269
3.1.4.37 GetDimensionsFromDataSource .....	270
3.1.4.37.1 Messages .....	270
3.1.4.37.1.1 GetDimensionsFromDataSourceSoapIn .....	270
3.1.4.37.1.2 GetDimensionsFromDataSourceSoapOut .....	270
3.1.4.37.2 Elements .....	271
3.1.4.37.2.1 GetDimensionsFromDataSource .....	271
3.1.4.37.2.2 GetDimensionsFromDataSourceResponse .....	271
3.1.4.37.3 Complex Types .....	271
3.1.4.37.4 Simple Types .....	271
3.1.4.38 GetFilter .....	271
3.1.4.38.1 Messages .....	272
3.1.4.38.1.1 GetFilterSoapIn .....	272
3.1.4.38.1.2 GetFilterSoapOut .....	272
3.1.4.38.2 Elements .....	272
3.1.4.38.2.1 GetFilter .....	272
3.1.4.38.2.2 GetFilterResponse .....	273
3.1.4.38.3 Complex Types .....	273
3.1.4.38.4 Simple Types .....	273
3.1.4.39 GetIndicator .....	273
3.1.4.39.1 Messages .....	274
3.1.4.39.1.1 GetIndicatorSoapIn .....	274
3.1.4.39.1.2 GetIndicatorSoapOut .....	274
3.1.4.39.2 Elements .....	274
3.1.4.39.2.1 GetIndicator .....	274
3.1.4.39.2.2 GetIndicatorResponse .....	275
3.1.4.39.3 Complex Types .....	275
3.1.4.39.4 Simple Types .....	275
3.1.4.40 GetKpi .....	275
3.1.4.40.1 Messages .....	276

3.1.4.40.1.1	GetKpiSoapIn .....	276
3.1.4.40.1.2	GetKpiSoapOut .....	276
3.1.4.40.2	Elements .....	276
3.1.4.40.2.1	GetKpi .....	276
3.1.4.40.2.2	GetKpiResponse .....	276
3.1.4.40.3	Complex Types .....	277
3.1.4.40.4	Simple Types .....	277
3.1.4.41	GetKpisFromScorecard .....	277
3.1.4.41.1	Messages .....	277
3.1.4.41.1.1	GetKpisFromScorecardSoapIn .....	277
3.1.4.41.1.2	GetKpisFromScorecardSoapOut .....	278
3.1.4.41.2	Elements .....	278
3.1.4.41.2.1	GetKpisFromScorecard .....	278
3.1.4.41.2.2	GetKpisFromScorecardResponse .....	278
3.1.4.41.3	Complex Types .....	278
3.1.4.41.4	Simple Types .....	278
3.1.4.42	GetLatestAnalyticReportVersion .....	279
3.1.4.42.1	Messages .....	279
3.1.4.42.1.1	GetLatestAnalyticReportVersionSoapIn .....	279
3.1.4.42.1.2	GetLatestAnalyticReportVersionSoapOut .....	279
3.1.4.42.2	Elements .....	279
3.1.4.42.2.1	GetLatestAnalyticReportVersion .....	280
3.1.4.42.2.2	GetLatestAnalyticReportVersionResponse .....	280
3.1.4.42.3	Complex Types .....	280
3.1.4.42.4	Simple Types .....	280
3.1.4.43	GetListItems .....	280
3.1.4.43.1	Messages .....	281
3.1.4.43.1.1	GetListItemsSoapIn .....	281
3.1.4.43.1.2	GetListItemsSoapOut .....	281
3.1.4.43.2	Elements .....	281
3.1.4.43.2.1	GetListItems .....	281
3.1.4.43.2.2	GetListItemsResponse .....	282
3.1.4.43.3	Complex Types .....	282
3.1.4.43.4	Simple Types .....	282
3.1.4.44	GetMdx .....	282
3.1.4.44.1	Messages .....	283
3.1.4.44.1.1	GetMdxSoapIn .....	283
3.1.4.44.1.2	GetMdxSoapOut .....	283
3.1.4.44.2	Elements .....	283
3.1.4.44.2.1	GetMdx .....	283
3.1.4.44.2.2	GetMdxResponse .....	284
3.1.4.44.3	Complex Types .....	284
3.1.4.44.4	Simple Types .....	284
3.1.4.45	GetParameterDisplayData .....	284
3.1.4.45.1	Messages .....	285
3.1.4.45.1.1	GetParameterDisplayDataSoapIn .....	285
3.1.4.45.1.2	GetParameterDisplayDataSoapOut .....	285
3.1.4.45.2	Elements .....	285
3.1.4.45.2.1	GetParameterDisplayData .....	285
3.1.4.45.2.2	GetParameterDisplayDataResponse .....	286
3.1.4.45.3	Complex Types .....	287
3.1.4.45.4	Simple Types .....	287
3.1.4.46	GetPreviewDataSet .....	287

3.1.4.46.1	Messages .....	287
3.1.4.46.1.1	GetPreviewDataSetSoapIn .....	287
3.1.4.46.1.2	GetPreviewDataSetSoapOut .....	288
3.1.4.46.2	Elements .....	288
3.1.4.46.2.1	GetPreviewDataSet .....	288
3.1.4.46.2.2	GetPreviewDataSetResponse .....	288
3.1.4.46.3	Complex Types .....	289
3.1.4.46.4	Simple Types .....	289
3.1.4.47	GetQueryResultMembers .....	289
3.1.4.47.1	Messages .....	289
3.1.4.47.1.1	GetQueryResultMembersSoapIn .....	289
3.1.4.47.1.2	GetQueryResultMembersSoapOut .....	290
3.1.4.47.2	Elements .....	290
3.1.4.47.2.1	GetQueryResultMembers .....	290
3.1.4.47.2.2	GetQueryResultMembersResponse .....	290
3.1.4.47.3	Complex Types .....	291
3.1.4.47.4	Simple Types .....	291
3.1.4.48	GetRegisteredCustomFCOs .....	291
3.1.4.48.1	Messages .....	291
3.1.4.48.1.1	GetRegisteredCustomFCOsSoapIn .....	291
3.1.4.48.1.2	GetRegisteredCustomFCOsSoapOut .....	291
3.1.4.48.2	Elements .....	292
3.1.4.48.2.1	GetRegisteredCustomFCOs .....	292
3.1.4.48.2.2	GetRegisteredCustomFCOsResponse .....	292
3.1.4.48.3	Complex Types .....	292
3.1.4.48.3.1	ArrayOfCustomFCODefinition .....	292
3.1.4.48.3.2	CustomFCODefinition .....	293
3.1.4.48.4	Simple Types .....	293
3.1.4.48.4.1	CustomFCOType .....	293
3.1.4.49	GetReportView .....	294
3.1.4.49.1	Messages .....	295
3.1.4.49.1.1	GetReportViewSoapIn .....	295
3.1.4.49.1.2	GetReportViewSoapOut .....	295
3.1.4.49.2	Elements .....	295
3.1.4.49.2.1	GetReportView .....	295
3.1.4.49.2.2	GetReportViewResponse .....	295
3.1.4.49.3	Complex Types .....	296
3.1.4.49.4	Simple Types .....	296
3.1.4.50	GetScorecard .....	296
3.1.4.50.1	Messages .....	296
3.1.4.50.1.1	GetScorecardSoapIn .....	297
3.1.4.50.1.2	GetScorecardSoapOut .....	297
3.1.4.50.2	Elements .....	297
3.1.4.50.2.1	GetScorecard .....	297
3.1.4.50.2.2	GetScorecardResponse .....	297
3.1.4.50.3	Complex Types .....	298
3.1.4.50.4	Simple Types .....	298
3.1.4.51	QueryChildMembers .....	298
3.1.4.51.1	Messages .....	298
3.1.4.51.1.1	QueryChildMembersSoapIn .....	298
3.1.4.51.1.2	QueryChildMembersSoapOut .....	298
3.1.4.51.2	Elements .....	299
3.1.4.51.2.1	QueryChildMembers .....	299

3.1.4.51.2.2	QueryChildMembersResponse.....	299
3.1.4.51.3	Complex Types .....	299
3.1.4.51.4	Simple Types .....	300
3.1.4.52	QueryChildMembersByRangeFromDataSource .....	300
3.1.4.52.1	Messages .....	300
3.1.4.52.1.1	QueryChildMembersByRangeFromDataSourceSoapIn .....	300
3.1.4.52.1.2	QueryChildMembersByRangeFromDataSourceSoapOut .....	300
3.1.4.52.2	Elements .....	301
3.1.4.52.2.1	QueryChildMembersByRangeFromDataSource .....	301
3.1.4.52.2.2	QueryChildMembersByRangeFromDataSourceResponse .....	301
3.1.4.52.3	Complex Types .....	301
3.1.4.52.4	Simple Types .....	301
3.1.4.53	QueryChildMembersFromDataSource.....	302
3.1.4.53.1	Messages .....	302
3.1.4.53.1.1	QueryChildMembersFromDataSourceSoapIn.....	302
3.1.4.53.1.2	QueryChildMembersFromDataSourceSoapOut.....	302
3.1.4.53.2	Elements .....	302
3.1.4.53.2.1	QueryChildMembersFromDataSource.....	303
3.1.4.53.2.2	QueryChildMembersFromDataSourceResponse .....	303
3.1.4.53.3	Complex Types .....	303
3.1.4.53.4	Simple Types .....	303
3.1.4.54	QueryDimensionRootMembers .....	303
3.1.4.54.1	Messages .....	304
3.1.4.54.1.1	QueryDimensionRootMembersSoapIn .....	304
3.1.4.54.1.2	QueryDimensionRootMembersSoapOut.....	304
3.1.4.54.2	Elements .....	304
3.1.4.54.2.1	QueryDimensionRootMembers .....	304
3.1.4.54.2.2	QueryDimensionRootMembersResponse.....	305
3.1.4.54.3	Complex Types .....	305
3.1.4.54.4	Simple Types .....	305
3.1.4.55	QueryDimensionRootMembersFromDataSource.....	305
3.1.4.55.1	Messages .....	306
3.1.4.55.1.1	QueryDimensionRootMembersFromDataSourceSoapIn.....	306
3.1.4.55.1.2	QueryDimensionRootMembersFromDataSourceSoapOut .....	306
3.1.4.55.2	Elements .....	306
3.1.4.55.2.1	QueryDimensionRootMembersFromDataSource .....	306
3.1.4.55.2.2	QueryDimensionRootMembersFromDataSourceResponse .....	307
3.1.4.55.3	Complex Types .....	307
3.1.4.55.4	Simple Types .....	307
3.1.4.56	QueryNamedSets.....	307
3.1.4.56.1	Messages .....	308
3.1.4.56.1.1	QueryNamedSetsSoapIn.....	308
3.1.4.56.1.2	QueryNamedSetsSoapOut.....	308
3.1.4.56.2	Elements .....	308
3.1.4.56.2.1	QueryNamedSets.....	308
3.1.4.56.2.2	QueryNamedSetsResponse .....	309
3.1.4.56.3	Complex Types .....	309
3.1.4.56.4	Simple Types .....	309
3.1.4.57	QueryNamedSetsFromDataSource .....	309
3.1.4.57.1	Messages .....	310
3.1.4.57.1.1	QueryNamedSetsFromDataSourceSoapIn .....	310
3.1.4.57.1.2	QueryNamedSetsFromDataSourceSoapOut .....	310
3.1.4.57.2	Elements .....	310

3.1.4.57.2.1	QueryNamedSetsFromDataSource .....	310
3.1.4.57.2.2	QueryNamedSetsFromDataSourceResponse .....	310
3.1.4.57.3	Complex Types .....	311
3.1.4.57.4	Simple Types .....	311
3.1.4.58	QueryRelatedMember .....	311
3.1.4.58.1	Messages .....	311
3.1.4.58.1.1	QueryRelatedMemberSoapIn .....	311
3.1.4.58.1.2	QueryRelatedMemberSoapOut .....	312
3.1.4.58.2	Elements .....	312
3.1.4.58.2.1	QueryRelatedMember .....	312
3.1.4.58.2.2	QueryRelatedMemberResponse .....	312
3.1.4.58.3	Complex Types .....	313
3.1.4.58.4	Simple Types .....	313
3.1.4.59	QueryRelatedMemberFromDataSource .....	313
3.1.4.59.1	Messages .....	313
3.1.4.59.1.1	QueryRelatedMemberFromDataSourceSoapIn .....	314
3.1.4.59.1.2	QueryRelatedMemberFromDataSourceSoapOut .....	314
3.1.4.59.2	Elements .....	314
3.1.4.59.2.1	QueryRelatedMemberFromDataSource .....	314
3.1.4.59.2.2	QueryRelatedMemberFromDataSourceResponse .....	314
3.1.4.59.3	Complex Types .....	315
3.1.4.59.4	Simple Types .....	315
3.1.4.60	QueryTimeIntelligence .....	315
3.1.4.60.1	Messages .....	316
3.1.4.60.1.1	QueryTimeIntelligenceSoapIn .....	316
3.1.4.60.1.2	QueryTimeIntelligenceSoapOut .....	316
3.1.4.60.2	Elements .....	316
3.1.4.60.2.1	QueryTimeIntelligence .....	316
3.1.4.60.2.2	QueryTimeIntelligenceResponse .....	317
3.1.4.60.3	Complex Types .....	317
3.1.4.60.4	Simple Types .....	317
3.1.4.61	QueryTimeIntelligenceDirect .....	317
3.1.4.61.1	Messages .....	318
3.1.4.61.1.1	QueryTimeIntelligenceDirectSoapIn .....	318
3.1.4.61.1.2	QueryTimeIntelligenceDirectSoapOut .....	318
3.1.4.61.2	Elements .....	318
3.1.4.61.2.1	QueryTimeIntelligenceDirect .....	318
3.1.4.61.2.2	QueryTimeIntelligenceDirectResponse .....	319
3.1.4.61.3	Complex Types .....	319
3.1.4.61.4	Simple Types .....	319
3.1.4.62	QueryTransformMembers .....	319
3.1.4.62.1	Messages .....	320
3.1.4.62.1.1	QueryTransformMembersSoapIn .....	320
3.1.4.62.1.2	QueryTransformMembersSoapOut .....	320
3.1.4.62.2	Elements .....	320
3.1.4.62.2.1	QueryTransformMembers .....	320
3.1.4.62.2.2	QueryTransformMembersResponse .....	321
3.1.4.62.3	Complex Types .....	321
3.1.4.62.4	Simple Types .....	321
3.1.4.62.4.1	QueryTransformMembersType .....	321
3.1.4.63	SaveTemporaryAnalyticReport .....	322
3.1.4.63.1	Messages .....	322
3.1.4.63.1.1	SaveTemporaryAnalyticReportSoapIn .....	322

3.1.4.63.1.2	SaveTemporaryAnalyticReportSoapOut.....	323
3.1.4.63.2	Elements .....	323
3.1.4.63.2.1	SaveTemporaryAnalyticReport.....	323
3.1.4.63.2.2	SaveTemporaryAnalyticReportResponse .....	323
3.1.4.63.3	Complex Types .....	323
3.1.4.63.4	Simple Types .....	323
3.1.4.64	TestConnection.....	324
3.1.4.64.1	Messages .....	324
3.1.4.64.1.1	TestConnectionSoapIn.....	324
3.1.4.64.1.2	TestConnectionSoapOut.....	324
3.1.4.64.2	Elements .....	324
3.1.4.64.2.1	TestConnection.....	325
3.1.4.64.2.2	TestConnectionResponse .....	325
3.1.4.64.3	Complex Types .....	325
3.1.4.64.4	Simple Types .....	325
3.1.4.65	TrimAnnotationByOwner .....	325
3.1.4.65.1	Messages .....	326
3.1.4.65.1.1	TrimAnnotationByOwnerSoapIn .....	326
3.1.4.65.1.2	TrimAnnotationByOwnerSoapOut .....	326
3.1.4.65.2	Elements .....	326
3.1.4.65.2.1	TrimAnnotationByOwner .....	326
3.1.4.65.2.2	TrimAnnotationByOwnerResponse.....	327
3.1.4.65.3	Complex Types .....	327
3.1.4.65.4	Simple Types .....	327
3.1.4.66	TrimAnnotationByScorecardLocation.....	327
3.1.4.66.1	Messages .....	327
3.1.4.66.1.1	TrimAnnotationByScorecardLocationSoapIn.....	327
3.1.4.66.1.2	TrimAnnotationByScorecardLocationSoapOut .....	328
3.1.4.66.2	Elements .....	328
3.1.4.66.2.1	TrimAnnotationByScorecardLocation .....	328
3.1.4.66.2.2	TrimAnnotationByScorecardLocationResponse .....	328
3.1.4.66.3	Complex Types .....	328
3.1.4.66.4	Simple Types .....	328
3.1.4.67	TrimAnnotationUntouchedSince .....	329
3.1.4.67.1	Messages .....	329
3.1.4.67.1.1	TrimAnnotationUntouchedSinceSoapIn .....	329
3.1.4.67.1.2	TrimAnnotationUntouchedSinceSoapOut .....	329
3.1.4.67.2	Elements .....	330
3.1.4.67.2.1	TrimAnnotationUntouchedSince .....	330
3.1.4.67.2.2	TrimAnnotationUntouchedSinceResponse .....	330
3.1.4.67.3	Complex Types .....	330
3.1.4.67.4	Simple Types .....	330
3.1.4.68	UpdateAnnotation .....	330
3.1.4.68.1	Messages .....	331
3.1.4.68.1.1	UpdateAnnotationSoapIn .....	331
3.1.4.68.1.2	UpdateAnnotationSoapOut .....	331
3.1.4.68.2	Elements .....	332
3.1.4.68.2.1	UpdateAnnotation .....	332
3.1.4.68.2.2	UpdateAnnotationResponse.....	332
3.1.4.68.3	Complex Types .....	332
3.1.4.68.4	Simple Types .....	332
3.1.4.69	UpdateDashboard .....	332
3.1.4.69.1	Messages .....	334

3.1.4.69.1.1	UpdateDashboardSoapIn .....	334
3.1.4.69.1.2	UpdateDashboardSoapOut .....	334
3.1.4.69.2	Elements .....	334
3.1.4.69.2.1	UpdateDashboard .....	334
3.1.4.69.2.2	UpdateDashboardResponse .....	334
3.1.4.69.3	Complex Types .....	335
3.1.4.69.4	Simple Types .....	335
3.1.4.70	UpdateDataSource .....	335
3.1.4.70.1	Messages .....	336
3.1.4.70.1.1	UpdateDataSourceSoapIn .....	336
3.1.4.70.1.2	UpdateDataSourceSoapOut .....	336
3.1.4.70.2	Elements .....	336
3.1.4.70.2.1	UpdateDataSource .....	337
3.1.4.70.2.2	UpdateDataSourceResponse .....	337
3.1.4.70.3	Complex Types .....	337
3.1.4.70.4	Simple Types .....	337
3.1.4.71	UpdateFilter .....	337
3.1.4.71.1	Messages .....	338
3.1.4.71.1.1	UpdateFilterSoapIn .....	338
3.1.4.71.1.2	UpdateFilterSoapOut .....	339
3.1.4.71.2	Elements .....	339
3.1.4.71.2.1	UpdateFilter .....	339
3.1.4.71.2.2	UpdateFilterResponse .....	339
3.1.4.71.3	Complex Types .....	339
3.1.4.71.4	Simple Types .....	339
3.1.4.72	UpdateIndicator .....	340
3.1.4.72.1	Messages .....	341
3.1.4.72.1.1	UpdateIndicatorSoapIn .....	341
3.1.4.72.1.2	UpdateIndicatorSoapOut .....	341
3.1.4.72.2	Elements .....	341
3.1.4.72.2.1	UpdateIndicator .....	341
3.1.4.72.2.2	UpdateIndicatorResponse .....	342
3.1.4.72.3	Complex Types .....	342
3.1.4.72.4	Simple Types .....	342
3.1.4.73	UpdateKpi .....	342
3.1.4.73.1	Messages .....	343
3.1.4.73.1.1	UpdateKpiSoapIn .....	343
3.1.4.73.1.2	UpdateKpiSoapOut .....	344
3.1.4.73.2	Elements .....	344
3.1.4.73.2.1	UpdateKpi .....	344
3.1.4.73.2.2	UpdateKpiResponse .....	344
3.1.4.73.3	Complex Types .....	344
3.1.4.73.4	Simple Types .....	344
3.1.4.74	UpdateReportView .....	345
3.1.4.74.1	Messages .....	346
3.1.4.74.1.1	UpdateReportViewSoapIn .....	346
3.1.4.74.1.2	UpdateReportViewSoapOut .....	346
3.1.4.74.2	Elements .....	346
3.1.4.74.2.1	UpdateReportView .....	346
3.1.4.74.2.2	UpdateReportViewResponse .....	347
3.1.4.74.3	Complex Types .....	347
3.1.4.74.4	Simple Types .....	347
3.1.4.75	UpdateScorecard .....	347



3.1.4.75.1	Messages .....	348
3.1.4.75.1.1	UpdateScorecardSoapIn .....	348
3.1.4.75.1.2	UpdateScorecardSoapOut .....	348
3.1.4.75.2	Elements .....	348
3.1.4.75.2.1	UpdateScorecard .....	348
3.1.4.75.2.2	UpdateScorecardResponse .....	349
3.1.4.75.3	Complex Types .....	349
3.1.4.75.4	Simple Types .....	349
3.1.4.76	ValidateKpi.....	349
3.1.4.76.1	Messages .....	350
3.1.4.76.1.1	ValidateKpiSoapIn.....	350
3.1.4.76.1.2	ValidateKpiSoapOut .....	350
3.1.4.76.2	Elements .....	351
3.1.4.76.2.1	ValidateKpi .....	351
3.1.4.76.2.2	ValidateKpiResponse .....	351
3.1.4.76.3	Complex Types .....	351
3.1.4.76.4	Simple Types .....	351
3.1.4.77	ValidateScorecard .....	351
3.1.4.77.1	Messages .....	352
3.1.4.77.1.1	ValidateScorecardSoapIn .....	352
3.1.4.77.1.2	ValidateScorecardSoapOut .....	352
3.1.4.77.2	Elements .....	352
3.1.4.77.2.1	ValidateScorecard .....	352
3.1.4.77.2.2	ValidateScorecardResponse .....	353
3.1.4.77.3	Complex Types .....	353
3.1.4.77.4	Simple Types .....	353
3.1.4.78	ValidateSiteCollection .....	353
3.1.4.78.1	Messages .....	354
3.1.4.78.1.1	ValidateSiteCollectionSoapIn .....	354
3.1.4.78.1.2	ValidateSiteCollectionSoapOut .....	354
3.1.4.78.2	Elements .....	354
3.1.4.78.2.1	ValidateSiteCollection .....	354
3.1.4.78.2.2	ValidateSiteCollectionResponse.....	354
3.1.4.78.3	Complex Types .....	355
3.1.4.78.4	Simple Types .....	355
3.1.4.78.4.1	URLValidationResult .....	355
3.1.5	Timer Events .....	356
3.1.6	Other Local Events .....	356
<b>4</b>	<b>Protocol Examples.....</b>	<b>357</b>
4.1	Scorecard Update .....	357
4.1.1	CreateKPI.....	357
4.1.2	GetScorecard.....	361
4.1.3	UpdateScorecard .....	367
4.1.4	GenerateView .....	381
4.1.5	DeleteScorecard.....	386
4.2	Create and Use a Datasource .....	387
4.2.1	CreateDatasource.....	387
4.2.2	TestDataSource .....	389
4.2.3	GetDimensions.....	390
4.2.4	QueryDimensionRootMembersFromDataSource .....	393
4.2.5	QueryChildMembersFromDataSource .....	393

<b>5 Security .....</b>	<b>395</b>
5.1 Security Considerations for Implementers.....	395
5.2 Index of Security Parameters .....	395
<b>6 Appendix A: Full WSDL .....</b>	<b>396</b>
<b>7 Appendix B: Product Behavior .....</b>	<b>500</b>
<b>8 Change Tracking.....</b>	<b>502</b>
<b>9 Index .....</b>	<b>503</b>

# 1 Introduction

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

## 1.1 Glossary

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

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

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

**Analysis Services**  
**attribute hierarchy**  
**AutoFilter**  
**banding**  
**calculate**  
**cell**  
**child**  
**context site**  
**cube**  
**current user**  
**current version**  
**dashboard**  
**data point**  
**data source**  
**descendant**  
**dimension**  
**display folder**  
**document library**  
**drilldown**  
**feature**  
**filter**  
**formula**  
**hierarchy**  
**hyperlink**  
**item**  
**key performance indicator (KPI)**  
**level**  
**list**  
**login name**  
**major version**  
**master page**  
**MD5**  
**measure**  
**measure group**  
**member**

**multidimensional expression (MDX)**  
**ODBC**  
**OLAP**  
**PivotTable**  
**Portable Network Graphics (PNG)**  
**published item**  
**query**  
**report**  
**report view**  
**rollup**  
**score**  
**scorecard**  
**server-relative URL**  
**Simple Object Access Protocol (SOAP)**  
**site**  
**site collection**  
**slice**  
**SOAP action**  
**SOAP body**  
**SOAP fault**  
**SOAP fault detail**  
**subsite**  
**target**  
**ToolTip**  
**transform**  
**trusted location**  
**tuple**  
**UI culture**  
**Unified Modeling Language (UML)**  
**Uniform Resource Locator (URL)**  
**Web Part**  
**whitespace**  
**workbook**  
**WSDL message**  
**WSDL operation**  
**XML document**  
**XML namespace**

The following terms are specific to this document:

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

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

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

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

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

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

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

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

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

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

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

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

## 1.2 References

### 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. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[MC-ADONETDSSS] Microsoft Corporation, "ADO.NET DataSet Structure Schema", <http://schemas.microsoft.com/2003/07/msdata.xsd>

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

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

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

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

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

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

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

[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.ietf.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>

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

[UNICODE] The Unicode Consortium, "Unicode 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.S., Ed., Beech, D., Ed., Maloney, M., Ed., and Mendelsohn, N., Ed., "XML Schema Part 1: Structures", W3C Recommendation, May 2001, <http://www.w3.org/TR/2001/REC-xmlschema-1-20010502/>

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

### 1.2.2 Informative References

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

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

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

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

### 1.3 Protocol Overview (Synopsis)

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

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

This protocol enables a protocol client to:

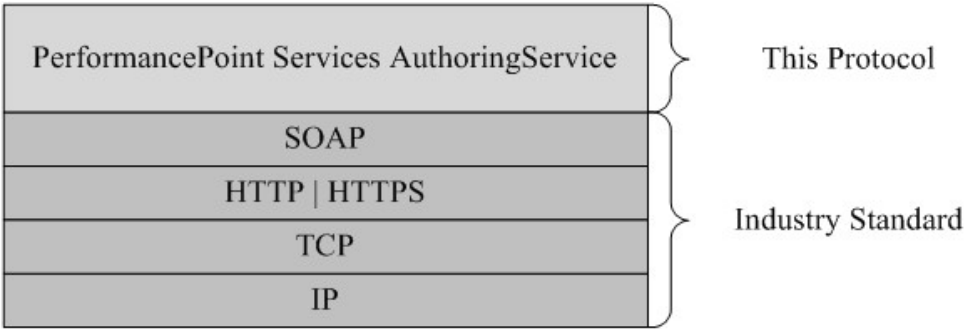
- Create, read, update, validate and delete a variety of dashboard content in a content store. The types and sub-types of content were summarized previously, and described in detail by Common Message Syntax (section 2.)
- Create, read, update, and delete annotations in an annotation store.
- Retrieve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

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

### 1.4 Relationship to Other Protocols

This protocol uses the **SOAP** message protocol for formatting request and response messages, as described in [\[SOAP1.1\]](#), [\[SOAP1.2/1\]](#) and [\[SOAP1.2/2\]](#). It transmits those messages by using **HTTP**, as described in [\[RFC2616\]](#), or **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 of 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 to render the data in an alternative fashion, such as for a mobile device (see section [3.1.4.18](#)).
- Creating and testing data source definitions (including retrieving test data sets) to check that the data source is configured correctly for used in the separate construction of scorecards or dashboards.

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

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

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

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

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

## 1.7 Versioning and Capability Negotiation

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

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

## 1.8 Vendor-Extensible Fields

None.

## 1.9 Standards Assignments

None.



## 2 Messages

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

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

### 2.1 Transport

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

Protocol messages MUST be formatted as specified either in [\[SOAP1.1\]](#), section 4 or in [\[SOAP1.2/1\]](#), section 5. Server faults MUST be returned either using HTTP Status Codes as specified in [\[RFC2616\]](#), section 10 or using **SOAP faults** as specified either in [\[SOAP1.1\]](#), section 4.4 or in [\[SOAP1.2/1\]](#), section 5.4. 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 structures used by this protocol. The syntax of the structures uses XML Schema, as specified in [\[XMLSCHEMA1\]](#) and [\[XMLSCHEMA2\]](#), and Web Services Description Language, 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
xs	<a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>	<a href="#">[XMLSCHEMA1]</a> <a href="#">[XMLSCHEMA2]</a>
xsd	<a href="http://www.w3.org/2001/XMLSchema">http://www.w3.org/2001/XMLSchema</a>	<a href="#">[XMLSCHEMA1]</a> <a href="#">[XMLSCHEMA2]</a>
xsi	<a href="http://www.w3.org/2001/XMLSchema-instance">http://www.w3.org/2001/XMLSchema-instance</a>	<a href="#">[XMLSCHEMA1]</a> <a href="#">[XMLSCHEMA2]</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>	
q	<a href="http://microsoft.com/wsdl/types/">http://microsoft.com/wsdl/types/</a>	<a href="#">[WSDL]</a>
soap	<a href="http://schemas.xmlsoap.org/wsdl/soap/">http://schemas.xmlsoap.org/wsdl/soap/</a>	<a href="#">[SOAP1.1]</a>

Prefix	Namespace URI	Reference
http	http://schemas.xmlsoap.org/wsdl/http/	<a href="#">[WSDL]</a>
wsdl	http://schemas.xmlsoap.org/wsdl/	<a href="#">[WSDL]</a>
diffgr	urn:schemas-microsoft-com:xml-diffgram-v1	<a href="#">[MS-DSDIFFGRAM]</a>
msdata	urn:schemas-microsoft-com:xml-msdata	<a href="#">[MC-ADONETDSSS]</a>
msprop	urn:schemas-microsoft-com:xml-msprop	<a href="#">[MS-DSDIFFGRAM]</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="#">2.2.9</a> .

## 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 specifies an operation to add all <b>members (3)</b> at the specified <b>level</b> to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddCalcMemberSetOp</b>	This complex type specifies an operation to add a <b>calculated</b> member (3) to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddChildrenSetOp</b>	This complex type specifies an operation to add child members (3), of the specified member (3), to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddDefaultMemberSetOp</b>	This complex type specifies an operation to add the <b>default member</b> to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddDescendantsLeavesSetOp</b>	This complex type specifies an operation to add leaf descendant members (3), of the specified member (3), to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddDescendantsSetOp</b>	This complex type specifies an operation to add descendant

Complex type	Description
	members (3), at the specified level of the specified member (3), to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddDescendantsSubtreeSetOp</b>	This complex type specifies an operation to add descendant members (3), from all levels subordinate to the specified member, to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddFilterSetOp</b>	This complex type specifies an operation to add a value <b>filter</b> set operation to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddFilterTopBottomSetOp</b>	This complex type specifies an operation to add a top or bottom filter set operation to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddMemberSetOp</b>	This complex type specifies an operation to add a member (3) to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddNamedSetSetOp</b>	This complex type specifies an operation to add a <b>named set</b> to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AddParentSiblingsSetOp</b>	This complex type specifies an operation to add the parent's siblings (members (3)), of the specified member (3), to a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>AliasInfo</b>	The <b>AliasInfo</b> complex type maps a <b>KpiMeasure</b> to a string.
<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>AnalyticChartReportViewData</b>	The <b>AnalyticChartReportViewData</b> is a complex type that contains the chart type report view details for analytic reports.
<b>AnalyticGridReportViewData</b>	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 particular slice of a scorecard.
<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 AnnotationComment elements (see section

Complex type	Description
	<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="#">2.2.4.160</a> ).
<b>ArrayOfBpmProperty</b>	The <b>ArrayOfBpmProperty</b> complex type specifies an array of <b>BpmProperty</b> elements (see section <a href="#">2.2.4.63</a> ).
<b>ArrayOfBpmPropertyListItem</b>	The <b>ArrayOfBpmPropertyListItem</b> complex type specifies an array of <b>items (1)</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 decimal, <b>ArrayOfMember</b> , <b>ArrayOfMemberTransform</b> , dateTime, string, double, guid, char, or int.
<b>ArrayOfComment</b>	The <b>ArrayOfComment</b> complex type specifies an array of comments.
<b>ArrayOfConfiguredView</b>	The <b>ArrayOfConfiguredView</b> complex type specifies an array of view definitions for a scorecard.
<b>ArrayOfDashboardElement</b>	The <b>ArrayOfDashboardElement</b> complex type specifies an array of DashboardElement (see section <a href="#">2.2.4.80</a> ).
<b>ArrayOfDataColumnMapping</b>	The <b>ArrayOfDataColumnMapping</b> complex type specifies and array of <b>DataColumnMapping</b> (see section <a href="#">2.2.4.84</a> ).
<b>ArrayOfDataSource</b>	The <b>ArrayOfDataSource</b> complex type specifies an array of data sources.
<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 DefaultDimensionSetting (see section <a href="#">2.2.4.87</a> ).
<b>ArrayOfDimension</b>	The <b>ArrayOfDimension</b> complex type specifies an array of dimension elements.
<b>ArrayOfEndPoint</b>	The <b>ArrayOfEndPoint</b> complex type specifies an array of connection termination points for a consumer Web Part such as a report view or a scorecard.
<b>ArrayOfFirstClassElement</b>	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.

Complex type	Description
<b>ArrayOfHierarchy</b>	The <b>ArrayOfHierarchy</b> complex type specifies an array of hierarchy values for a dimension.
<b>ArrayOfIndicatorBand</b>	The <b>ArrayOfIndicatorBand</b> complex type specifies an array of indicator bands.
<b>ArrayOfKpi</b>	The <b>ArrayOfKpi</b> complex type specifies an array of KPIs (section <a href="#">2.2.4.112</a> ) for a scorecard.
<b>ArrayOfKpiMeasure</b>	The <b>ArrayOfKpiMeasure</b> complex type specifies an array of KpiMeasure complex types.
<b>ArrayOfLevel</b>	The <b>ArrayOfLevel</b> complex type defines an array of Level (section <a href="#">2.2.4.131</a> ) complex types.
<b>ArrayOfMeasure</b>	The <b>ArrayOfMeasure</b> complex type defines an array of <b>Measure</b> (section <a href="#">2.2.4.134</a> ) complex types.
<b>ArrayOfMember</b>	The <b>ArrayOfMember</b> complex type defines an array of <b>Member</b> (section <a href="#">2.2.4.135</a> ) complex types.
<b>ArrayOfMemberTransform</b>	The <b>ArrayOfMemberTransform</b> complex type defines an array of <b>MemberTransform</b> (section <a href="#">2.2.4.147</a> ) complex types.
<b>ArrayOfNamedSet</b>	The <b>ArrayOfNamedSet</b> complex type defines an array of <b>NamedSet</b> (section <a href="#">2.2.4.148</a> ) complex types.
<b>ArrayOfNameInfo</b>	The <b>ArrayOfNameInfo</b> complex type defines an array of <b>NameInfo</b> elements.
<b>ArrayOfParameter</b>	A collection of parameters used in an analytic <b>query</b> .
<b>ArrayOfParameterDefinition</b>	The <b>ArrayOfParameterDefinition</b> complex type defines an array of <b>ParameterDefinition</b> complex types.
<b>ArrayOfParameterMapping</b>	The <b>ArrayOfParameterMapping</b> complex type defines an array of <b>ParameterMapping</b> complex types.
<b>ArrayOfPropertyBag</b>	The <b>ArrayOfPropertyBag</b> complex type defines an array of <b>PropertyBag</b> (section <a href="#">2.2.4.137</a> ) elements.
<b>ArrayOfSetOperation</b>	The <b>ArrayOfSetOperation</b> complex type defines an array of <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ) elements.
<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 Target (section <a href="#">2.2.4.145</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.

Complex type	Description
<b>Axis</b>	The <b>Axis</b> complex type specifies information about an axis in a query result.
<b>Banding</b>	This complex type represents the Banding settings of the KPI Target.
<b>BpmException</b>	Contains the details of a server alert.
<b>BpmProperty</b>	This <b>BpmProperty</b> complex type is the abstract base type for <a href="#">BpmPropertyBool</a> , <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 BpmProperty type.
<b>BpmPropertyDate</b>	The <b>BpmPropertyDate</b> complex type defines a Date property. It extends the BpmProperty type.
<b>BpmPropertyDecimal</b>	The <b>BpmPropertyDecimal</b> complex type defines a Decimal property. It extends the BpmProperty type.
<b>BpmPropertyHyperlink</b>	The <b>BpmPropertyHyperlink</b> complex type defines a <b>Hyperlink</b> property. This type extends <b>BpmPropertyLinkBase</b> (section <a href="#">2.2.4.69</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="#">2.2.4.69</a> ).
<b>BpmPropertyLinkBase</b>	The <b>BpmPropertyLinkBase</b> complex type defines a <b>Hyperlink</b> property. It extends the BpmProperty type.
<b>BpmPropertyList</b>	The <b>BpmPropertyList</b> complex type specifies zero or one of the <b>ArrayOfBpmPropertyListItem</b> (section <a href="#">2.2.4.24</a> ) complex type. It extends the BpmProperty type.
<b>BpmPropertyListItem</b>	The <b>BpmPropertyListItem</b> complex type defines a name-value pair.
<b>BpmPropertyLongText</b>	The <b>BpmPropertyLongText</b> complex type defines a Long Text property. The type extends BpmProperty.
<b>BpmPropertyText</b>	The <b>BpmPropertyText</b> complex type defines a Text property. The type extends BpmProperty.
<b>BpmPropertyUser</b>	The <b>BpmPropertyUser</b> complex type defines a User property. The type extends BpmProperty.
<b>CalculatedFormulaInfo</b>	The <b>CalculatedFormulaInfo</b> complex type specifies a calculated formula in a <a href="#">KpiMeasure</a> . This type is used to specify calculations as part of a KPI's calculated metric.
<b>Comment</b>	The <b>Comment</b> complex type represents a comment to be associated with a data entity. This class is the base class for AnnotationComment.

Complex type	Description
<b>ConfiguredView</b>	The <b>ConfiguredView</b> 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.
<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="#">2.2.4.164</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>DashboardElements</b> (section <a href="#">2.2.4.80</a> ) that are displayed vertically or horizontally.
<b>DashboardElementSize</b>	The <b>DashboardElementSize</b> 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 report, 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>DataSourceVariable</b>	This type is reserved and MUST NOT be used.
<b>DataTableMapping</b>	The <b>DataTableMapping</b> complex type specifies how data from tabular data sources is mapped to multi-dimensional data.
<b>DefaultDimensionSetting</b>	The <b>DefaultDimensionSetting</b> complex type specifies a default set of members in a dimension. It extends the <b>Dimension</b> (see section <a href="#">2.2.4.96</a> ) type.
<b>DictionaryWrapperOfStringGridCell</b>	The <b>DictionaryWrapperOfStringGridCell</b> complex type specifies a collection of <b>ArrayOfGridCells</b> (see section <a href="#">2.2.4.36</a> ) with associated string keys.
<b>DictionaryWrapperOfStringPropertyBag</b>	The <b>DictionaryWrapperOfStringPropertyBag</b> 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

Complex type	Description
	dimension.
<b>Element</b>	The <b>Element</b> abstract class specifies basic metadata about an item (1). This class is the base class for <b>FirstClassElement</b> and <b>SecondClassElement</b> .
<b>ElementVersion</b>	The <b>ElementVersion</b> complex type specifies the version information used to distinguish different instances of a <b>FirstClassElement</b> .
<b>EliminateDescendantsSetOp</b>	This complex type specifies an operation to eliminate descendant members (3), of the specified member (3), from a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>EliminateMemberSetOp</b>	This complex type specifies an operation to eliminate a member (3) from a <b>MemberSet</b> (see section <a href="#">2.2.4.145</a> ). This type extends <b>SetOperation</b> (section <a href="#">2.2.4.166</a> ).
<b>EndPoint</b>	The <b>EndPoint</b> 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>	The <b>ExcelDataSet</b> complex type specifies the Excel workbook ([MS-XLS]) data for an <b>ExcelWorkbook</b> data source.
<b>ExcelServicesData</b>	The <b>ExcelServicesData</b> complex type describes an Excel Services ([MS-ESP]) 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> abstract class represents an object that is versionable. This is the base class for <b>Dashboard</b> , <a href="#">DataSource</a> , <a href="#">Scorecard</a> , <a href="#">ReportView</a> , <a href="#">Kpi</a> , and <a href="#">Indicator</a> .
<b>GridCell</b>	The <b>GridCell</b> complex type specifies a single cell used by the scorecard grid view and the analytic grid view.
<b>GridCellSet</b>	The <b>GridCellSet</b> complex type 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>	The <b>GridColor</b> complex type specifies the grid color for the <b>GridCell</b> contents.
<b>GridDisplayElement</b>	<p>The <b>GridDisplayElement</b> complex type specifies an element in a scorecard cell. This is a base class for the following complex types:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">GridDisplayElementNumber</a></li> <li>▪ <a href="#">GridDisplayElementIndicator</a></li> <li>▪ <b>GridDisplayElementText</b></li> </ul>



Complex type	Description
	<ul style="list-style-type: none"> <li>▪ <a href="#">GridDisplayElementHyperLink</a></li> </ul>
<b>GridDisplayElementActual</b>	The <b>GridDisplayElementActual</b> complex type specifies the <a href="#">GridDisplayElement</a> of a KPI's actual value in a scorecard cell. It inherits from the <a href="#">GridDisplayElementNumber</a> .
<b>GridDisplayElementAggregation</b>	The <b>GridDisplayElementAggregation</b> complex type specifies the <b>GridDisplayElement</b> (section <a href="#">2.2.4.103</a> ) of an aggregated value in a scorecard cell. Inherits from the <b>GridDisplayElementNumber</b> (section <a href="#">2.2.4.109</a> ).
<b>GridDisplayElementHyperLink</b>	The <b>GridDisplayElementHyperLink</b> complex type specifies the <b>GridDisplayElement</b> (section <a href="#">2.2.4.103</a> ) of a KPI's hyperlink property in a cell. Inherits from the <b>GridDisplayElement</b> .
<b>GridDisplayElementIndicator</b>	The <b>GridDisplayElementIndicator</b> complex type specifies the image of an indicator for the <a href="#">GridDisplayElement</a> in a scorecard cell. It inherits from the <a href="#">GridDisplayElement</a> .
<b>GridDisplayElementIndicatorText</b>	The <b>GridDisplayElementIndicatorText</b> complex type specifies the descriptive name of an indicator for the <a href="#">GridDisplayElement</a> in a scorecard cell. Descriptive name of the <b>IndicatorBand</b> is the <b>ToolTip</b> property of the <a href="#">IndicatorBand</a> .
<b>GridDisplayElementNumber</b>	<p>The <b>GridDisplayElementNumber</b> complex type specifies a numeric <a href="#">GridDisplayElement</a> in a scorecard cell. This is a base class for the following complex types:</p> <ul style="list-style-type: none"> <li>▪ <a href="#">GridDisplayElementsActual</a></li> <li>▪ <a href="#">GridDisplayElementTarget</a></li> <li>▪ <a href="#">GridDisplayElementScore</a></li> <li>▪ <a href="#">GridDisplayElementVariance</a></li> </ul>
<a href="#">GridDisplayElementScore</a>	The <b>GridDisplayElementNumber</b> complex type specifies the <a href="#">GridDisplayElement</a> of the KPI target's score in a scorecard cell. It inherits from the <a href="#">GridDisplayElementNumber</a> .
<b>GridDisplayElementTarget</b>	The <b>GridDisplayElementTarget</b> complex type specifies the <a href="#">GridDisplayElement</a> of a KPI's target value in a scorecard cell. It inherits from the <a href="#">GridDisplayElementNumber</a> .
<b>GridDisplayElementText</b>	The <b>GridDisplayElementText</b> complex type specifies the <a href="#">GridDisplayElement</a> of a text value in a scorecard cell. It inherits from the <a href="#">GridDisplayElement</a> .
<b>GridDisplayElementVariance</b>	The <b>GridDisplayElementVariance</b> complex type specifies the <a href="#">GridDisplayElement</a> of a KPI target's variance value in a scorecard cell. It inherits from the <a href="#">GridDisplayElementNumber</a> .

Complex type	Description
<b>GridFontInfo</b>	The <b>GridFontInfo</b> complex type specifies the font display options for the GridCell contents.
<b>GridFormatInfo</b>	The <b>GridFormatInfo</b> complex type specifies 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>	The <b>GridIndicatorSettings</b> complex type specifies the settings for the Indicator in the <a href="#">Target</a> field.
<b>GridScoreSettings</b>	The <b>GridScoreSettings</b> complex type specifies the settings for the score in the Target field.
<b>GridTargetSettings</b>	The <b>GridTargetSettings</b> complex type specifies the display settings for both the actual and target (see Target) columns.
<b>GridVarianceSettings</b>	The <b>GridVarianceSettings</b> complex type specifies the settings for the variance 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 grid-based scorecard view.
<b>GridViewTransformReference</b>	The <b>GridViewTransformReference</b> complex type specifies one transform operation to be applied to a GridViewData instance.
<b>Hierarchy</b>	The <b>Hierarchy</b> complex type specifies a hierarchy in an OLAP structure.
<b>Indicator</b>	The Indicator complex type is a set of visualizations that represent how the actual value of a <b>KPI</b> compares against its target value.
<b>IndicatorBand</b>	The IndicatorBand complex type is a visualization representing one state of an indicator.
<b>Item</b>	Represents a key-value pair in a <b>SerializableDictionary</b> (section <a href="#">2.2.4.165</a> ).
<b>Kpi</b>	The <b>Kpi</b> complex type is contained in a scorecard.
<b>KpiMeasure</b>	The <b>KpiMeasure</b> complex type is contained in a key performance indicator (KPI).
<b>KpiNumberFormatProperties</b>	The <b>KpiNumberFormatProperties</b> complex type is used for custom formatting of key performance indicator (KPI) measure values.
<b>Level</b>	The <b>Level</b> complex type represents an OLAP Level in a hierarchy (section <a href="#">2.2.4.124</a> ). This type extends NameInfo.
<b>ListLocation</b>	Contains the necessary information to identify a list (1) within the server (2)

Complex type	Description
<b>MDXParameterDefinition</b>	The <b>MDXParameterDefinition</b> complex type is a complex type that represents a custom MDX used to retrieve data.
<b>Measure</b>	The <b>Measure</b> complex type represents an OLAP measure.
<b>Member</b>	The <b>Member</b> complex type represents an OLAP member in a dimension.
<b>MemberList</b>	This complex type specifies the members (3) of an <b>OLAP hierarchy</b> . This type extends <b>MemberSet</b> (section <a href="#">2.2.4.145</a> ).
<b>MemberOperation</b>	Represents the basic member (section <a href="#">2.2.4.135</a> ) operations that can be performed on an OLAP dimension member (section <a href="#">2.2.4.135</a> ). <b>MemberOperation</b> abstract type is the base class for <b>MemberOperationAllDescendants</b> (section <a href="#">2.2.4.138</a> ), <b>MemberOperationChildren</b> (section <a href="#">2.2.4.139</a> ), <b>MemberOperationDescendants</b> (section <a href="#">2.2.4.140</a> ), <b>MemberOperationDrillUp</b> (section <a href="#">2.2.4.141</a> ), <b>MemberOperationHide</b> (section <a href="#">2.2.4.142</a> ) and <b>MemberOperationLeafDescendants</b> (section <a href="#">2.2.4.143</a> ).
<b>MemberOperationAllDescendants</b>	The <b>MemberOperationAllDescendants</b> complex type represents a MemberOperation that represents all descendants of a referred member in the <a href="#">dimension</a> hierarchy. This type extends MemberOperation.
<b>MemberOperationChildren</b>	The <b>MemberOperationChildren</b> complex type represents a MemberOperation that represents all child members of a referred member in a dimension hierarchy. This type extends MemberOperation.
<b>MemberOperationDescendants</b>	The <b>MemberOperationDescendants</b> complex type represents a MemberOperation that represents all descendants of a referred member at a specified level in the hierarchy. This type extends MemberOperation.
<b>MemberOperationDrillUp</b>	The <b>MemberOperationDrillUp</b> complex type represents a MemberOperation that represents the parent of a referred member. This type extends MemberOperation.
<b>MemberOperationHide</b>	The <b>MemberOperationHide</b> complex type represents a MemberOperation that hides a referred member. This type extends MemberOperation.
<b>MemberOperationLeafDescendants</b>	The <b>MemberOperationLeafDescendants</b> complex type represents a MemberOperation that represents all descendants of a referred member that are also leaf members in the dimension hierarchy. This type extends MemberOperation.
<b>MemberParameterDefinition</b>	The <b>MemberParameterDefinition</b> is a complex type that represents a group of members used to retrieve data.
<b>MemberSet</b>	The <b>MemberSet</b> is a complex type that represents the properties of a OLAP hierarchy.
<b>MemberSetFormula</b>	The <b>MemberSetFormula</b> is a complex type that

Complex type	Description
	represents the collection of operations on the members (3) of a OLAP hierarchy.
<b>MemberTransform</b>	The <b>MemberTransform</b> complex type represents a transform, such as drilldown, applied to a member, hierarchy group or KPI.
<b>NamedSet</b>	The NamedSet complex type specifies an OLAP Named Set.
<b>NamedSetParameterDefinition</b>	The <b>NamedSetParameterDefinition</b> is a complex type representing a set of members used to retrieve data.
<b>NameInfo</b>	The <b>NameInfo</b> complex type provides base naming information.
<b>NumericFormat</b>	The <b>NumericFormat</b> is a complex type that represents the numeric format setting for a Analysis Services measure numeric value within an analytic grid report.
<b>NumericFormatsHashtable</b>	The <b>NumericFormatsHashtable</b> complex type represents an array of NumericFormat objects.
<b>OLAPQueryData</b>	Represents an analytic query.
<b>OLAPReportViewData</b>	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>	The <b>ParameterDefinition</b> complex type represents the non visual portion of the design time definition of a parameter. This class carries the state necessary to generate a parameter pick list that is not already defined in a data source.
<b>ParameterMapping</b>	The <b>ParameterMapping</b> complex type provides the mapping information between a <a href="#">ParameterDefinition</a> and a DashboardItem.
<b>PasReportViewData</b>	Contains all the state information for a ProClarity Analytics Server (PAS) 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 an MDX query that includes the member selections of each axis.
<b>ReportView</b>	This type controls the visual display of data in a dashboard and can be coordinated with other Report Views using filters.
<b>RepositoryLocation</b>	The <b>RepositoryLocation</b> complex type specifies the location of a FirstClassElement stored on the server (2).
<b>Scorecard</b>	The <b>Scorecard</b> complex type represents a scorecard.
<b>SecondClassElement</b>	This abstract class represents a second class object. This 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

Complex type	Description
	(section <a href="#">2.2.4.129</a> ).
<b>SerializableDictionary</b>	This complex type specifies an ordered collection of elements of complex type MemberSetFormula (section <a href="#">2.2.4.146</a> ), or MemberList (section <a href="#">2.2.4.136</a> ), or members, with their associated string keys.
<b>SetOperation</b>	This complex type specifies a set operation. It is the abstract base type for <a href="#">AddAllMembersSetOp</a> , <a href="#">AddCalcMemberSetOp</a> , <a href="#">AddChildrenSetOp</a> , <a href="#">AddDefaultMemberSetOp</a> , <a href="#">AddDescendantsLeavesSetOp</a> , <a href="#">AddDescendantsSetOp</a> , <a href="#">AddDescendantsSubtreeSetOp</a> , <a href="#">AddFilterSetOp</a> , <a href="#">AddFilterTopBottomSetOp</a> , <a href="#">AddMemberSetOp</a> , <a href="#">AddNamedSetSetOp</a> , <a href="#">AddParentSiblingsSetOp</a> , <a href="#">EliminateDescendantsSetOp</a> and <a href="#">EliminateMemberSetOp</a> .
<b>SqlReportViewData</b>	Contains all the state information for a SQL Reporting Services report.
<b>StatusFilter</b>	This complex type specifies an indicator to be filtered.
<b>StrategyMapViewData</b>	This class specifies metadata information about a strategy map.
<b>StringCollection</b>	The <b>StringCollection</b> complex type specifies a collection of dimension properties.
<b>Target</b>	The <b>Target</b> complex type specifies 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 TimeIntelligenceDefinition complex type specifies the Time Intelligence parameter definition class.
<b>TimeIntelligenceFormula</b>	This complex type specifies a Time Intelligence parameter formula.
<b>TimeIntelligenceLevelBinding</b>	The TimeIntelligenceLevelBinding complex type specifies the mapping of internal cube dimensions to their time aggregation level.
<b>TimeIntelligenceMdxSettings</b>	The <b>TimeIntelligenceMdxSettings</b> complex type specifies how a dimension in an Analysis Services data source maps to a time intelligence filter period when running Simple Time Period Specification formulas against the data source.
<b>TimeIntelligencePostFormulaDefinition</b>	The <b>TimeIntelligencePostFormulaDefinition</b> complex type specifies a Time Intelligence Post Formula filter definition.
<b>TimeIntelligenceSettings</b>	The <b>TimeIntelligenceSettings</b> complex type specifies additional time intelligence settings for a data source.
<b>Title</b>	The <b>Title</b> complex type represents a title for an analytic chart.

Complex type	Description
<b>ToolbarOptions</b>	The <b>ToolbarOptions</b> complex type contains the configuration settings of the toolbar of a ConfiguredView (section <a href="#">2.2.4.77</a> ).
<b>Tuple</b>	The <b>Tuple</b> complex type specifies a collection of objects that make up a tuple in a query result.
<b>XmlFont</b>	The <b>XmlFont</b> complex type specifies a set of attributes that define a font.

### 2.2.4.1 AddAllMembersSetOp

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to add all members, at the level specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<xs:complexType name="AddAllMembersSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

### 2.2.4.2 AddCalcMemberSetOp

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to add a calculated member (3), specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<xs:complexType name="AddCalcMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Aggregate" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Caption" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**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

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

```

<xs:complexType name="AddChildrenSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.4 AddDefaultMemberSetOp

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to add the default member to a **MemberSet** (see section [2.2.4.145](#)).

```

<xs:complexType name="AddDefaultMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.5 AddDescendantsLeavesSetOp

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

```

<xs:complexType name="AddDescendantsLeavesSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.6 AddDescendantsSetOp

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

```

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

```

**LevelName:** A level name from the hierarchy associated with the **MemberSet** (see section [2.2.4.145](#)). It MUST exist and MUST NOT be empty.

#### 2.2.4.7 AddDescendantsSubtreeSetOp

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to add descendant members (3), from all levels subordinate to the member specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<xs:complexType name="AddDescendantsSubtreeSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.8 AddFilterSetOp

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

```
<xs:complexType name="AddFilterSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.9 AddFilterTopBottomSetOp

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

```
<xs:complexType name="AddFilterTopBottomSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.10 AddMemberSetOp

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to add a member (3), specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).

```
<xs:complexType name="AddMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.11 AddNamedSetSetOp

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to add a named set, specified by **Name** (see section [2.2.4.166](#)), to a **MemberSet** (see section [2.2.4.145](#)).



```
<xs:complexType name="AddNamedSetSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.12 AddParentSiblingsSetOp

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

```
<xs:complexType name="AddParentSiblingsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.13 AliasInfo

The **AliasInfo** complex type maps a **KpiMeasure** to a string. This mapping defines an alias used to simplify the display and definition of formulas used in calculated metrics. The format MUST be as follows:

```
<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>
```

**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

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

```
<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>
```

**NumericFormats:** Numeric format settings for row or column measures of the analytic report as specified in the **NumericFormatsHashtable** (see section [2.2.4.152](#)).

**Font:** Grid font used for rendering the analytic report and specified by XmlFont (see section [2.2.4.182](#)).

**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>Member name</b>	<b>Description</b>
<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 (1) 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 (1). This includes selected menu items as well as selected text.
<b>HighlightText</b>	The system-defined color of the text of selected items (1).
<b>HotTrack</b>	The system-defined color used to designate a hot-tracked item. Single-clicking a hot-tracked item (1) runs the item (1).
<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>Info</b>	The system-defined color of the background of a ToolTip.
<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.

Member name	Description
<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>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>Member name</b>	<b>Description</b>
<b>DimGray</b>	A system-defined color.
<b>DodgerBlue</b>	A system-defined color.
<b>Firebrick</b>	A system-defined color.
<b>FloralWhite</b>	A system-defined color.
<b>ForestGreen</b>	A system-defined color.
<b>Fuchsia</b>	A system-defined color.
<b>Gainsboro</b>	A system-defined color.
<b>GhostWhite</b>	A system-defined color.
<b>Gold</b>	A system-defined color.
<b>Goldenrod</b>	A system-defined color.
<b>Gray</b>	A system-defined color.
<b>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.

Member name	Description
<b>LightSalmon</b>	A system-defined color.
<b>LightSeaGreen</b>	A system-defined color.
<b>LightSkyBlue</b>	A system-defined color.
<b>LightSlateGray</b>	A system-defined color.
<b>LightSteelBlue</b>	A system-defined color.
<b>LightYellow</b>	A system-defined color.
<b>Lime</b>	A system-defined color.
<b>LimeGreen</b>	A system-defined color.
<b>Linen</b>	A system-defined color.
<b>Magenta</b>	A system-defined color.
<b>Maroon</b>	A system-defined color.
<b>MediumAquamarine</b>	A system-defined color.
<b>MediumBlue</b>	A system-defined color.
<b>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>Member name</b>	<b>Description</b>
<b>OrangeRed</b>	A system-defined color.
<b>Orchid</b>	A system-defined color.
<b>PaleGoldenrod</b>	A system-defined color.
<b>PaleGreen</b>	A system-defined color.
<b>PaleTurquoise</b>	A system-defined color.
<b>PaleVioletRed</b>	A system-defined color.
<b>PapayaWhip</b>	A system-defined color.
<b>PeachPuff</b>	A system-defined color.
<b>Peru</b>	A system-defined color.
<b>Pink</b>	A system-defined color.
<b>Plum</b>	A system-defined color.
<b>PowderBlue</b>	A system-defined color.
<b>Purple</b>	A system-defined color.
<b>Red</b>	A system-defined color.
<b>RosyBrown</b>	A system-defined color.
<b>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.

Member name	Description
<b>Teal</b>	A system-defined color.
<b>Thistle</b>	A system-defined color.
<b>Tomato</b>	A system-defined color.
<b>Turquoise</b>	A system-defined color.
<b>Violet</b>	A system-defined color.
<b>Wheat</b>	A system-defined color.
<b>White</b>	A system-defined color.
<b>WhiteSmoke</b>	A system-defined color.
<b>Yellow</b>	A system-defined color.
<b>YellowGreen</b>	A system-defined color.
<b>ButtonFace</b>	The system-defined face color of a 3-D element.
<b>ButtonHighlight</b>	The system-defined color that is the highlight color of a 3-D element. This color is applied to parts of a 3-D element that face the light source.
<b>ButtonShadow</b>	The system-defined color that is the shadow color of a 3-D element. This color is applied to parts of a 3-D element that face away from the light source.
<b>GradientActiveCaption</b>	The system-defined color of the lightest color in the color gradient of an active window's title bar.
<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 (1) 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

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

```
<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>
```

**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 [2.2.4.182](#)). 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 AnalyticChartReportViewData

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

```
<xs:complexType name="AnalyticChartReportViewData">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:AnalyticBaseReportViewData">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="PlotAreaBackColor" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Title" type="tns:Title"/>
        <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>
```

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

- "NamedColor:<name>" where:
  - "<name>" is the name of a predefined color, specified by a string. Values MUST be the same as the names of the elements listed in Color Table 1 (see section [2.2.4.14](#)).
- "ARGBColor:<A>:<R>:<G>:<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.

**Title:** The title for the analytic chart as specified in **Title** (section [2.2.4.179](#)).

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

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

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

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

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

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

## 2.2.4.17 AnalyticGridReportViewData

This object defines how analytic grid reports are displayed to users.

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

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

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

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

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

**MaxColumnLabelLength:** Specifies the maximum length for column labels.

**ShortenColumnLabels** MUST be set to **true** for this property to be used.

## 2.2.4.18 Annotation

The **Annotation** complex type associates a collection of comments to a cell in a particular **slice** of a **scorecard**. An annotation is created using **CreateAnnotation** (see section [3.1.4.1](#)) and updated using **UpdateAnnotation** (see section [3.1.4.68](#)).

```
<xs:complexType name="Annotation">
  <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:q13="http://microsoft.com/wsdl/types/" type="q13:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Guid"
xmlns:q14="http://microsoft.com/wsdl/types/" type="q14:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellpathCoordinates" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="tns:AnnotationVersions"/>
  </xs:sequence>
</xs:complexType>
```

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

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

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

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

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

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

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

**ScorecardLocation:** Specifies the location of the scorecard referenced by this annotation. This element **MUST** be present. This element **MUST** conform to the schema of the **RepositoryLocation** (section [2.2.4.162](#)) complex type.

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

**Guid:** Specifies the identity for this annotation. This element **MUST** be formatted as a GUID and its value **MUST NOT** be {000000000000-00000000-000000-00000000}.

**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 names. This value **MUST NOT** be null or empty. The header cells **MUST** conform to the schema of **GridHeaderItem** (section 2.2.4.116) complex type. This value for the checked cell in the following example scorecard is calculated as follows:

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

- The column and row headers for the cell are extracted and are used to compute the CellPath for the cell. The CellPath is a collection of headers of the cell and is computed as follows:
  1. For each row and column header of the cell its parent path is computed and represented as a collection of headers.
  2. The corresponding path is then reversed and appended to the CellPath.
  3. The CellPath for the checked cell is shown in the following table. The DimensionValue, DimensionName and DisplayText values for each header cell in the CellPath are also listed in the table.

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

GridHeaderItem	DimensionValue	DimensionName	DisplayText
Column Header Parent	"[Geography].[State-Province].[All Geographies]"	"Geography.State-Province"	""
Column Header	"Actual"	"Scorecard_Measures _"	"Actual"

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

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

#### 2.2.4.19 AnnotationComment

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">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Comment">
      <xs:attribute name="Title" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

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

#### 2.2.4.20 ArrayOfAliasInfo

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

```
<xs:complexType name="ArrayOfAliasInfo">
```

```

<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

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

```

<xs:complexType name="ArrayOfAnnotationComment">
  <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

A collection of axes used in a **QueryState** object (see section [2.2.4.160](#)).

```

<xs:complexType name="ArrayOfAxis">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Axis" type="tns:Axis"/>
  </xs:sequence>
</xs:complexType>

```

**Axis:** An **Axis** object (see section [2.2.4.60](#)).

#### 2.2.4.23 ArrayOfBpmProperty

The **ArrayOfBpmProperty** complex type specifies an array of **BpmProperty** elements (see section [2.2.4.63](#)).

```

<xs:complexType name="ArrayOfBpmProperty">
  <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 [2.2.4.63](#)) complex type.

#### 2.2.4.24 ArrayOfBpmPropertyListItem

The **ArrayOfBpmPropertyListItem** complex type specifies an array of items (1) in a list property.

```
<xs:complexType name="ArrayOfBpmPropertyListItem">
  <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 [2.2.4.71](#)) complex type.

#### 2.2.4.25 ArrayOfChoice1

The **ArrayOfChoice1** complex type specifies an array of property values. The type of the element in the array MUST be one of decimal, **ArrayOfMember**, **ArrayOfMemberTransform**, **dateTime**, string, double, **guid**, **char**, or **int**.

```
<xs:complexType name="ArrayOfChoice1">
  <xs:choice minOccurs="0" maxOccurs="unbounded">
    <xs:element minOccurs="1" maxOccurs="1" name="decimal" type="xs:decimal"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMember" nillable="true"
      type="tns:ArrayOfMember"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMemberTransform" nillable="true"
      type="tns:ArrayOfMemberTransform"/>
    <xs:element minOccurs="1" maxOccurs="1" name="dateTime" type="xs:dateTime"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfString" nillable="true"
      type="tns:ArrayOfString"/>
    <xs:element minOccurs="1" maxOccurs="1" name="string" nillable="true" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="double" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="guid"
      xmlns:q8="http://microsoft.com/wsdl/types/" type="q8:guid"/>
    <xs:element minOccurs="1" maxOccurs="1" name="char"
      xmlns:q9="http://microsoft.com/wsdl/types/" type="q9:char"/>
    <xs:element minOccurs="1" maxOccurs="1" name="int" type="xs:int"/>
  </xs:choice>
</xs:complexType>
```

**decimal:** A decimal value.

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

**ArrayOfMemberTransform:** This element MUST NOT be null and MUST conform to the schema of the **ArrayOfMemberTransform** (section [2.2.4.47](#)) complex type.

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

**ArrayOfString:** This element MUST NOT be **null** and MUST conform to the schema of the **ArrayOfString** (section [2.2.4.55](#)) complex type.

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

**double:** A double numeric value.



**guid:** An identity value.

**char:** A character value.

**int:** An integer value.

#### 2.2.4.26 ArrayOfComment

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

```
<xs:complexType name="ArrayOfComment">
  <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

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

```
<xs:complexType name="ArrayOfConfiguredView">
  <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

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

```
<xs:complexType name="ArrayOfDashboardElement">
  <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

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

```

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

```

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

### 2.2.4.30 ArrayOfDataSource

The **ArrayOfDataSource** complex type specifies an array of data sources.

```

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

```

**DataSource:** This element MUST NOT be null and MUST conform to the schema of the **DataSource** (section [2.2.4.85](#)) complex type.

### 2.2.4.31 ArrayOfDecimal

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

```

<xs:complexType name="ArrayOfDecimal">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="decimal" type="xs:decimal"/>
  </xs:sequence>
</xs:complexType>

```

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

### 2.2.4.32 ArrayOfDefaultDimensionSetting

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

```

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

```

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

### 2.2.4.33 ArrayOfDimension

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

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

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

### 2.2.4.34 ArrayOfEndPoint

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

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

### 2.2.4.35 ArrayOfFirstClassElement

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

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

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

### 2.2.4.36 ArrayOfGridCell

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

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

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

#### 2.2.4.37 ArrayOfGridDisplayElement

An array of elements for a scorecard cell.

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

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

#### 2.2.4.38 ArrayOfGridHeaderItem

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

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

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

#### 2.2.4.39 ArrayOfGridViewTransformReference

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

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

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

#### 2.2.4.40 ArrayOfHierarchy

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

```

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

```

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

#### 2.2.4.41 ArrayOfIndicatorBand

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

```

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

```

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

#### 2.2.4.42 ArrayOfKpi

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

```

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

```

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

#### 2.2.4.43 ArrayOfKpiMeasure

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

```

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

```

**KpiMeasure:** This element MUST NOT be **null** and MUST conform to the schema of the **KpiMeasure** (section [2.2.4.129](#)) complex type.

#### 2.2.4.44 ArrayOfLevel

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

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

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

#### 2.2.4.45 ArrayOfMeasure

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

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

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

#### 2.2.4.46 ArrayOfMember

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

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

**Member:** This element MUST NOT be null and MUST conform to the schema of the **Member** (section [2.2.4.135](#)) complex type.

#### 2.2.4.47 ArrayOfMemberTransform

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

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

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

#### 2.2.4.48 ArrayOfNamedSet

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

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

**NamedSet:** This element MUST NOT be null and MUST conform to the schema of the **NamedSet** (section [2.2.4.148](#)) complex type.

#### 2.2.4.49 ArrayOfNameInfo

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

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

**NameInfo:** This element MUST NOT be null and MUST conform to the schema of the **NameInfo** (section [2.2.4.150](#)) complex type.

#### 2.2.4.50 ArrayOfParameter

A collection of parameters used in an analytic query.

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

**Parameter:** A **Parameter** object (see section [2.2.4.155](#)).

#### 2.2.4.51 ArrayOfParameterDefinition

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

```
<xs:complexType name="ArrayOfParameterDefinition">
  <xs:sequence>
```

```

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

```

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

#### 2.2.4.52 ArrayOfParameterMapping

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

```

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

```

**ParameterMapping:** This element MUST NOT be null and MUST conform to the schema of the **ParameterMapping** (section [2.2.4.157](#)) complex type.

#### 2.2.4.53 ArrayOfPropertyBag

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

```

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

```

**PropertyBag:** This element MUST NOT be **null** and MUST conform to the schema of the **PropertyBag** (section [2.2.4.159](#)) complex type.

#### 2.2.4.54 ArrayOfSetOperation

The **ArrayOfSetOperation** complex type specifies an array of **SetOperation** elements (see section [2.2.4.166](#))

```

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

```

**SetOperation:** This element MUST NOT be null and MUST conform to the schema of the **SetOperation** (section [2.2.4.166](#)) complex type.



#### 2.2.4.55 ArrayOfString

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

```
<xs:complexType name="ArrayOfString">
  <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).

#### 2.2.4.56 ArrayOfTarget

The **ArrayOfTarget** complex type specifies an array of **Target** (section [2.2.4.171](#)) complex types.

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

**Target:** This element MUST NOT be null and MUST conform to the schema of the **Target** (section [2.2.4.171](#)) complex type.

#### 2.2.4.57 ArrayOfTimeIntelligenceDataSource

A collection of Time Intelligence data source reference used in Time Intelligence parameter definitions.

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

**TimeIntelligenceDataSource:** See **TimeIntelligenceDataSource** (section [2.2.4.172](#)).

#### 2.2.4.58 ArrayOfTimeIntelligenceFormula

A collection of Time Intelligence parameter formulas.

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

**TimeIntelligenceFormula:** See **TimeIntelligenceFormula** (section [2.2.4.174](#)).

### 2.2.4.59 ArrayOfTimeIntelligenceLevelBinding

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

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

**TimeIntelligenceLevelBinding:** This element **MUST NOT** be null and **MUST** conform to the schema of the **TimeIntelligenceLevelBinding** (section [2.2.4.175](#)) complex type.

### 2.2.4.60 Axis

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

```
<xs:complexType name="Axis">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:AxisType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterEmpty" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="PropertyList" type="tns:StringCollection"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MemberSets"
      type="tns:SerializableDictionary"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortMode" type="tns:SortType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortIndex" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SortTuple" type="tns:Tuple"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortDescending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortPreserverPeerGroups"
      type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

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

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

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

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

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

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

**SortTuple:** Specifies a **Tuple** (section [2.2.4.181](#)) to sort by.

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

**SortPreserverPeerGroups:** This value **MUST** be **true** if peer groups **MUST** be preserved during sorting; otherwise, **false**. Preserving peer groups includes hierarchical relationships and sorting is

constrained to a parent's children. Alternatively, breaking peer groups ignore hierarchical relationships.

#### 2.2.4.61 Banding

This complex type represents the **banding** settings of the KPI **target**.

```
<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>
```

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

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

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

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

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

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

#### 2.2.4.62 BpmException

This complex type contains the details of a server alert.

```
<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>
```

**ErrorCode:** Identifies the alert type. MUST be one of the values specified in section [2.2.9.2](#).

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

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

#### 2.2.4.63 BpmProperty

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">
  <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**.

#### 2.2.4.64 BpmPropertyBool

The **BpmPropertyBool** complex type defines a Boolean property. It extends the **BpmProperty** (section [2.2.4.63](#)) type.

```
<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>
```

**Value:** A Boolean value.

#### 2.2.4.65 BpmPropertyDate

The **BpmPropertyDate** complex type defines a **Date** property. It extends the **BpmProperty** (section [2.2.4.63](#)) type.

```
<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>
```

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

#### 2.2.4.66 BpmPropertyDecimal

The **BpmPropertyDecimal** complex type defines a **Decimal** property. It extends the **BpmProperty** (section [2.2.4.63](#)) type.

```
<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>
```

**Decimal:** A decimal value.

#### 2.2.4.67 BpmPropertyHyperlink

This complex type defines a Hyperlink property. This type extends **BpmPropertyLinkBase** (section [2.2.4.69](#)).

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

```
<xs:complexType name="BpmPropertyHyperlink">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmPropertyLinkBase"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.68 BpmPropertyHyperlink2

This complex type defines a Hyperlink property. This type extends **BpmPropertyLinkBase** (section [2.2.4.69](#)).

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

```
<xs:complexType name="BpmPropertyHyperlink2">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:BpmPropertyLinkBase"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.69 BpmPropertyLinkBase

The **BpmPropertyLinkBase** complex type defines a **Hyperlink** property. It extends the **BpmProperty** (section [2.2.4.63](#)) type.

```

<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>

```

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

### 2.2.4.70 BpmPropertyList

The **BpmPropertyList** complex type specifies zero or one of the **ArrayOfBpmPropertyListItem** (section [2.2.4.24](#)) complex type. It extends the **BpmProperty** (section [2.2.4.63](#)) type.

```

<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>

```

**ListItems:** This element MUST NOT be **null** and MUST conform to the schema of the **ArrayOfBpmPropertyListItem** (section [2.2.4.24](#)).

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

### 2.2.4.71 BpmPropertyListItem

This complex type specifies a name-value pair.

```

<xs:complexType name="BpmPropertyListItem">
  <xs:attribute name="Name" type="xs:string"/>
  <xs:attribute name="Value" type="xs:string"/>
</xs:complexType>

```

**Name:** The name string. MUST be present, MUST be shorter than 1000 characters and MUST NOT be null or empty after trimming.

**Value:** The value string. MUST be present, MUST be shorter than 1000 characters and MUST NOT be null or empty after trimming.

### 2.2.4.72 BpmPropertyLongText

This complex type defines a Long Text property. The type extends **BpmProperty** (section [2.2.4.63](#)).

```

<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>

```

**Text:** The long text value. If the **BpmProperty** (section [2.2.4.63](#)) 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.

#### 2.2.4.73 BpmPropertyText

This complex type defines a **Text** property. The type extends **BpmProperty** (section [2.2.4.63](#)).

```

<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>

```

**Text:** The text value. If the **BpmProperty** (section [2.2.4.63](#)) 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.

#### 2.2.4.74 BpmPropertyUser

This complex type defines a **User** property. The type extends **BpmProperty** (section [2.2.4.63](#)).

```

<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>

```

**Login:** The user **login name** in domain\user format. If the **BpmProperty** (section [2.2.4.63](#)) 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.

#### 2.2.4.75 CalculatedFormulaInfo

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

```

<xs:complexType name="CalculatedFormulaInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AliasInfoCollection"
      type="tns:ArrayOfAliasInfo"/>
  </xs:sequence>
</xs:complexType>

```

```

</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 [2.2.9.2](#).

A detailed specification of how exceptions are reported by the protocol server is in section [2.2.9](#).

**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.

#### 2.2.4.76 Comment

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

```

<xs:complexType name="Comment">
  <xs:attribute name="Guid" xmlns:q1="http://microsoft.com/wsdl/types/" type="q1:guid"
    use="required"/>
  <xs:attribute name="CreatedBy" type="xs:string"/>
  <xs:attribute name="CreatedDate" type="xs:dateTime" use="required"/>
  <xs:attribute name="Message" type="xs:string"/>
</xs:complexType>

```

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

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

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

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

#### 2.2.4.77 ConfiguredView

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

```



```

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

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

**DataSourceLocation:** This element is of type **RepositoryLocation** (section [2.2.4.162](#)) and specifies the location of the **data source (1)** the scorecard connects to for retrieving and displaying data.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

#### 2.2.4.78 Cube

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

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

**Dimensions:** Specifies the dimensions (1) in the cube. This is an array of **Dimension** (see section [2.2.4.90](#)) items (1) as defined in **ArrayOfDimension** (see section [2.2.4.19](#)). This element MUST be present.

**MeasureGroups:** Specifies the **measure groups** in the cube. This is an array of **NameInfo** (see section [2.2.4.150](#)) items (1) as defined in **ArrayOfNameInfo** (see section [2.2.4.34](#)). This element MUST be present.

**Measures:** Specifies the **measures** in the cube. This is an array of **Measure** (see section [2.2.4.134](#)) items (1) as defined in **ArrayOfMeasure** (see section [2.2.4.45](#)). This element MUST be present.

**NamedSets:** Specifies the named sets in the cube. This is an array of **NamedSet** (see section [2.2.4.148](#)) items (1) as defined in **ArrayOfNamedSet** (see section [2.2.4.48](#)). This element MUST be present.

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

## 2.2.4.79 Dashboard






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">
  <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 (1) (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.

Value	Example	Meaning
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 to which to deploy.

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

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

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

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

#### 2.2.4.80 DashboardElement

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

The **DashboardElement** complex type extends the **SecondClassElement** type (section [2.2.4.164](#)) and is the base type for **DashboardElementContainer** (section [2.2.4.81](#)) and **DashboardItem** (section [2.2.4.83](#)).

```
<xs:complexType name="DashboardElement" abstract="true">
  <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

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

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

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

The **DashboardElementContainer** complex type extends the **DashboardElement** (section [2.2.4.80](#)) complex type.

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

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

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

#### 2.2.4.82 DashboardElementSize

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

```
<xs:complexType name="DashboardElementSize">
  <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

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">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:DashboardElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="InboundParameters"
type="tns:ArrayOfParameterMapping"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UnderlyingElementLocation"
type="tns:RepositoryLocation"/>
      </xs:sequence>
      <xs:attribute name="UnderlyingElementTypeName" type="xs:string"/>
      <xs:attribute name="AutoSizeWidth" type="xs:boolean" use="required"/>
      <xs:attribute name="AutoSizeHeight" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**InboundParameters:** Specifies an array of zero or more **ParameterMapping** (section [2.2.4.157](#)) items (1) which indicate any parameters coming from other elements on the dashboard. This element **MUST** be present.

**UnderlyingElementLocation:** Specifies the **RepositoryLocation** (section [2.2.4.162](#)) for the contained element. This element **MUST** be present.

**UnderlyingElementTypeName:** Specifies the fully qualified name for the assembly class that provides the implementation of the element. This attribute **MUST** be present. [<1>](#)

**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

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

```

<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>

```

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

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

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

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

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

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

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

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

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

#### 2.2.4.85 DataSource

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

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

```

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

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

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

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

**CustomTimeIntelligenceSettings:** Contains a string of custom time intelligence data for the data source. This element **MUST** be present. For ADOMD.NET data sources, CustomTimeIntelligenceSettings **MUST** be a **TimeIntelligenceMdxSettings** object (section [2.2.4.176](#)) serialized as an XML document and XML encoded. For all other data source types, this element **MUST** be an empty string.

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

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

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



Value	Meaning
SqlTabularDataSource	A SQL Server table data source.
ExcelServicesWorkbook	An Excel Services workbook.
ExcelWorkbook	An embedded Excel workbook.
SpListDataSource	A Microsoft® SharePoint® Server 2010 list data source.

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

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

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

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

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

Type	Contents
ADOMD.NET	CubeName <b>MUST</b> be the name of the cube used by the data source.
SqlTabularDataSource	CubeName <b>MUST</b> be the name of the table in the database used by the data source. CubeName <b>MUST</b> be in the form <i>[schema].[table]</i> where <i>schema</i> is the

Type	Contents
	table schema and <i>table</i> is the name of the table.
ExcelServicesWorkbook	CubeName MUST be the path and file name of the Excel Services workbook to use.
ExcelWorkbook	CubeName MUST be an empty string.
SpListDataSource	CubeName MUST be the GUID of the list (1) used as the data source.

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

Type	Contents
ADOMD.NET	CubeDisplayName is the name of the selected cube that is displayed to the user.
SqlTabularDataSource	CubeDisplayName is the name of the selected SQL table that is displayed to the user.
ExcelServicesWorkbook	CubeDisplayName is the name of the selected ExcelServicesWorkbook that is displayed to the user.
ExcelWorkbook	CubeDisplayName MUST be an empty string.
SpListDataSource	CubeDisplayName SHOULD be the name of the list (1).

**FormattingDimensionName:** Specifies the initial value for the dimension in the cube which contains the numerical formats for analytic grids or charts using the data source.

**FormattingDimensionName** is only used for ADOMD.NET data sources. This attribute MUST be present for all data source types. For non-ADOMD.NET data sources, this attribute MUST be an empty string. For ADOMD.NET data sources, this attribute MAY be an empty string.

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

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

**ConnectionString:** Specifies the connection string used to connect to the data source. This attribute MUST be present. If **UseConnectionString** is set to **true**, **ConnectionString** MUST NOT be an empty string. The content of **ConnectionString** is determined by the type of the data source as described in the following table.

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

Type	Contents
ExcelServicesWorkbook	ConnectionString MUST be an empty string.
ExcelWorkbook	ConnectionString MUST be an empty string.
SpListDataSource	ConnectionString MUST be an empty string.

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

**UseConnectionString:** If **true**, **ConnectionString** is used to connect to the data source. If **false**, **ConnectionString** is ignored. This attribute MUST be present. **UseConnectionString** is only used for ADOMD.NET, SqlTabularDataSource, and ODBC data source types.

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

**PassUserNameAsAdomdCustomData:** This attribute MUST be present and MUST be set to **true** when the user name is specified for the **CustomData** connection string property while connecting to an ADOMD provider; otherwise, it MUST be set to **false**. This attribute is only used by ADOMD.NET data sources and MUST be ignored by all other data source types.

**ReadOnly:** This attribute MUST be present and MUST be set to **true** if the data source object is read-only for the current user; otherwise, **false**. When calling operation **CreateDataSource**, if **ReadOnly** is set to **true**, the server responds with a soap fault with **ErrorCode** "CannotPublishReadOnlyElement"; if **ReadOnly** is set to **false**, the creation is successful.

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

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

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

## 2.2.4.86 DataTableMapping

The **DataTableMapping** complex type specifies how data from tabular data sources is mapped to multi-dimensional data.

```
<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>
```

**ColumnMappings:** Specifies the **ArrayOfDataColumnMapping** (section [2.2.4.29](#)) items (1) that provide the mapping information for each of the tabular columns. This element **MUST** be present.

If an item (1) 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

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">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:Dimension">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Members" type="tns:Member"/>
      </xs:sequence>
      <xs:attribute name="IsVisible" type="xs:boolean" use="required"/>
      <xs:attribute name="ShowAsSlider" type="xs:boolean" use="required"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Members:** Specifies a default set of members (3) in a dimension (1). Contains an array of 0 or more **Member** (see section [2.2.4.135](#)) items (1). 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

This complex type specifies a collection of ArrayOfGridCells (see section [2.2.4.36](#)) with associated string keys.

```
<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>
```

**Keys:** An array of strings representing keys for addressing the contents of the **Values** array (see section [2.2.4.55](#)).

**Values:** An array of **GridCells** (see section [2.2.4.100](#)). This element MUST conform to the schema of the **ArrayOfGridCell** complex type (see section [2.2.4.36](#)).

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

- The number of items (1) in **Keys** and the number of items (1) in **Values** MUST be the same.
- Each item (1) in **Values** MUST NOT be null.
- Each item (1) 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

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

```
<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>
```

**Keys:** An array of strings serving as keys for addressing the contents of the **Values** array. See **ArrayOfString**, section [2.2.4.55](#).

**Values:** An array of **PropertyBags**. See **ArrayOfPropertyBag**, section [2.2.4.53](#).

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

- The number of items (1) in **Keys** and the number of items in **Values** MUST be the same.
- Each item (1) in **Values** MUST NOT be null.
- Each item (1) 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

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

```
<xs:complexType name="Dimension">
  <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:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="Hierarchies"
type="tns:ArrayOfHierarchy"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Levels" type="tns:ArrayOfLevel"/>
    </xs:sequence>
    <xs:attribute name="IsMeasureDimension" type="xs:boolean" use="required"/>
    <xs:attribute name="DefaultMemberName" type="xs:string"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

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

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

**Hierarchies:** Specifies the hierarchies in the dimension (1). A list (1) of the **Hierarchy** (see section [2.2.4.124](#)) elements as defined in **ArrayOfHierarchy** (section [2.2.4.40](#)). The **Hierarchy.Levels** collection will contain only the **Levels** that are used in that **Hierarchy**. This element **MUST** be present.

**Levels:** Specifies the levels in the dimension (1). A list (1) of the **Level** (see section [2.2.4.131](#)) elements as defined in **ArrayOfLevel** (section [2.2.4.44](#)). The **Dimension.Levels** collection will contain all of the **Levels** that are used in all of the **Hierarchies** in a **Dimension**. This element **MUST** be present.

**IsMeasureDimension:** Specifies if the dimension (1) is a measure dimension. This value **MUST** be **true** when the value of Type is "Measure" (section [2.2.4.134](#)); otherwise, **false**. This element **MUST** be present.

**DefaultMemberName:** Specifies the unique name of the default member for the dimension (1). The length of the value **MUST NOT** exceed 1000 characters. This element **MUST** be present.

## 2.2.4.91 Element

This abstract class specifies basic metadata about an item (1). This class is the base class for [FirstClassElement](#) and [SecondClassElement](#).

```

<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>

```

**Properties:** Specifies properties associated with the Element. This element **MUST** be present. Contains an array of 0 or more [BpmProperty](#) items (1).

**Comments:** Specifies comments associated with the Element. This element **MUST** be present. Contains an array of 0 or more [Comment](#) items (1).

## 2.2.4.92 ElementVersion

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

```
<xs:complexType name="ElementVersion">
  <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

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to eliminate descendant members (3), of the member (3) specified by **Name** (see section [2.2.4.166](#)), from a **MemberSet** (see section [2.2.4.145](#)).

```
<xs:complexType name="EliminateDescendantsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

### 2.2.4.94 EliminateMemberSetOp

This complex type extends the **SetOperation** (section [2.2.4.166](#)) type. It defines an operation to eliminate a member (3), specified by **Name** (see section [2.2.4.166](#)), from a **MemberSet** (see section [2.2.4.145](#)).

```
<xs:complexType name="EliminateMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation"/>
  </xs:complexContent>
</xs:complexType>
```

### 2.2.4.95 EndPoint

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

```
<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>
```

**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

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

```
<xs:complexType name="ExcelDataSet">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CompressedDataTable" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcelFileBlob" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TableMapping" type="tns:DataTableMapping"/>
  </xs:sequence>
  <xs:attribute name="UseFirstRowHeaders" type="xs:boolean" use="required"/>
</xs:complexType>
```

**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 Base64 encoded.

**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 Base64 encoded.

**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

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

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



</xs:complexType>

**WorkbookParameters:** Specifies the **PropertyBag** (section [2.2.4.159](#)) containing the parameters that are passed to the workbook when opening the data source. This element MUST be present.

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

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

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

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

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

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

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

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

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

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

## 2.2.4.98 Filter

This complex type specifies a filter.

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

```

**BeginPoints:** Specifies the available connection sources to filter and set conditions for the display of other reports and scorecards. This element **MUST** be present, and the array **MUST** contain at least one **ParameterDefinition** (Section [2.2.4.156](#)). This element **MUST** conform to the schema of the **ArrayOfParameterDefinition** (Section [2.2.4.51](#)) complex type.

**DataSourceLocation:** Specifies the data source (1) for the selectable filter values. This element **MUST** be present. This element **MUST** conform to the schema of the **RepositoryLocation** (Section [2.2.4.162](#)) complex type. This element **MUST** contain the RepositoryLocation of a data source (1).

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

**EndPoints:** Specifies available connections destinations for filtering and controlling the conditional visibility of the filter. This element **MUST** be present, and the array **MUST** be empty if the **SubTypeId** is not Custom. This element **MUST** conform to the schema of the **ArrayOfEndPoint** (section [2.2.4.34](#)) complex type.

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

Value	Content
FixedValues	Specifies a filter that contains selections provided from a tabular data source (1).
MDXQuery	Specifies a filter that contains selections provided by an MDX query.
MemberSelection	Specifies a filter that contains selections provided by selecting members from a data source (1).
NamedSets	Specifies a filter that contains selections provided from a named set definition.
TimeIntelligence	Specifies a filter that contains selections provided by a <b>time intelligence</b> mapped data source (1).
TimeIntelligencePostFormula	Specifies a filter that contains selections provided by a custom formula applied against a time intelligence mapped data source (1).

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

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

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

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

#### 2.2.4.99 FirstClassElement

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

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

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

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

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

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

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

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

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

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

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

2.2.4.100 GridCell

Specifies a single cell used by the scorecard grid view and the analytic grid view. The following UML class diagram shows the **GridCell** and its relationship with other classes.

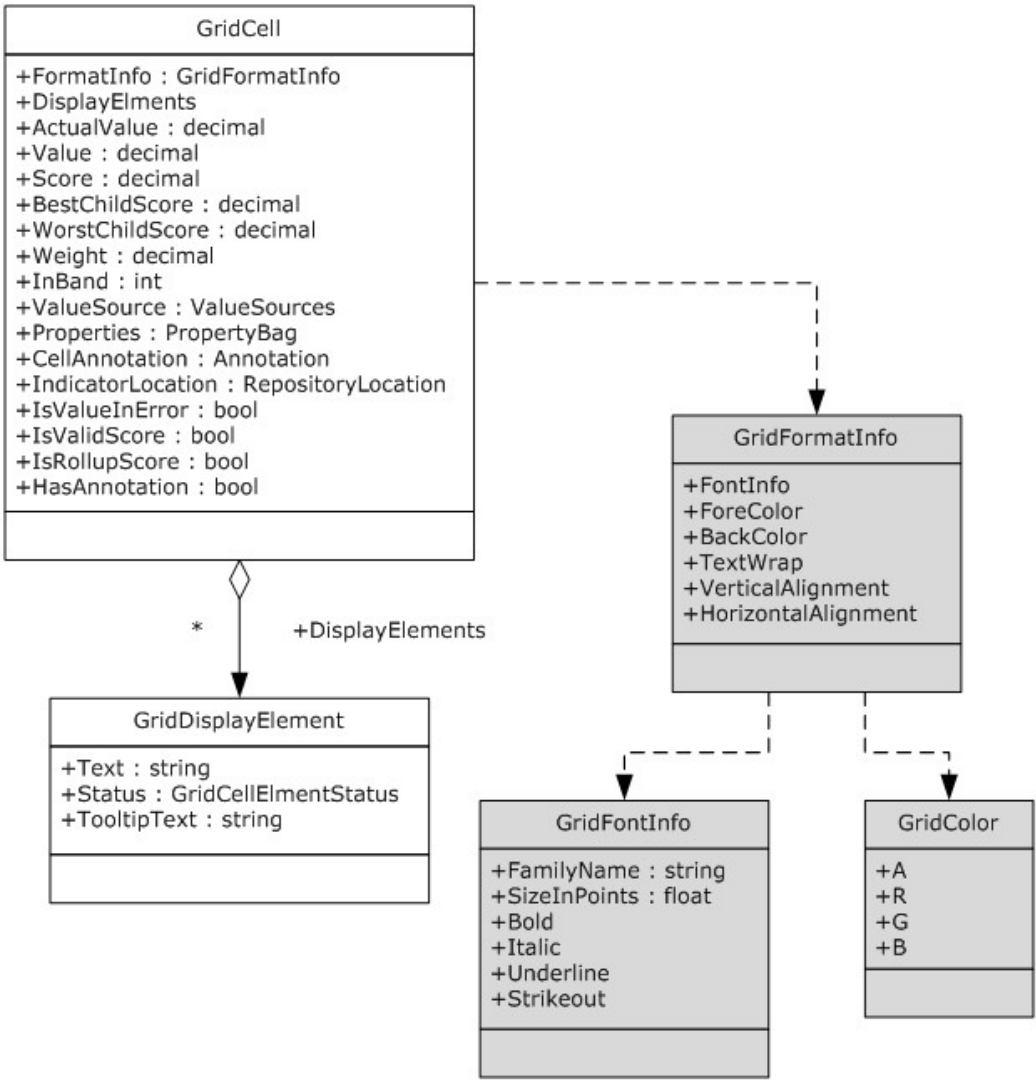


Figure 2: GridCell in relation to other classes

<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>

```

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

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

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

**IndicatorLocation:** If the GridCell contains an indicator, this property MUST point to the indicator location, as defined in [RepositoryLocation](#).

**InBand:** If the GridCell contains an indicator, this property MUST contain the index to the indicator band (see [Indicator](#).IndicatorBands).

**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 associated with the **GridCell**. Target cells can have multiple value elements (that is, variance, score, actual, and target) in which case the **Value** property MUST always specify the target value.

**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 roll up 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 roll up 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

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">
  <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

This class represents the grid color for the [GridCell](#) contents.

```
<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>
```

**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.

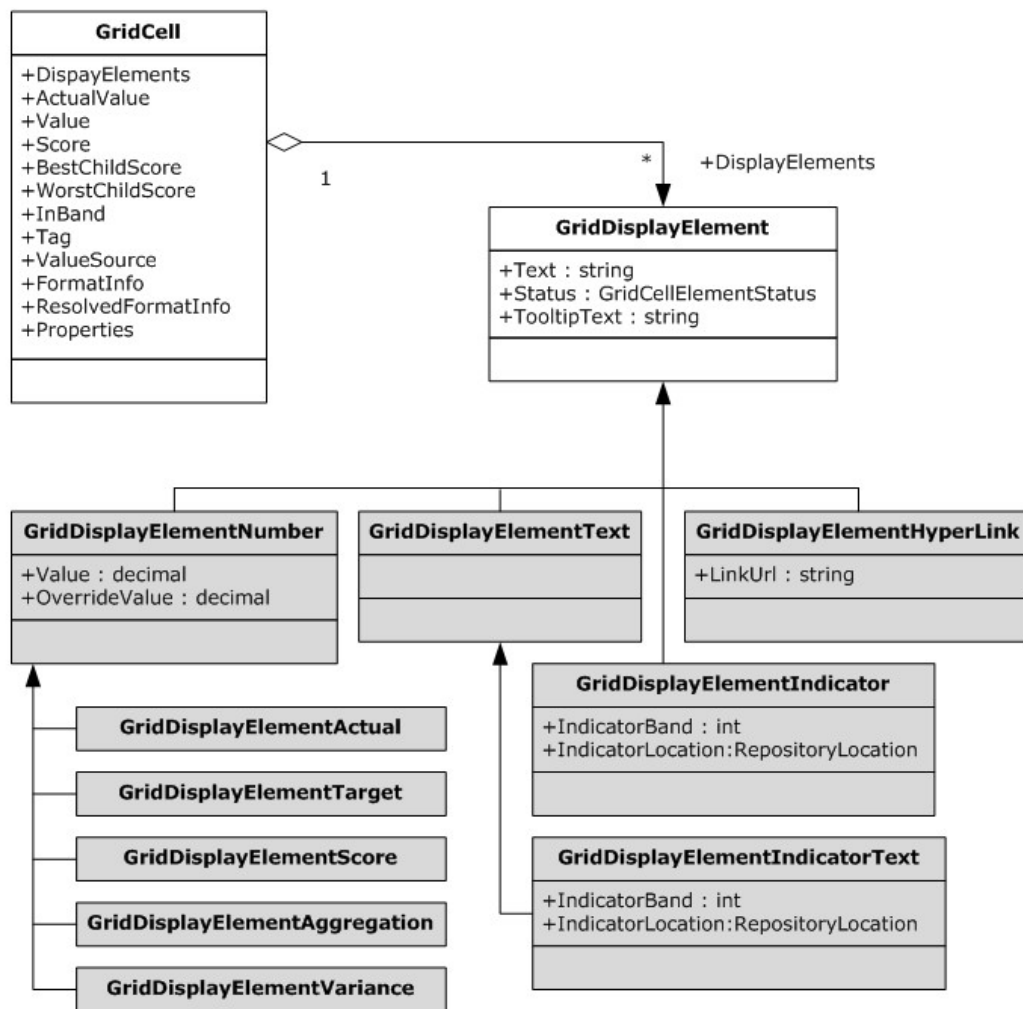
**B:** The blue color channel. The value MUST be between 0 and 255.

#### 2.2.4.103 GridDisplayElement

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">
  <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

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

```
<xs:complexType name="GridDisplayElementActual">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.105 GridDisplayElementAggregation

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

```
<xs:complexType name="GridDisplayElementAggregation">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.106 GridDisplayElementHyperLink

Specifies the [GridDisplayElement](#) of a KPI's hyperlink property in a cell. Inherits from the [GridDisplayElement](#).

```
<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>
```

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

#### 2.2.4.107 GridDisplayElementIndicator

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

```
<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>
```

**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

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

```
<xs:complexType name="GridDisplayElementIndicatorText">
  <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

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">
  <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

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

```
<xs:complexType name="GridDisplayElementScore">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.111 GridDisplayElementTarget

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

```
<xs:complexType name="GridDisplayElementTarget">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.112 GridDisplayElementText

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

```
<xs:complexType name="GridDisplayElementText">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElement"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.113 GridDisplayElementVariance

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

```
<xs:complexType name="GridDisplayElementVariance">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber"/>
  </xs:complexContent>
</xs:complexType>
```

#### 2.2.4.114 GridFontInfo

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

```
<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>
```

**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

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

```
<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>
```

**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

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

```
<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" xmlns:q6="http://microsoft.com/wsdl/types/" type="q6:guid"
use="required"/>
  <xs:attribute name="DefinitionGuid" xmlns:q7="http://microsoft.com/wsdl/types/"
type="q7: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:complexType>
```

```

<xs:attribute name="IsColumnHeader" type="xs:boolean" use="required"/>
<xs:attribute name="AppendFilterInfoToHyperlink" type="xs:boolean" use="required"/>
<xs:attribute name="Weight" type="xs:decimal" use="required"/>
<xs:attribute name="KpiTargetName" type="xs:string"/>
<xs:attribute name="AggregationType" type="tns:HeaderAggregationTypes" use="required"/>
</xs:complexType>

```

**HeaderFormatInfo:** This property, as defined in [GridFormatInfo](#), overrides the format information set under [GridViewDefinition](#) for **GridHeaderItem**.

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

**Children:** Specifies an array of [GridHeaderItem](#) as defined in [ArrayOfGridHeaderItem](#).

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

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

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

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

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

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

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

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

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

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

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

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

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

Header type	Dimension name
Member	Member Dimension name.
Kpi	Scorecard__
KpiActual	Scorecard_Measures__
KpiTarget	Scorecard_Measures__

Header type	Dimension name
Aggregate	Scorecard_Aggregates__
ScorecardDetails	Scorecard_Details__
DocumentLinks	Scorecard_DocumentLinks__
NamedSet	<b>null</b>
None	<b>null</b>

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

Header type	Dimension value
Member	Member unique name.
Kpi	RepositoryLocation of the <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 <b>AggregateTypeEnum</b> (see section <a href="#">2.2.5.1</a> ).
ScorecardDetails	Only the "Description", "Name", or "Person Responsible" values are supported.
DocumentLinks	GUID.
NamedSet	<b>null</b>
None	<b>null</b>

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

**GroupId:** Integer identifier to identify all members (3) in a set. The **GroupId** is positive if the header type is **Member** or **NamedSet** and has a negative value when no hierarchy (e.g. a flat list of members). Root headers are an exception to this rule because their **GroupId** value is 0.

**Depth:** Depth of the **GridHeaderItem** in the tree. It starts with value 0 for the root level node and keeps incrementing moving towards the leaves.

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

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

**IsCollapsed:** This attribute MUST be **true** if the header node is collapsed; otherwise, **false**.

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

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

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

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

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

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

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

**NamedSetExpression:** The expression to use in named set expansions and MUST conform to **MDX** format. For named set headers, it's automatically set. For custom formulas, the **CustomSetFormula** and **NamedSetExpression** have the same value. For time formulas, this property is ignored.

**CustomSetFormula:** **CustomSetFormula** can be a custom formula Time Intelligence formula, or an MDX entered by the user. When it's a customer formula, the **CustomSetFormula** and **NamedSetExpression** values are equal.

**IsNamedSetInError:** This attribute MUST be **true** if the named set expression is in an error state; otherwise, "false".

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

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

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

**Hyperlink:** Represents hyperlink for **GridHeaderItem**.

**ShowHyperlinkInNewWindow:** This attribute MUST be **true** if the hyperlink opens in a new window or **false** if the hyperlink opens in the same window.

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

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

**AppendFilterInfoToHyperlink:** This attribute MUST be **true** if the filter information MUST be appended to the hyperlink; otherwise, **false**.

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

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



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

#### 2.2.4.117 GridIndicatorSettings

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

```
<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>
```

**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

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

```
<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>
```

**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

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

```
<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>

```

**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

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

```

<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>

```

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

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

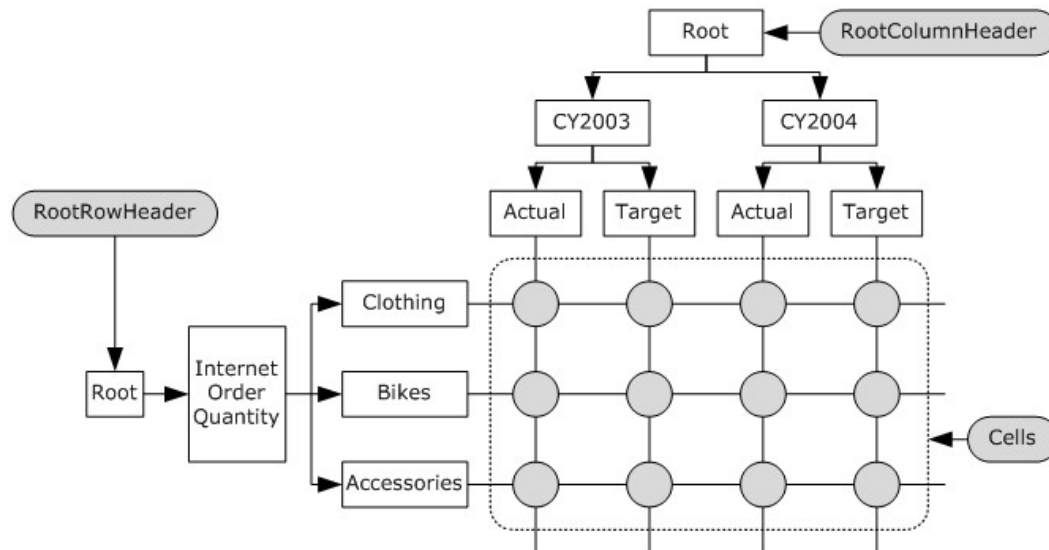
**DisplayType:** .Represents the variance display type as defined in [VarianceDisplayType](#).

**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

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



**Figure 4: GridViewData**

The **GridViewData** (see section [2.2.4.121](#)) is mainly composed of two tree data structures representing all the row and column headers and a two dimensional array representing every possible interception between elements of those two trees.

The row and column header trees MUST be accessed by the properties **RootRowHeader** and **RootColumnHeader** respectively. The two dimensional array MUST be accessed by the **Cells** property.

```
<xs:complexType name="GridViewData">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultCellFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Cells" type="tns:GridCellSet"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader" type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation"/>
  </xs:sequence>
</xs:complexType>
```

```

    <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:q17="http://microsoft.com/wsdl/types/"
type="q17: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:q18="http://microsoft.com/wsdl/types/"
type="q18:guid" use="required"/>
  <xs:attribute name="EmptyCell" type="xs:string"/>
  <xs:attribute name="InvalidCell" type="xs:string"/>
  <xs:attribute name="TIFormula" type="xs:string"/>
  <xs:attribute name="TICurrentDateTime" type="xs:string"/>
</xs:complexType>

```

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

**DefaultRowHeaderFormatInfo:** Specifies the default style format applied to scorecard row header cells, as defined in [GridFormatInfo](#).

**DefaultColumnHeaderFormatInfo:** Represents the default style format applied to scorecard column header cells, as defined in [GridFormatInfo](#).

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

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

**RootColumnHeader:** Specifies the root element for the column header tree, as defined in [GridHeaderItem](#).

**ScorecardLocation:** Points to the scorecard object for which the **GridViewData** was created, as defined in [RepositoryLocation](#).

**DefaultRollupIndicatorLocation:** Points to the default indicator for roll up calculated cells, as defined in [RepositoryLocation](#).

**PreQueryTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** just before getting data from the data sources(1) (see [GridViewTransformReference](#)).

**PostQueryTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** after getting data from the data sources(1) (see [GridViewTransformReference](#)).

**PreRenderTransforms:** Specifies a set of transform operations that are applied to the **GridViewData** prior to rendering the scorecard (see [GridViewTransformReference](#)). While all the

other types of transform operations are applied once when the **GridViewData** is generated, the pre-render and per-user transforms are applied every time the scorecard is rendered, even if the GridViewData object is not new.

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

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

**ScorecardViewId:** GUID that identifies the [ConfiguredView](#) instance associated to the scorecard pointed by **ScorecardLocation**.

**Cached:** This attribute MUST be **false** if the GridViewData is new, or **true** if it was retrieved from a caching mechanism.

**CacheExpiration:** Specifies when the GridViewData object becomes invalid.

**DefaultRollupIndicatorId:** GUID used as the identifier for the indicator that is used by default for roll up calculated cells.

**EmptyCell:** Specifies the default text used as the display test for empty cells.

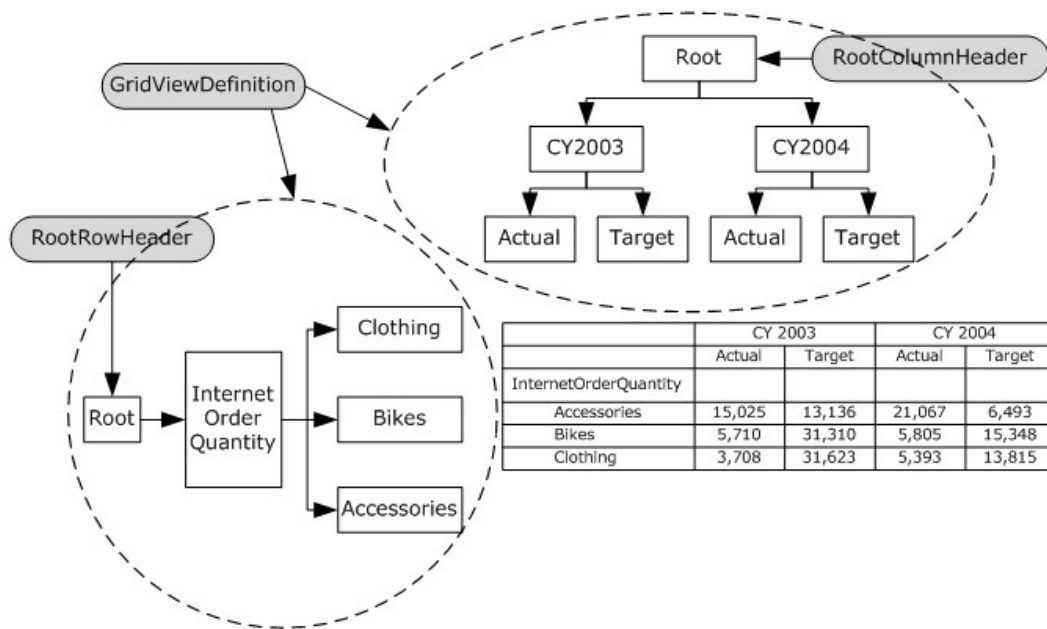
**InvalidCell:** Specifies the default text used as the display test for invalid cells.

**TIFormula:** Specifies the value passed from an external time intelligence filter connected to the scorecard TI Formula endpoint (See [Scorecard.EndPoints](#)). If set, it represents the **Simple Time Period Specification** formula that is used by the scorecard query engine to filter KpiMeasure complex types uniformly independent of data source. If it is **null** or empty the default time intelligence filter of the KPI is applied, if one is defined.

**TICurrentDateTime:** Specifies the value passed from an external time intelligence filter connected to the scorecard Current Date Time endpoint (See [Scorecard.EndPoints](#)). If set, it represents the Simple Time Period Specification date time that is used by the scorecard query engine to evaluate **KpiMeasure** complex types that contain a time intelligence filter. If not set, the current date time of the server is used by the scorecard query engine to evaluate **KpiMeasure** complex types if a time intelligence filter is defined.

#### 2.2.4.122 GridViewDefinition

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



**Figure 5: GridViewDefinition**

The **GridViewDefinition** contains the tree data structures representing all the row and column headers. The row and column header trees MUST be accessed by the properties **RootRowHeader** and **RootColumnHeader** properties respectively.

```
<xs:complexType name="GridViewDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="CornerCellFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultCellFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
      type="tns:GridFormatInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader" type="tns:GridHeaderItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
      type="tns:GridHeaderItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DefaultRollupIndicatorId"
      xmlns:q5="http://microsoft.com/wsdl/types/" type="q5:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
      type="tns:RepositoryLocation"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreQueryTransforms"
      type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PostQueryTransforms"
      type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PreRenderTransforms"
      type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PerUserTransforms"
      type="tns:GridViewTransformReference"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellBorderColor" type="tns:GridColor"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultCellBorderColor"
      type="tns:GridColor"/>
  </xs:sequence>
  <xs:attribute name="EmptyCell" type="xs:string"/>
</xs:complexType>
```

```

<xs:attribute name="InvalidCell" type="xs:string"/>
<xs:attribute name="ShowGridLines" type="xs:boolean" use="required"/>
<xs:attribute name="ShowHiddenHeaders" type="xs:boolean" use="required"/>
<xs:attribute name="ShowMetricHeaders" type="xs:boolean" use="required"/>
<xs:attribute name="ShowPlusMinus" type="xs:boolean" use="required"/>
</xs:complexType>

```

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

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

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

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

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

**RootColumnHeader:** Specifies the root element of the column header tree, as defined in GridHeaderItem.

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

**DefaultRollupIndicatorLocation:** Points to the default indicator for roll up calculated cells, as defined in [RepositoryLocation](#).

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

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

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

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

**CellBorderColor:** Specifies the border color applied to scorecard cells as defined in [GridColor](#).

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

**EmptyCell:** Specifies the string that needs to be displayed in empty scorecard cells. The cells are left empty when this property is NULL or empty.

**InvalidCell:** Specifies the string that needs to be displayed in invalid scorecard cells. The default value for this property is "Error".

**ShowGridLines:** This attribute MUST be **true** if the scorecard grid lines are displayed; otherwise, **false**.

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

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

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

#### 2.2.4.123 GridViewTransformReference

This class specifies one transform operation to be applied to a [GridViewData](#) instance.

```
<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>
```

**Parameters:** Represents a general property bag, as defined in [PropertyBag](#). The **Parameters** property MAY be null or empty. If the transformation associated with the **GridViewTransformReference** requires any specific information, the **Parameters** property MUST contain that information.

**Id:** Specifies the transformation associated with the **GridViewTransformReference**. It MUST NOT be null or empty. It MUST be one of the transformations registered on the server.

#### 2.2.4.124 Hierarchy

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

```
<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>
```

**Levels:** An array of [Level](#) objects in the hierarchy.

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

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

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

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

#### 2.2.4.125 Indicator

A set of visualizations that represent how the actual value of a KPI compares against its target value.



```

<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>

```

**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

This is a visualization representing one state of an indicator.

```

<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>

```

**ImageData:** A base-64 encoded string converted from a stream of the **Portable Network Graphics (PNG)** image file representing this indicator state.

- The Portable Network Graphics (PNG) file stream that **ImageData** originates from MUST NOT exceed 512,000 bytes in length.
- Both the height and the width of the Portable Network Graphics (PNG) image MUST NOT exceed 256 pixels.

**Color:** A string converted from a 24-bit color that represents this indicator state when it is shown as text. The string MUST be formatted as "#RRGGBB".

- **RR** – A two-digit hexadecimal value that indicates the amount of red light in the color. For example, #FF0000 defines the color red.
- **GG** – A two-digit hexadecimal value that indicates the amount of green light in the color. For example, #00FF00 defines the color green.
- **BB** – A two-digit hexadecimal value that indicates the amount of blue light in the color. For example, #0000FF defines the color blue.

**BackColor:** A string converted from a 24-bit color that represents this indicator state in visualizations where images or text cannot be displayed, such as in **strategy maps**. The string MUST be formatted as "#RRGGBB".

- **RR** – A two-digit hexadecimal value that indicates the amount of red light in the color. For example, #FF0000 defines the color red.
- **GG** – A two-digit hexadecimal value that indicates the amount of green light in the color. For example, #00FF00 defines the color green.
- **BB** – A two-digit hexadecimal value that indicates the amount of blue light in the color. For example, #0000FF defines the color blue.

**ToolTip:** A string containing the tooltip for this **IndicatorBand**. The length MUST NOT exceed 1000 characters.

#### 2.2.4.127 Item

Represents a key-value pair in a **SerializableDictionary** (section [2.2.4.165](#)).

```
<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>
```

**Key:** Specifies the string key used for addressing the **Value** element content.

**Value:** Specifies the element associated with the **Key**. It MUST be of complex type **MemberSetFormula** (section [2.2.4.146](#)), **MemberList** (section [2.2.4.136](#)), or **Member** (section [2.2.4.135](#)).

The **Key** and **Value** elements MUST conform to the following:

- For each **Key**, there MUST be an associated **Value**.
- Each **Key** MUST be unique and MUST NOT be NULL.

Each **Value** MUST NOT be NULL.

#### 2.2.4.128 Kpi

A key performance indicator (KPI) is contained in a scorecard.

```

<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>

```

**Actuals:** An array of **KpiMeasure** (see section [2.2.4.129](#)) elements. The array MUST exist and MUST contain at least one **KpiMeasure**.

**Targets:** An array of **Target** (see section [2.2.4.171](#)) elements.

## 2.2.4.129 KpiMeasure

The **KpiMeasure** complex type is contained in a key performance indicator (KPI).

```

<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:complexType>

```

**OwnerKpiLocation:** The location of the parent **Kpi** (see section [2.2.4.128](#)), as specified by **RepositoryLocation** (see section [2.2.4.162](#)). Upon successful **Kpi** creation, the server (2) MUST set this value to a **RepositoryLocation**, whose **ItemUrl** field contains the empty string.

**DataSourceLocation:** The location of the **DataSource** (see section [2.2.4.85](#)), as specified by **RepositoryLocation** (see section [2.2.4.162](#)).

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

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

**CalcFormulaInfo:** A calculated formula to apply to the measure query, as specified by **CalculatedFormulaInfo** (see section [2.2.4.75](#)).

**AggregateBy:** The aggregation method to apply to the measure query, as specified by **AggregateTypeEnum** (see section [2.2.5.1](#)).

**DisableScorecardFilters:** A value of **true** indicates that scorecard filters are disabled for the measure query; a value of **false** indicates that scorecard filters are enabled for the measure query.

**ModelCurrent:** The fixed value of the **KpiMeasure**.

- **DataSourceLocation.ItemUrl** MUST equal `"/%%fixedvalues%%"` for **ModelCurrent** to be used.

**Pattern:** The pattern this **KpiMeasure** follows, as specified by **KpiPattern** (see section [2.2.5.32](#)). Banding and scoring behave differently with different patterns.

**CurrentFormula:** The MDX formula or **tuple** used to retrieve the current value.

- If **IsCustomCurrentFormula** is set to **true**, the value MUST have 1 or more non-**whitespace** characters.
- If **IsCustomCurrentFormula** is set to **false**, the value is ignored.
- MUST be a valid MDX formula or tuple if **DataSource.SourceName** (see section [2.2.4.85](#)) equals "ADOMD.NET".
- The length MUST NOT exceed 4,000 characters.

**IsCustomCurrentFormula:** A value of **true** indicates that **CurrentFormula** is used to compute the current value; a value of **false** indicates that **CurrentFormula** is ignored.

- **DataSource.SourceName** (see section [2.2.4.85](#)) MUST equal "ADOMD.NET" for **IsCustomCurrentFormula** to be used.

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

**OverrideHoverText:** A descriptive string meant for the user. The length MUST NOT exceed 256 characters.

**TimeFilterFormula:** The time intelligence formula to apply to the measure query. The length MUST NOT exceed 4,000 characters.

**ValueSource:** The rollup method to apply to the source data, as specified by **ValueSources** (see section [2.2.5.51](#)).

### 2.2.4.130 KpiNumberFormatProperties

Used for custom formatting of key performance indicator (KPI) measure values.

```
<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>

```

**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

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

```

<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>

```

**DimensionUniqueName:** The unique name of the dimension for the level.

**HierarchyUniqueName:** The unique name of the hierarchy for the level.

**IsAllLevel:** This attribute MUST be **true** if this Level is the level that unites all the members of the dimension or hierarchy into one element at the top of the dimension or hierarchy; otherwise, **false**.

**LevelNumber:** The numeric representation of the level depth in the dimension or hierarchy that the level represents. The value MUST NOT be less than 0. Zero means this level is the root level in the dimension or hierarchy. If set to 1, this member is at the first level of the dimension or hierarchy, 2 indicates that the member is at the second level of the dimension or hierarchy, and so on.

#### 2.2.4.132 ListLocation

Contains the necessary information to identify a list (1) on the server (2).

```
<xs:complexType name="ListLocation">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SiteUrl" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ListUrl" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**SiteUrl:** The url for the server where the list (1) is located. The attribute MUST be a valid [\[RFC1738\]](#) URL.

**ListUrl:** The location on the server where the list (1) is located. MUST be present. MUST be a valid URL as specified in [\[RFC1738\]](#).

#### 2.2.4.133 MDXParameterDefinition

The **MDXParameterDefinition** is a complex type that specifies a custom MDX used to retrieve data.

```
<xs:complexType name="MDXParameterDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Expression" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**Expression:** A string representing an MDX.

#### 2.2.4.134 Measure

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

```
<xs:complexType name="Measure">
  <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.

Value	Corresponding Aggregation Type
1	Sum
2	Count
3	Minimum
4	Maximum
5	Average
6	Variance
7	Standard Deviation
123	Calculated
0	Unknown

**MeasureGroup:** The name of the measure group which contains this measure.

**DisplayFolder:** The name of the display folder for this measure.

**HierarchyName:** The unique name of the hierarchy of this measure.

#### 2.2.4.135 Member

Represents an OLAP member in a **dimension** (see section [2.2.4.90](#)).

```
<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="LevelName" type="xs:string"/>
  <xs:attribute name="DimensionName" type="xs:string"/>
  <xs:attribute name="LevelDepth" type="xs:int" use="required"/>
  <xs:attribute name="ChildCount" type="xs:long" use="required"/>
  <xs:attribute name="IsChildCountReal" type="xs:boolean" use="required"/>
  <xs:attribute name="IsAllLevel" type="xs:boolean" use="required"/>
  <xs:attribute name="DimensionUniqueName" type="xs:string"/>
  <xs:attribute name="MemberType" type="tns:MemberType" use="required"/>
</xs:complexType>
```

**MemberOperation:** The **MemberOperation** (see section [2.2.4.137](#)) for this member (3).

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

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

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

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

**LevelDepth:** The numeric value of the level depth in the **hierarchy** (see section [2.2.4.124](#)) that this member belongs to. Zero means this member is at the root level in the hierarchy. If set to 1, this member is at the first level of the hierarchy, 2 indicates that the member is at the second level of the hierarchy, and so on.

**ChildCount:** The number of child members (3) of this member (3).

**IsChildCountReal:** This attribute MUST be **false** if the **ChildCount** property is an estimate, or **true** if it is the actual number. This property is used to monitor whether the **ChildCount** property is up to date. This property is set by the client.

**IsAllLevel:** This attribute MUST be **true** if the level that this member (3) belongs to is the level that unites all the members (3) of the hierarchy into one element at the top of the hierarchy; otherwise, **false**.

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

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

### 2.2.4.136 MemberList

This complex type specifies the members (3) of an OLAP hierarchy. This type extends **MemberSet** (section [2.2.4.145](#)) and can be used with any axis type.

```
<xs:complexType name="MemberList">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberSet">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="memberList" type="tns:ArrayOfString"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**memberList:** An array of strings representing the members of an OLAP hierarchy. This MUST conform to the schema of complex type **ArrayOfString** (section [2.2.4.55](#)). Each string in the list represents the **UniqueName** string property of an OLAP member (see section [2.2.4.135](#)).

### 2.2.4.137 MemberOperation

Represents the basic [member](#) operations that can be performed on an OLAP dimension member. MemberOperation abstract type is the base class for [MemberOperationAllDescendants](#), [MemberOperationChildren](#), [MemberOperationDescendants](#), [MemberOperationDrillUp](#), [MemberOperationHide](#) and [MemberOperationLeafDescendants](#).

```
<xs:complexType name="MemberOperation" abstract="true"/>
```

### 2.2.4.138 MemberOperationAllDescendants

A [MemberOperation](#) that represents all descendants of a referred [member](#) in the [dimension hierarchy](#). This type extends MemberOperation.

```
<xs:complexType name="MemberOperationAllDescendants">
```



```

<xs:complexContent mixed="false">
  <xs:extension base="tns:MemberOperation"/>
</xs:complexContent>
</xs:complexType>

```

#### 2.2.4.139 MemberOperationChildren

A [MemberOperation](#) that represents all child members of a referred [member](#) in a [dimension hierarchy](#). This type extends MemberOperation.

```

<xs:complexType name="MemberOperationChildren">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.140 MemberOperationDescendants

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">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation">
      <xs:attribute name="LevelUniqueName" type="xs:string"/>
      <xs:attribute name="LevelDisplayName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

**LevelUniqueName:** The unique name of a [level](#) in the [dimension](#) hierarchy.

**LevelDisplayName:** The display name of a level (see section [2.2.4.131](#)) in a dimension (see section [2.2.4.90](#)) hierarchy (see section [2.2.4.124](#)).

#### 2.2.4.141 MemberOperationDrillUp

A [MemberOperation](#) that represents the parent of a referred [member](#). This type extends MemberOperation.

```

<xs:complexType name="MemberOperationDrillUp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberOperation"/>
  </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.142 MemberOperationHide

A [MemberOperation](#) that hides a referred [member](#). This type extends MemberOperation.

```

<xs:complexType name="MemberOperationHide">
  <xs:complexContent mixed="false">

```

```

        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.143 MemberOperationLeafDescendants

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">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberOperation"/>
    </xs:complexContent>
</xs:complexType>

```

#### 2.2.4.144 MemberParameterDefinition

The **MemberParameterDefinition** is a complex type that represents a group of members (3) used to retrieve data.

```

<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>

```

**Dimension:** A **Dimension** (see section [2.2.4.90](#)) representing the dimension (1) for the group of associated (or related) members (3).

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

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

#### 2.2.4.145 MemberSet

Specifies the properties of a OLAP member hierarchy.

```

<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>

```

**FilterEmpty:** This attribute MUST be present and MUST be **true** if the FILTER function MUST be used in the MDX query; otherwise, **false**.

**HierarchyType:** This attribute MUST be present. It specifies the type of the hierarchy that the members belong to. It MUST conform to the schema of **HierarchyType** (section [2.2.5.28](#)) simple type.

**Hierarchize:** This attribute MUST be present and MUST be **true** if the HIERARCHIZE function MUST be used in the MDX query; otherwise, **false**.

**Distinct:** This attribute MUST be present and MUST be **true** if the DISTINCT function MUST be used in the MDX query; otherwise, **false**.

**HierarchyName:** This attribute MUST NOT be NULL. It specifies the unique name of the hierarchy.

#### 2.2.4.146 MemberSetFormula

Specifies a collection of operations on the members (3) of a OLAP hierarchy. This type extends [MemberSet](#) and can be used with any axis type.

```
<xs:complexType name="MemberSetFormula">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:MemberSet">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Operations"
type="tns:ArrayOfSetOperation"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**Operations:** This element MUST NOT be NULL. It contains a collection of elements of complex type **SetOperation** (section [2.2.4.166](#)) that specify the operations on the members of the hierarchy.

#### 2.2.4.147 MemberTransform

Represents a **transform**, such as drilldown, applied to a [member](#), [hierarchy](#) group or [KPI](#).

```
<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>
```

**GroupId:** The string representing a hierarchy group identifier.

**CellPath:** The location of the member inside the hierarchy group.

**Type:** The [MemberTransformType](#) of the **MemberTransform**.

**Operation:** The [MemberTransformOperation](#) of the **MemberTransform**.

**CustomData:** Specifies additional data related to the **MemberTransform**. This element MUST be present. This element MUST NOT be empty. The content of **CustomData** is dependent on the Operation of the **MemberTransform** as described in the following table.

Operation	Content
Replace	CustomData MUST be an instance of <a href="#">ArrayOfMember</a> .
DrillUp, DrillDown, or Expand	CustomData MUST be an instance of <a href="#">DataSource</a> .

#### 2.2.4.148 NamedSet

An OLAP Named Set.

```
<xs:complexType name="NamedSet">
  <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 [2.2.4.55](#)) complex type.

**Name:** The display name for the named set.

**Expression:** The MDX for this named set.

**DisplayFolder:** Where the named set appears in a hierarchical view of named sets.

#### 2.2.4.149 NamedSetParameterDefinition

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

```
<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>
```

**Name:** A display name for the named set.

**Expression:** The MDX representing a set of members (3) used to retrieve data.

#### 2.2.4.150 NameInfo

This complex type specifies the names and the description of a cube, dimension (1), hierarchy, level, or measure. It is the base type for the complex types **Cube** (section [2.2.4.78](#)), **Dimension**

(section [2.2.4.90](#)), **Hierarchy** (section [2.2.4.124](#)), **Level** (section [2.2.4.131](#)), and **Measure** (section [2.2.4.134](#)).

```
<xs:complexType name="NameInfo">
  <xs:attribute name="DisplayName" type="xs:string"/>
  <xs:attribute name="UniqueName" type="xs:string"/>
  <xs:attribute name="Description" type="xs:string"/>
</xs:complexType>
```

**DisplayName:** The display name of the cube, dimension, hierarchy, level, or measure.

**UniqueName:** The unique name of the cube, dimension, hierarchy, level, or measure.

**Description:** The description of the cube, dimension, hierarchy, level, or measure.

### 2.2.4.151 NumericFormat

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">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FormatType" type="tns:FormatType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CurrencySymbol" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DecimalPlaces" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NegativeSymbol"
      type="tns:FormatNegativeSymbol"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ShowZeroAs" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UseThousandsSeparator" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextLeft" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextRight" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

**MemberName:** The Analysis Services measure name to which this numeric formatting is being applied.

**FormatType:** The formatting pattern used for number formatting, as specified by **FormatType** (see section [2.2.5.23](#)).

**CurrencySymbol:** The currency symbol for number formatting.

**DecimalPlaces:** The number of trailing decimal places used for number formatting. The value MUST NOT be less than 0 and MUST NOT be greater than 30.

**NegativeSymbol:** The representation of negative values used for number formatting.

**ShowZeroAs:** The string used, if its length is greater than 0 characters, to express the value of 0; otherwise formatted as a number.

**UseThousandsSeparator:** A value of **true** indicates that a thousands separator is enabled for number formatting; a value of **false** indicates it is disabled.

**AdditionalTextLeft:** The text added to the left of the formatted number.

**AdditionalTextRight:** The text added to the right of the formatted number.

#### 2.2.4.152 NumericFormatsHashtable

An array of **NumericFormat** objects.

```
<xs:complexType name="NumericFormatsHashtable">
  <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 [2.2.4.151](#)) complex type.

#### 2.2.4.153 OLAPQueryData

Represents an analytic query.

```
<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>
```

**Parameters:** An **ArrayOfParameters** collection (see section [2.2.4.50](#)) containing all the user-defined parameters for the current query as well as their default values. It MUST NOT be null. If there are no user-defined parameters, it MUST be empty.

**DataSourceLocation:** A **RepositoryLocation** object (see section [2.2.4.162](#)) that specifies the location on the server of the data source object associated with this query. It MUST NOT be **null**.

**MDX:** The MDX query used to generate data for the analytic report. It MUST NOT be null or empty. Any parameters from the **Parameters** collection used in this query MUST be denoted using left and right angle brackets. For example, a parameter named *ParameterName* MUST be included as `<<ParameterName>>`.

#### 2.2.4.154 OLAPReportViewData

Contains all the state information for an analytic report.

```
<xs:complexType name="OLAPReportViewData">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryData" type="tns:OLAPQueryData"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryState" type="tns:QueryState"/>
    <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:sequence>
  <xs:attribute name="MeasureGroupName" type="xs:string"/>
</xs:complexType>
```

```

<xs:attribute name="Caption" type="xs:string"/>
<xs:attribute name="Description" type="xs:string"/>
<xs:attribute name="FormatDimensionUniqueName" type="xs:string"/>
</xs:complexType>

```

**QueryData:** An **OLAPQueryData** object (see section [2.2.4.153](#)) that specifies data source information and user-defined parameters. It MUST NOT be **null**. Either this object or the **QueryState** object MUST be populated to represent the query for the report.

**QueryState:** A **QueryState** object (see section [2.2.4.160](#)) that specifies the current data query. It MUST NOT be **null**. Either this object or the **QueryData** object MUST be populated to represent the query for the report. If this object is used, the **IsEnabled** property MUST be set to **true**. If both **QueryData** and **QueryState** are populated and **QueryState.IsEnabled** is **true**, then the **QueryState** object will be used to run the query. If **QueryState.IsEnabled** is **false**, then the **QueryData** object will be used to run the query.

**ReportViewData:** Specifies view data for the current report. It MUST be XML that can **deserialize** into an object that inherits from **AnalyticBaseReportViewData** (see section [2.2.4.14](#)). It MUST NOT be null or empty. See also **AnalyticChartReportViewData** (section [2.2.4.16](#)) and **AnalyticGridReportViewData** (section [2.2.4.17](#)) which both inherit from **AnalyticBaseReportViewData**.

**ParentReportViewLocation:** A **RepositoryLocation** object (see section [2.2.4.162](#)) that specifies the location of the parent report on the server. It MUST NOT be null. It SHOULD be empty to indicate that there is no parent report. It MUST contain the location of a report on the server if the method **SaveTemporaryAnalyticReport** is being called (see section [3.1.4.63](#)).

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

**MeasureGroupName:** Specifies the measure group that was selected when the report was last modified.

**Caption:** Specifies the text that is displayed in the caption for the report.

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

**FormatDimensionUniqueName:** Specifies a text name that uniquely identifies the dimension to use to obtain data formatting information for this report.

## 2.2.4.155 Parameter

Specifies a logical element of an analytic query whose value can be changed independently of the analytic query.

```

<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>

```

**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 [2.2.4.50](#)). It MUST NOT contain a left-angle bracket (<) or a right-angle bracket (>).

**2.2.4.156 ParameterDefinition**

This class represents the non visual portion of the metadata to describe a parameter. This class carries the state necessary to generate a parameter list representing possible connections that can be originated from a first-class element.

```
<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>
```

**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.



ParameterProviderId	CustomDefinition
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 [\[MSFT-ConnectionFormula\]](#).

#### 2.2.4.157 ParameterMapping

Provides the mapping information between a **ParameterDefinition** (section [2.2.4.156](#)) and a **DashboardItem** (section [2.2.4.83](#)).

```
<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" xmlns:q19="http://microsoft.com/wsdl/types/" type="q19:guid"
    use="required"/>
  <xs:attribute name="SourceColumnName" type="xs:string"/>
  <xs:attribute name="DashboardItemId" xmlns:q20="http://microsoft.com/wsdl/types/"
    type="q20:guid" use="required"/>
</xs:complexType>
```

```

<xs:attribute name="ParameterUniqueName" type="xs:string"/>
<xs:attribute name="PostFormula" type="xs:string"/>
<xs:attribute name="IsConditionalDataEnabled" type="xs:boolean" use="required"/>
<xs:attribute name="IsDefaultVisibility" type="xs:boolean" use="required"/>
</xs:complexType>

```

**ConditionalData:** The **DataTable** (as described in [\[DataTable\]](#)) containing visibility values that indicate a connected Web Part is visible. The **DataTable** MUST contain a **DataColumn** with name equal to the **KeyColumn** defined in **ParameterDefinition** (section [2.2.4.156](#)) that contains key values. The **DataTable** MUST contain a **DataColumn** with name equal to the **DisplayColumn** defined in **ParameterDefinition** (section [2.2.4.156](#)) that contains display values; otherwise, the first column in the **DataTable** will be used for display values.

**EndPointUniqueName:** Specifies the unique name of the endpoint for the **DashboardItem** (section [2.2.4.83](#)).

**Id:** A GUID that marks the mapping relationship.

**SourceColumnName:** A column name that appears in the return of the query that pulls selected values for the parameter associated with the element identified by **DashboardItemId**.

**DashboardItemId:** Identifies the **DashboardItem** that is the source of the parameter.

**ParameterUniqueName:** This attribute MUST equal the **ParameterUniqueName** defined in **ParameterDefinition** (section [2.2.4.156](#)).

**PostFormula:** A PostFormula is a transformation expression that is applied to the selected values passed from a filter or scorecard to consuming report or scorecard as defined in [\[MSFT-ConnectionFormula\]](#).

**IsConditionalDataEnabled:** This attribute MUST be set to **true** if **ConditionalData** is not **null**; otherwise, **false**.

**IsDefaultVisibility:** This attribute MUST be set to **true** if the Web Part is shown as a default, when the provider does not enable any consumers via configured visible values; otherwise, **false**.

## 2.2.4.158 PasReportViewData

Contains all the state information for a ProClarity Analytics Server (PAS) report.

```

<xs:complexType name="PasReportViewData">
  <xs:attribute name="ServerUrl" type="xs:string"/>
  <xs:attribute xmlns:q1="http://microsoft.com/wsd1/types/" name="PageId" type="q1:guid"
    use="required"/>
  <xs:attribute name="PagePath" type="xs:string"/>
  <xs:attribute name="ConfigOptions" type="xs:string"/>
</xs:complexType>

```

**ServerUrl:** The URL identifies the report view's PAS server.

**PageId:** The PAS report view GUID identifier.

**PagePath:** The PAS report URL path that is relative to the server URL. The absolute URL is the combination of the **ServerUrl** and **PagePath** parts.

**ConfigOptions:** A list (1) of PAS report view configuration options that is included as the "uiConfig" URL parameter query string.

#### 2.2.4.159 PropertyBag

The **PropertyBag** complex type MUST contain a pairing of keys and values.

```
<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>
```

**Keys:** Key names of type string.

**Values:** A property chosen from a list (1) of various data types; see [ArrayOfChoice1](#).

#### 2.2.4.160 QueryState

An alternate representation of a MDX query that includes the member selections of each axis.

```
<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>
```

**Axes:** An **ArrayOfAxis** (see section [2.2.4.22](#)) collection that contains the member selections for each axis. It MUST NOT be null.

**IsEnabled:** Specifies whether the **QueryState** object represents the query for the report. A value of **true** indicates that the **QueryState** object will be used. A value of **false** indicates that the **QueryState** object will not be used.

**UnknownFilterParameter:** Specifies whether or not an aggregation of multiple members are selected on one of the filter axes. A value of **true** indicates that multiple members are selected on a filter axis. A value of **false** indicates that they are not.

**ShowDatasourceFormatting:** Specifies whether or not formatting information from the data source is used to determine how to display data. A value of **true** indicates that formatting information from the data source is to be used. A value of **false** indicates that it is not.

**DataSourceLocation:** A **RepositoryLocation** object (see section [2.2.4.162](#)) that specifies the location on the server of the data source object associated with this query state. It MUST NOT be null.

## 2.2.4.161 ReportView

This type controls the visual display of data in a dashboard and can be coordinated with other Report Views using filters. Report Views include analytic grids and charts, **PivotTable** and PivotChart reports, Excel spreadsheets [\[MS-XLSX\]](#), SQL Server Reporting Services reports, strategy maps, trend charts, web pages, and custom reports.

```
<xs:complexType name="ReportView">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:FirstClassElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="EndPoints" type="tns:ArrayOfEndPoint"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition"/>
      </xs:sequence>
      <xs:attribute name="TypeName" type="xs:string"/>
      <xs:attribute name="RenderClientSide" type="xs:boolean" use="required"/>
      <xs:attribute name="ConfiguredViewId" xmlns:q10="http://microsoft.com/wsdl/types/"
type="q10:guid" use="required"/>
      <xs:attribute name="SubTypeId" type="xs:string"/>
      <xs:attribute name="RendererClassName" type="xs:string"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

**ScorecardLocation:** This property is only used for Strategy Map ReportViews. It stores the **RepositoryLocation** (section [2.2.4.162](#)) of the Scorecard associated with the Strategy Map.

**CustomData:** Specifies custom data for the report view. This element **MUST** be present. The content of **CustomData** is determined by the **TypeName** of the report view as described in the following table.

TypeName	Content
AnalyticChart	<b>CustomData</b> MUST contain an <b>OlapReportViewData</b> object serialized as an XML document and XML encoded. The value of the <b>OlapReportViewData ReportViewData</b> property MUST be an <b>AnalyticChartReportViewData</b> (section <a href="#">2.2.4.16</a> ) serialized as an XML document.
DecompositionTree	<b>CustomData</b> MUST be ignored.
ExcelServices	<b>CustomData</b> MUST contain an <b>ExcelServicesData</b> 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>OlapReportViewData</b> object serialized as an XML document and XML encoded. The value of the <b>OlapReportViewData ReportViewData</b> property MUST be an <b>AnalyticGridReportViewData</b> (section

TypeName	Content
	<a href="#">2.2.4.17</a> ) serialized as an XML document.
PasPage	<b>CustomData</b> MUST contain an <b>PasReportViewData</b> (section <a href="#">2.2.4.158</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 an <b>StrategyMapViewData</b> (section <a href="#">2.2.4.169</a> ) serialized as an XML document and XML encoded.
SqlReport	<b>CustomData</b> MUST contain an <b>SqlReportViewData</b> (section <a href="#">2.2.4.167</a> ) serialized as an XML document and XML encoded.
TrendAnalysisChart	<b>CustomData</b> MUST be ignored.
Url	<b>CustomData</b> MUST NOT be null and MUST be a valid <a href="#">RFC1738</a> 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, then two **Endpoint** (section [2.2.4.95](#)) items will be present for row and column with a category of None. This element MUST conform to the schema of the **ArrayOfEndPoint** (section [2.2.4.34](#)) complex type.

**BeginPoints:** Specifies the available connection sources to filter and set conditions for the display of other reports and scorecards. This element MUST be present, and the array MUST contain at least one **ParameterDefinition** (section [2.2.4.156](#)). This element MUST conform to the schema of the **ArrayOfParameterDefinition** (section [2.2.4.51](#)) complex type.

**TypeName:** Specifies the name of the report view type. This attribute MUST be present. The content of TypeName is determined by the type of the report view as described in the following table. If the report view is a custom report view, **TypeName** MUST NOT be empty. It MUST NOT be longer than 60 characters. It MUST NOT contain the characters ', ', or \. It MUST NOT be the same as one of the predefined report view types already listed in the following table.

Type	Content
URL	TypeName MUST be "Url".
SQL Report	TypeName MUST be "SqlReport".
Spreadsheet	TypeName MUST be "Spreadsheet".
PivotTable	TypeName MUST be "PivotTable".
PivotChart	TypeName MUST be "PivotChart".
Strategy Map	TypeName MUST be "StrategyMap".
Trend Analysis Chart	TypeName MUST be "TrendAnalysisChart".
Analytic Grid	TypeName MUST be "OLAPGrid".

Type	Content
Analytic Chart	TypeName MUST be "AnalyticChart".
Decomposition Tree Report	TypeName MUST be "DecompositionTree".
Analytic Drill Through report	TypeName MUST be "OLAPDrillThrough".
Excel Services Workbook	TypeName MUST be "ExcelServices".
PAS Page	TypeName MUST be "PasPage".
KPI Detail Page	TypeName MUST be "KpiDetails".

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

**ConfiguredViewId:** Specifies the identity of the **ConfiguredView** (section [2.2.4.77](#)) for this ReportView. This element MUST be present.

**SubTypeId:** Specifies the identifier for the type of the report view. This attribute MUST be present. The content of SubTypeId is determined by the type of the report view as described in the following table. If the report view is a custom report view, SubTypeId MUST NOT be empty. It MUST NOT be longer than 60 characters. It MUST NOT contain the characters ', ', or \. It MUST NOT be the same as one of the predefined report view type's **SubTypeId** already listed in the following table.

Type	Content
URL	SubTypeId MUST be "Url".
SQL Report	SubTypeId MUST be "SqlReport".
Spreadsheet	SubTypeId MUST be "Spreadsheet".
PivotTable	SubTypeId MUST be "PivotTable".
PivotChart	SubTypeId MUST be "PivotChart".
Strategy Map	SubTypeId MUST be "StrategyMap".
Trend Analysis Chart	SubTypeId MUST be "TrendAnalysisChart".
Analytic Grid	SubTypeId MUST be "OLAPGrid".
Analytic Chart	SubTypeId MUST be "AnalyticChart".
Decomposition Tree Report	SubTypeId MUST be "DecompositionTree".
Analytic Drill Through report	SubTypeId MUST be "OLAPDrillThrough".
Excel Services Workbook	SubTypeId MUST be "ExcelServices".
PAS Page	SubTypeId MUST be "PasPage".
KPI Detail Page	SubTypeId MUST be "KpiDetails".

**RendererClassName:** Specifies the fully qualified name for the assembly class that provides the rendering for the report view. This attribute MUST be present. If **SubTypeId** is not one of the

predefined report view types listed in the table for **SubTypeId**, **RendererClassName** MUST be the assembly-qualified name of the custom type; otherwise, the value MUST be empty.

#### 2.2.4.162 RepositoryLocation

Specifies the location of a FirstClassElement stored on the server (2).

```
<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>
```

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

- If the **FirstClassElement** was created by **SaveTemporaryAnalyticReport** (see section [3.1.4.63](#)), this value MUST be empty.
- When creating a new **FirstClassElement**, this value MUST be empty.
- In all other cases, this value MUST contain a valid URL.

**ItemType:** The type of **FirstClassElement** as specified by **FirstClassObjectType** (see section [2.2.5.20](#)).

**ItemGuid:** The GUID assigned to the **FirstClassElement** by the server (2).

**SpSiteCollectionGuid:** The GUID of the **site collection** to which the **FirstClassElement** belongs. This value is assigned by the server (2).

**SpSiteGuid:** The GUID of the site(2) to which the **FirstClassElement** belongs. This value is assigned by the server (2).

**SpListGuid:** The GUID of the **list (2)** to which the **FirstClassElement** belongs. This value is assigned by the server (2).

### 2.2.4.163 Scorecard

This complex type represents a scorecard.

```
<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>
```

**ConfiguredViews:** Settings for display, behavior, and other purposes, as specified by **ArrayOfConfiguredView** (section [2.2.4.27](#)). MUST be present and MUST contain at least one **ConfiguredView** (section [2.2.4.77](#)).

**EndPoints:** Specifies the available connection destinations to filter and control the display of this scorecard. This element MUST be present. This element MUST conform to the schema of the **ArrayOfEndPoint** (section [2.2.4.34](#)) complex type.

**BeginPoints:** Specifies the available connection sources to filter and set conditions for the display of other reports and scorecards. This element MUST be present and MUST conform to the schema of the **ArrayOfParameterDefinition** (section [2.2.4.51](#)) complex type.

**RendererClassName:** Specifies the fully qualified name for the assembly class that provides the rendering for the scorecard. This attribute MUST be present. If the scorecard is a custom type, **RendererClassName** MUST be the assembly-qualified name of the custom type; otherwise, the value MUST be empty.

### 2.2.4.164 SecondClassElement

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">
```



```

<xs:complexContent mixed="false">
  <xs:extension base="tns:Element">
    <xs:attribute name="Guid" xmlns:q2="http://microsoft.com/wsdl/types/" type="q2:guid"
use="required"/>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

**Guid:** The element's unique identifier.

#### 2.2.4.165 SerializableDictionary

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

```

<xs:complexType name="SerializableDictionary">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Item" type="tns:Item"/>
  </xs:sequence>
</xs:complexType>

```

**Item:** Represents a key-value pair (section [2.2.4.127](#)).

#### 2.2.4.166 SetOperation

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">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue1" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue2" type="xs:double"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TupleSet" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TupleCaption" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterHierarchy" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterMeasure" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultMeasure" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Level" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelDepth" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberDefinition" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

**Name:** Specifies the name of a set operation.

**FilterValue1:** This contains the first filter value for those filter operations that need two filter values (for example, filtering a set such that the result is between a given minimum and maximum values). This is also used for filter operations that only require one filter value.

**FilterValue2:** For filter operations that need two filter values, this contains the second filter value. This is ignored for filter operations that only need one filter value.

**TupleSet:** This is the string representation of the tuple set used in filter operation to specify what to filter. The tuple set definition MUST be a valid Multidimensional Expressions (MDX) expression.

**TupleCaption:** This contains the tuple caption that will be displayed on the information bar.

**FilterHierarchy:** This contains the hierarchy unique name in a valid Multidimensional Expressions (MDX) that is used on the filter operation.

**FilterMeasure:** This contains the measure display name in that is used on the filter operation.

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

**Level:** This is used in filter set operation. This contains the level display name where the filter is being applied.

**LevelDepth:** This is used in filter set operation. This contains the level number where the filter is being applied.

**FilterType:** Specifies the type of filter. This MUST be one of the following values

Value	Meaning
0	No filter specified
1	Specifies top count.
2	Specifies top percent.
3	Specifies top sum.
4	Specifies bottom count.
5	Specifies bottom percent.
6	Specifies bottom sum.
7	Specifies equal.
8	Specifies not equals.
9	Specifies greater than.
10	Specifies greater than or equals.
11	Specifies less than.
12	Specifies less than or equals.
13	Specifies between.
14	Specifies not between.

**MemberDefinition:** This defines a calculated member in a valid Multidimensional Expressions (MDX) being added to a **MemberSet** (see section [2.2.4.145](#)).

## 2.2.4.167 SqlReportViewData

Contains all the state information for a SQL Reporting Services report.

```
<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>
```

**ReportName:** The SQL Reporting Services report name.

**ServerAddress:** The SQL Reporting Services URL.

**ServerUrl:** The SQL Report URL, when in "SharePoint Integrated" mode.

**ReportPath:** The server-relative SQL Report URL, when in "Report Center" mode.

**ReportUrl:** In "SharePoint Integrated" mode, it defines the path of the SQL Report RDL.

**ReportMode:** Indicates whether the report is in "SharePoint Integrated" or "Report Center" mode.

**ShowToolbar:** When true, the SQL Report toolbar is shown.

**ShowParameters:** When true, the SQL Report parameter toolbar is shown.

**ShowDocMap:** When true, the SQL Report document map toolbar is shown.

**DocMapId:** The SQL Report document map identifier.

**Zoom:** The SQL Report zoom property.

**Section:** The SQL Report section property.

**Format:** The SQL Report format property.

## 2.2.4.168 StatusFilter

This complex type specifies an indicator to be filtered.

```
<xs:complexType name="StatusFilter">
  <xs:attribute name="IndicatorLocationGuid" xmlns:q4="http://microsoft.com/wsdl/types/"
    type="q4:guid" use="required"/>
  <xs:attribute name="BandIndex" type="xs:int" use="required"/>
</xs:complexType>
```

**IndicatorLocationGuid:** The unique identifier for the filtered indicator. [<2>](#)

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

#### 2.2.4.169 StrategyMapViewData

This class specifies metadata information about a strategy map.

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

**ToolbarOptions:** Specifies the toolbar configuration as defined in **StrategyMapToolbarOptions** (see section [2.2.5.49](#)).

**VDX:** Specifies a base 64-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.

#### 2.2.4.170 StringCollection

The StringCollection complex type specifies a collection of dimension properties.

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

**string:** Specifies the name of the dimension property.

#### 2.2.4.171 Target

The target of a [KPI](#) used to measure against actual data.

```
<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"
xmlns:q3="http://microsoft.com/wsdl/types/" type="q3:guid"/>
    </xs:sequence>
    <xs:attribute name="IsRollupScore" type="xs:boolean" use="required"/>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

**IndicatorLocation:** The [RepositoryLocation](#) of the [Indicator](#).

**StatedScore:** The [KpiMeasure](#) that the Target uses when the type of [Banding](#) is StatedScore. This value MUST NOT be NULL if the type of **Banding** is "StatedScore".

**Banding:** The Banding data that correspond to the target.

**RelatedActualId:** The GUID of the corresponding **Actuals** of the KPI. This element MUST be present.

**IsRollupScore:** This attribute MUST be **true** if the score of this target is computed by rolling up the child scores, or MUST be **false** if the score is computed from the source data.

#### 2.2.4.172 TimeIntelligenceDataSource

A Time Intelligence data source reference used in Time Intelligence parameter definitions.

```

<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>

```

**DataSourceLocation:** The [RepositoryLocation](#) of the data source.

**DisplayName:** The display name of the data source.

#### 2.2.4.173 TimeIntelligenceDefinition

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

```

<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>
```

**Formulas:** See **ArrayOfTimeIntelligenceFormula** (section [2.2.4.58](#)).

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

**DataSources:** The **ArrayOfTimeIntelligenceDataSource** (section [2.2.4.57](#)) that are queried to populate the parameter message values (section [2.2.4.156](#)).

#### 2.2.4.174 TimeIntelligenceFormula

This complex type specifies a Time Intelligence parameter formula.

```
<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>
```

**DisplayName:** The display name of the formula.

**Formula:** The Time Intelligence **formula**. MUST NOT be NULL.

#### 2.2.4.175 TimeIntelligenceLevelBinding

Specifies the mapping of internal cube dimensions to their time aggregation level.

```
<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>
```

**Level:** The [DateAggregationType](#) that indicates the level of the binding.

**UniqueName:** The unique name of the dimension in the cube that is mapped to the DateAggregationType indicated in Level. This element MUST be present.

#### 2.2.4.176 TimeIntelligenceMdxSettings

Specifies how a dimension (1) in an Analysis Services data source maps to a time intelligence filter when running Simple Time Period Specification formulas against the data source.

```
<xs:complexType name="TimeIntelligenceMdxSettings">
  <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:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="ReferenceMember" type="tns:Member"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ReferenceDateTime" type="xs:dateTime"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelBindings"
type="tns:ArrayOfTimeIntelligenceLevelBinding"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

**ReferenceDimension:** Specifies the time dimension in the cube that is used when the Simple Time Period Specification formula is run. See **Dimension** (section [2.2.4.90](#)). This element MUST be present.

**ReferenceLevel:** Specifies the lowest hierarchy level in the **ReferenceDimension** that will be available for Simple Time Period Specification formulas run against the data source. See **DataAggregationTypes** (section [2.2.5.12](#)).

**ReferenceMember:** Specifies the date **Member** (see section [2.2.4.135](#)) in the dimension (1) specified in the **ReferenceDimension** element that corresponds to the date provided in the **ReferenceDateTime** element. This element MUST be present.

**ReferenceDateTime:** Specifies the actual date to which the value in the **ReferenceMember** element maps.

**LevelBindings:** Specifies the **ArrayOfTimeIntelligenceLevelBinding** (see section [2.2.4.59](#)) that maps the internal cube member levels to their corresponding Simple Time Period Specification formula. If there is no mapping for one or more of the member levels, the member (3) level MUST NOT have a binding present in this array. This element MUST be present.

## 2.2.4.177 TimeIntelligencePostFormulaDefinition

This complex type specifies a Time Intelligence Post Formula filter definition.

```

<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>

```

**MasterDataSource:** The DataSource (see section [2.2.4.85](#)) that is queried to populate the parameter display values (see section [2.2.4.156](#)).

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

## 2.2.4.178 TimeIntelligenceSettings

Specifies additional time intelligence settings for a data source.

```

<xs:complexType name="TimeIntelligenceSettings" abstract="true">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Enabled" type="xs:boolean"/>
  </xs:sequence>

```

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

**Enabled:** This value MUST be **true** if the time intelligence setting is enabled; otherwise, **false**.

### 2.2.4.179 Title

This complex type represents a title for an analytic chart.

```
<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>
```

**Font:** The font, specified by **XmlFont** (see section [2.2.4.182](#)). 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](#)).

### 2.2.4.180 ToolbarOptions

Contains the configuration settings of the toolbar of a **ConfiguredView** (section [2.2.4.77](#)).

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



```

<xs:attribute name="ShowToolbar" type="xs:boolean" use="required"/>
<xs:attribute name="ShowStatusFilter" type="xs:boolean" use="required"/>
<xs:attribute name="ShowToolTips" type="xs:boolean" use="required"/>
<xs:attribute name="ShowCollapse" type="xs:boolean" use="required"/>
<xs:attribute name="ShowMode" type="xs:boolean" use="required"/>
<xs:attribute name="ShowExpand" type="xs:boolean" use="required"/>
<xs:attribute name="ShowToolbarItemsLabel" type="xs:boolean" use="required"/>
<xs:attribute name="ShowDefaultRollup" type="xs:boolean" use="required"/>
<xs:attribute name="ShowWorstChildRollup" type="xs:boolean" use="required"/>
<xs:attribute name="ShowIndicatorCount" type="xs:boolean" use="required"/>
</xs:complexType>

```

**ShowInlineText:** This attribute MUST be **true** if the inline text button MUST be shown; **false** if not.

**ShowToolbar:** Specifies whether the toolbar is shown or not.

- If set to **true**, toolbar MUST be shown following the toolbar configuration settings.
- If set to **false**, toolbar MUST NOT be shown, and toolbar configuration settings MUST be ignored.

**ShowStatusFilter:** This attribute MUST be **true** if the status filtering options (see [StatusFilter](#), section [2.2.4.168](#)) MUST be shown; **false** if not. MUST be ignored if the **AllowStatusFilter** of the related **ConfiguredView** (section [2.2.4.77](#)) is set to **false**, in which case the filtering options MUST NOT be shown.

**ShowToolTips:** This attribute MUST be **true** if **ToolTips** MUST display in the toolbar buttons and options; **false** if not.

**ShowCollapse:** This attribute MUST be **true** if the collapse all button MUST be shown; **false** if not.

**ShowMode:** This attribute MUST be **true** if the button to switch between tree and flat mode MUST be shown; **false** if not.

**ShowExpand:** This attribute MUST be **true** if the expand all button MUST be shown; **false** if not.

**ShowToolbarItemsLabel:** Specifies whether the toolbar buttons are rendered with text label or not

- If set to **true**, toolbar options and buttons MUST include both icon and text label.
- If set to **false**, toolbar options and buttons MUST NOT include the text labels and MUST only include icon.

**ShowDefaultRollup:** This attribute MUST be **true** if the default rollup button MUST be shown; **false** if not.

**ShowWorstChildRollup:** This attribute MUST be **true** if the worst child rollup button MUST be shown; **false** if not.

**ShowIndicatorCount:** This attribute MUST be **true** if the indicator count rollup button MUST be shown; **false** if not.

## 2.2.4.181 Tuple

The **Tuple** complex type represents an ordered collection of one or more [members](#) from different dimensions and it contains an instance of **ArrayOfMember** (see section [2.2.4.46](#)).

```

<xs:complexType name="Tuple">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DimensionMembers"
      type="tns:ArrayOfMember"/>
  </xs:sequence>
</xs:complexType>

```

**DimensionMembers:** This element MUST NOT be **null**.

## 2.2.4.182 XmlFont

Specifies a set of attributes that define a font.

```

<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>

```

**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 <b>KpiMeasure</b> 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>	Data Point marker shape for a line-type series of the report view
<b>AnnotationVersions</b>	Specifies the product version that was used to create the

Simple type	Description
	annotation.
<b>AxisType</b>	This simple type specifies the type of an axis in a query result.
<b>BandType</b>	Specifies the type of the banding for the <b>Target</b> (see section <a href="#">2.2.4.171</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 (1) 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>	Specifies how a user is allowed to interact with an Excel Services ([MS-ESP]) report.
<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 the object.
<b>FontStyle</b>	Specifies style information applied to the font.
<b>FormatNegativeSymbol</b>	This simple type specifies the formatting pattern for negative numbers when custom formatting is used. Positive values are not affected. See <b>KpiNumberFormatProperties</b> (section <a href="#">2.2.4.130</a> ).
<b>FormatType</b>	Defines formatting pattern for numeric values. See <b>KpiNumberFormatProperties</b> (section <a href="#">2.2.4.130</a> ).
<b>GraphicsUnit</b>	Specifies the unit of measure for the font.
<b>GridCellElementStatus</b>	This simple type specifies the status of a display element of a scorecard cell. It MUST be 0, 1, or 2.
<b>HeaderAggregationTypes</b>	This simple type specifies the type of aggregation used by the Scorecard.

Simple type	Description
<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>	This simple type specifies the position of the indicator within the target value cell.
<b>IndicatorType</b>	This simple type specifies whether the <a href="#">IndicatorBands</a> indicate better or worse, as values move lower or higher, or whether they become better or worse the closer they move to the center value.
<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 (1) 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 members (see section <a href="#">2.2.4.90</a> ). <b>Member</b> (see section <a href="#">2.2.4.135</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="#">2.2.4.147</a> ) will use
<b>MemberTransformType</b>	This simple type specifies the classification of the <b>MemberTransform</b> (section <a href="#">2.2.4.147</a> ).
<b>MemberType</b>	This simple type specifies the type represented by the member (section <a href="#">2.2.4.135</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 Status 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 <b>NamedSet</b> , as specified in <b>ScorecardNodeTypes</b> (section <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 <b>GridHeaderItem</b> (section <a href="#">2.2.4.116</a> )

Simple type	Description
<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>	This simple type specifies the manner in which the values in a query result are sorted.
<b>SqlReportViewDataServerMode</b>	Indicates whether SQL Server Reporting Services integrated into a SharePoint server.
<b>StrategyMapToolbarOptions</b>	This 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 roll-up values are computed. The enumeration determines how values for parent scorecard row items (1) will be computed from the values of child scorecard row items (1) within the same scorecard column.
<b>VarianceDisplayType</b>	This simple type enumeration specifies how a variance is presented.
<b>VarianceType</b>	This simple type enumeration specifies how a variance is calculated.
<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

The **AggregateTypeEnum** simple type specifies the method by which a KpiMeasure will be aggregated.

```
<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>
```

The following table specifies the allowable values for AggregateTypeEnum:

Value	Meaning
Default	Query using the default KpiMeasure aggregation.
Sum	Query the total value of the KpiMeasure.
Minimum	Query the minimum value of the KpiMeasure.

Value	Meaning
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

Specifies the alignment of a text string relative to its layout rectangle.

```
<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>
```

The following table specifies the allowable values for AlignmentType:

Value	Meaning
Left	Specifies that the text be aligned left of the layout rectangle.
Right	Specifies that the text be aligned right of the layout rectangle.
Center	Specifies that the text be aligned center of the layout rectangle.

### 2.2.5.3 AnalyticChartType

Type of chart to display.

```
<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>
```

The following table specifies the allowable values for AnalyticChartType:

Value	Meaning
None	The type of chart has not been set.

Value	Meaning
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

The location of the analytic chart legend.

```
<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>
```

The following table specifies the allowable values for AnalyticLegendLocation:

Value	Meaning
None	The legend is not displayed.
Right	The legend is displayed to the right of the analytic chart.
Top	The legend is displayed on top of the analytic chart.
Bottom	The legend is displayed on the bottom of the analytic chart.
Left	The legend is displayed to the left of the analytic chart.

#### 2.2.5.5 AnalyticMarkerStyle

Data Point marker shape for a line-type series of the report view.

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

```

<xs:enumeration value="Triangle"/>
<xs:enumeration value="Cross"/>
<xs:enumeration value="Star4"/>
<xs:enumeration value="Star5"/>
<xs:enumeration value="Star6"/>
<xs:enumeration value="Star10"/>
</xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for AnalyticMarkerStyle:

Value	Meaning
None	No marker is displayed for the series/ <b>data point</b> .
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

Specifies the product version that was used to create the annotation.

```

<xs:simpleType name="AnnotationVersions">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Office14Beta2"/>
    <xs:enumeration value="Office14Beta1"/>
    <xs:enumeration value="Pps2007"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for AnnotationVersions:

Value	Meaning
Office14Beta2	Annotation was created with a Beta2 or RTM version <a href="#">&lt;3&gt;</a> .
Office14Beta1	Annotation was created with a Beta1 version <a href="#">&lt;4&gt;</a> .
Pps2007	Annotation was created with a prior production version. <a href="#">&lt;5&gt;</a>



### 2.2.5.7 AxisType

The **AxisType** simple type specifies the type of an axis in a query result.

```
<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>
```

The following table specifies the allowable values for AxisType:

Value	Meaning
Filter	Specifies a filter axis type or the slicer axis of the query.
Columns	Specifies a column axis type that contains the column definition of the query.
Rows	Specifies a row axis type that contains the row definition of the query.
Pages	This axis type is unused.
Sections	This axis type is unused.
Chapters	This axis type is unused.

### 2.2.5.8 BandType

Specifies the type of the banding for the **Target** (see section [2.2.4.171](#)).

```
<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>
```

The following table specifies the allowable values for BandType:

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="#">2.2.4.171</a> ).

### 2.2.5.9 BeginPointEmitterType

The **BeginPointEmitterType** simple type specifies the type of information the parameter emits.

```
<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>
```

The following table specifies the allowable values for BeginPointEmitterType:

Value	Meaning
BothAConditionalVisibilityAndParameterEmitter	Emits information that is used for setting conditional visibility values that indicate a connected Web Part is visible and parameter values.
ConditionalVisibilityEmitter	Emits information that is used for setting conditional visibility values that indicate a connected Web Part is visible.
ParameterEmitter	Emits information that is used for setting parameter values.

### 2.2.5.10 ConnectionContext

The **ConnectionContext** simple type specifies what identity is used to connect to the data source.

```
<xs:simpleType name="ConnectionContext">
  <xs:restriction base="xs:string">
    <xs:enumeration value="ConnectAsUser"/>
    <xs:enumeration value="ConnectAsSharedUser"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for ConnectionContext:

Value	Meaning
ConnectAsUser	Connects to the data source using the user credentials.
ConnectAsSharedUser	Connects to the data source using the shared account credentials.

### 2.2.5.11 DataValuePosition

Specifies the display positioning for a data value.

```
<xs:simpleType name="DataValuePosition">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Left"/>
    <xs:enumeration value="Right"/>
  </xs:restriction>
</xs:simpleType>
```

```

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

```

The following table specifies the allowable values for DataValuePosition:

Value	Meaning
Left	Specifies that the data value will be displayed on the left.
Right	Specifies that the data value will be displayed on the right.
NotDisplayed	Specifies that the data value will not be displayed.

### 2.2.5.12 DateAggregationTypes

This simple type represents a category of time intervals and MUST contain an item (1) from the enumerated list.

```

<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>

```

The following table specifies the allowable values for DateAggregationTypes:

Value	Meaning
None	No time interval is defined.
Second	Intervals are seconds.
Minute	Intervals are minutes.
Hour	Intervals are hours.
Day	Intervals are days.
Week	Intervals are weeks.
Month	Intervals are months.

Value	Meaning
Quarter	Intervals are quarters.
Year	Intervals are years.
Semester	Intervals are half years or semesters.

### 2.2.5.13 DimensionTypeEnum

Specifies the type of information in a dimension (1).

```
<xs:simpleType name="DimensionTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Accounts"/>
    <xs:enumeration value="BillOfMaterials"/>
    <xs:enumeration value="Channel"/>
    <xs:enumeration value="Currency"/>
    <xs:enumeration value="Customers"/>
    <xs:enumeration value="Geography"/>
    <xs:enumeration value="Measure"/>
    <xs:enumeration value="Organization"/>
    <xs:enumeration value="Other"/>
    <xs:enumeration value="Products"/>
    <xs:enumeration value="Promotion"/>
    <xs:enumeration value="Quantitative"/>
    <xs:enumeration value="Rates"/>
    <xs:enumeration value="Scenario"/>
    <xs:enumeration value="Time"/>
    <xs:enumeration value="Unknown"/>
    <xs:enumeration value="Utility"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for DimensionTypeEnum:

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

Value	Meaning
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

The category specifying sort and filter **EndPoints** when connecting provider Web Parts to consumer Web Parts on the Dashboard.

```
<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>
```

The following table specifies the allowable values for EndPointCategory:

Value	Meaning
None	EndPoint has no category
Axis	EndPoint is a Scorecard Axis
ColumnHierarchy	EndPoint is a Scorecard Column Hierarchy
RowHierarchy	EndPoint is a Scorecard Row Hierarchy

#### 2.2.5.15 ExcelServicesToolbarOptions

Specifies the toolbar options for an Excel Services ([\[MS-ESP\]](#)) report.

```
<xs:simpleType name="ExcelServicesToolbarOptions">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="AllowInExcelOperations"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

        <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 ExcelServicesToolbarOptions:

Value	Meaning
AllowInExcelOperations	Allows operations that open the Excel workbook ( <a href="#">[MS-XLS]</a> ).
AllowRefreshConnections	Allows data connections in the Excel workbook to refresh.
AllowRecalculation	Allows users to recalculate the Excel workbook.
ShowVisibleItemButton	Shows the view menu to enable users to change the currently displayed published item.

### 2.2.5.16 ExcelServicesToolbarType

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

```

<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>

```

The following table specifies the allowable values for ExcelServicesToolbarType:

Value	Meaning
None	No toolbar is displayed.
FullToolbar	The full toolbar is displayed.
SummaryToolbar	The summary toolbar is displayed.

### 2.2.5.17 ExcelServicesViewOptions

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

```

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

```

```

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

```

The following table specifies the allowable values for ExcelServicesViewOptions:

Value	Meaning
AllowInteractivity	Allows users to interact with the workbook.
AllowParameterModification	Allows users to change workbook parameters.
ShowWorkbookParameters	Allows users to view and edit workbook parameters.
AllowSorting	Allows users to sort when using <b>AutoFilter</b> , lists (1), and Pivot Tables.
AllowFiltering	Allows users to filter when using AutoFilter, lists (1), and Pivot Tables.
AllowHyperlinks	Allows users to use hyperlinks in the workbook.
AllowPivotSpecificOperations	Allows users to drill down, find members (3), and take actions in Pivot Tables 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.

### 2.2.5.18 FactAggregations

This simple type specifies the type of aggregation to be performed on a numeric fact column in a tabular data set. The values are exclusive; that is, exactly one MUST be present in any field that uses this type.

```

<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>

```

The following table specifies the allowable values for FactAggregations:

Value	Meaning
Average	Calculate the average of numeric fact values.
Count	Calculate the total number of fact values.
Max	Determine the largest numeric fact value.
Min	Determine the smallest numeric fact value.
None	Perform no aggregation.
StDev	Calculate the variance of the numeric fact values.
Sum	Calculate the sum of the numeric fact values.
Variance	Calculate the statistical variance of the numeric fact values.
FirstOccurance	Determine the first fact value that occurs for each unique column member.

### 2.2.5.19 FilterSelectionMode

Specifies the manner in which the items (1) in a Filter (see section [2.2.4.98](#)) can be selected.

```
<xs:simpleType name="FilterSelectionMode">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SingleSelect"/>
    <xs:enumeration value="MultiSelect"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for FilterSelectionMode:

Value	Meaning
SingleSelect	Single select parameter selection. Only one item (1) can be selected for the filter at one time.
MultiSelect	Multi select parameter selection. Multiple items (1) can be selected for the filter at one time.

### 2.2.5.20 FirstClassObjectType

Specifies the type of a first-class object.

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

```

The following table specifies the allowable values for FirstClassObjectType:

Value	Meaning
None	Indicates the object type is undefined
Kpi	Indicates the object is a Kpi (see section <a href="#">2.2.4.128</a> ).
Scorecard	Indicates the object is a Scorecard (see section <a href="#">2.2.4.163</a> )
ReportView	Indicates the object is a ReportView (see section <a href="#">2.2.4.161</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="#">2.2.4.161</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

Specifies style information applied to the font. It MUST equal **Regular** or any combination of the other values.

```

<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>

```

The following table specifies the allowable values for FontStyle:

Value	Meaning
Regular	Normal text.
Bold	Bold text.
Italic	Italic text.
Underline	Underlined text.

Value	Meaning
Strikeout	Text with a line through the middle.

### 2.2.5.22 FormatNegativeSymbol

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">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NegativeSign"/>
    <xs:enumeration value="Parenthesis"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for FormatNegativeSymbol:

Value	Meaning
NegativeSign	Show minus sign preceding to the number. Example: -42.15
Parenthesis	Enclose the number in parenthesis. Example: (42.15)

### 2.2.5.23 FormatType

Defines the formatting pattern for numeric values. See KpiNumberFormatProperties (section [2.2.4.130](#)).

```
<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>
```

The following table specifies the allowable values for FormatType:

Value	Meaning
Default	No formatting. Formatting of the data source is used.
Number	General numeric formatting—for example, 12,222.003
Currency	Currency formatting—for example, \$25.00
Percentage	Percentage formatting—for example, 25%

Value	Meaning
Unknown	

#### 2.2.5.24 GraphicsUnit

Specifies the unit of measure for the font.

```
<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>
```

The following table specifies the allowable values for GraphicsUnit:

Value	Meaning
World	Specifies the world coordinate system unit as the unit of measure.
Display	Specifies the unit of measure of the display device. Typically pixels for video displays, and 1/100 inch for printers.
Pixel	Specifies a device pixel as the unit of measure.
Point	Specifies a printer's point (1/72 inch) as the unit of measure.
Inch	Specifies the inch as the unit of measure.
Document	Specifies the document unit (1/300 inch) as the unit of measure.
Millimeter	Specifies the millimeter as the unit of measure.

#### 2.2.5.25 GridCellElmentStatus

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

```
<xs:simpleType name="GridCellElmentStatus">
  <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 GridCellElmentStatus:

Value	Meaning
0	OK: Specifies that element is displayed correctly
1	Error: Specifies that element is in error: error state is displayed. See InvalidCell property of the <a href="#">GridViewDefinition</a>
2	Null: Specifies that element is empty: empty state is displayed. See EmptyCell property of the GridViewDefinition

### 2.2.5.26 HeaderAggregationTypes

This simple type specifies the type of aggregation used by the Scorecard.

```
<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>
```

The following table specifies the allowable values for HeaderAggregationTypes:

Value	Meaning
None	No aggregation
Sum	Aggregate the sum value
Average	Aggregate the average value
Min	Aggregate the minimum value
Max	Aggregate the maximum value
Trend	Aggregate the trend of the last two sibling values

### 2.2.5.27 HierarchyOrigin

This simple type specifies the overall structure of a hierarchy.

```
<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>
```

The following table specifies the allowable values for HierarchyOrigin:

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

This simple type specifies the type of an OLAP hierarchy.

```
<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>
```

The following table specifies the allowable values for HierarchyType:

Value	Meaning
Standard	Indicates a Standard OLAP hierarchy.
Measure	Indicates a Measured OLAP hierarchy.
Time	Indicates a Time OLAP hierarchy.

### 2.2.5.29 HorizontalAlignments

This simple type specifies how an object or text in a control is horizontally aligned relative to the control element.

```
<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>
```

The following table specifies the allowable values for HorizontalAlignments:

Value	Meaning
Undefined	No horizontal alignment is applied to the object or text.
Left	The object or text is aligned on the left of the control element.

Value	Meaning
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

This simple type specifies the position of the indicator within the target value cell.

```
<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>
```

The following table specifies the allowable values for IndicatorPosition:

Value	Meaning
Left	Display the indicator against the left edge of the cell.
Right	Display the indicator against the right edge of the cell.
Center	Display the indicator in the center of the cell between the two numeric values.
NotDisplayed	Do not display the indicator.

### 2.2.5.31 IndicatorType

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">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Standard"/>
    <xs:enumeration value="Centered"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for IndicatorType:

Value	Meaning
Standard	Indicator bands go from best to worst as values increase (or decrease).
Centered	Indicator bands go from best to worst as values get further away from the center.

### 2.2.5.32 KpiPattern

This simple type specifies how Banding and scoring change in appearance according to the setting of the KPI pattern.

```
<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>
```

The following table specifies the allowable values for KpiPattern:

Value	Meaning
IncreasingIsBetter	For banding and scoring, data that increases is better.
DecreasingIsBetter	For banding and scoring, data that decreases is better.
CloserToTargetIsBetter	For banding and scoring, data that is closer to the target is better.

### 2.2.5.33 LayoutOrientation

This simple type defines the layout of items (1) within a DashboardElementContainer (see section [2.2.4.81](#)).

```
<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>
```

The following table specifies the allowable values for LayoutOrientation:

Value	Meaning
HorizontalLeftJustified	Horizontal layout where adjacent items (1) are left-justified.
HorizontalRightJustified	Horizontal layout where adjacent items (1) are right-justified.
VerticalBottomJustified	Vertical layout where adjacent items (1) are bottom-justified.
VerticalTopJustified	Vertical layout where adjacent items (1) are top-justified.
Stacked	Items (1) are stacked so that only one item (1) is visible at a time.
Hidden	Items (1) are not displayed.

### 2.2.5.34 MappedColumnDataTypes

This simple type specifies the data type of the mapped columns in DataColumnMapping (see section [2.2.4.84](#)).

```
<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>
```

The following table specifies the allowable values for MappedColumnDataTypes:

Value	Meaning
NotSupported	Used when <a href="#">MappedColumnTypes</a> is set to Ignore in DataColumnMapping.
Number	The mapped column values are numeric. Valid numeric values are short, integer, long, decimal and float.
String	The mapped column values are <a href="#">UNICODE</a> characters.
DateTime	The mapped column values are date-time values.

### 2.2.5.35 MappedColumnTypes

This simple type specifies the classification of a mapped column in **DataColumnMapping** (see section [2.2.4.84](#)).

```
<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>
```

The following table specifies the allowable values for MappedColumnTypes:

Value	Meaning
Ignore	The ignore type indicates that the mapped column in DataColumnMapping MUST be ignored.
Fact	The mapped column contains <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 (see section <a href="#">2.2.4.90</a> ) members.
TimeDimension	The mapped column contains time-based dimension members.



Value	Meaning
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

This simple type specifies the relationship among dimension members (see section [2.2.4.90](#)). Member (see section [2.2.4.135](#)) relationships are used in the context of a referred member.

```
<xs:simpleType name="MemberRelationship">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Parent"/>
    <xs:enumeration value="FirstSibling"/>
    <xs:enumeration value="PrevMember"/>
    <xs:enumeration value="NextMember"/>
    <xs:enumeration value="LastSibling"/>
    <xs:enumeration value="FirstChild"/>
    <xs:enumeration value="LastChild"/>
    <xs:enumeration value="CurrentMember"/>
    <xs:enumeration value="Children"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for MemberRelationship:

Value	Meaning
Parent	Parent of the referred dimension (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.135</a> ).
FirstSibling	First <b>Child</b> of the parent of the referred (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.135</a> ).
PrevMember	Previous member (3) at the same level that contains the referred dimension (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.135</a> ).
NextMember	Next member (3) at the same level that contains the referred dimension (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.135</a> ).
LastSibling	Last Child of the parent of the referred dimension (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.135</a> ).
FirstChild	First Child of the parent of the referred dimension (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.135</a> ).
LastChild	Last Child of the referred dimension (section <a href="#">2.2.4.90</a> ) member (3) (section <a href="#">2.2.4.135</a> ).
CurrentMember	Current member (3) (section <a href="#">2.2.4.135</a> ) along a specified dimension (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 (section <a href="#">2.2.4.90</a> ) member (section <a href="#">2.2.4.135</a> ).

### 2.2.5.37 MemberTransformOperation

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

```
<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>
```

The following table specifies the allowable values for MemberTransformOperation:

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

### 2.2.5.38 MemberTransformType

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

```
<xs:simpleType name="MemberTransformType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Row"/>
    <xs:enumeration value="Column"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for MemberTransformType:

Value	Meaning
Row	The MemberTransform (section <a href="#">2.2.4.147</a> ) will be applied to rows.
Column	The MemberTransform (section <a href="#">2.2.4.147</a> ) will be applied to columns.

### 2.2.5.39 MemberType

This simple type specifies the type represented by the member (section [2.2.4.135](#)) object.

```
<xs:simpleType name="MemberType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Regular"/>
  </xs:restriction>
</xs:simpleType>
```

```

    <xs:enumeration value="Operation"/>
    <xs:enumeration value="Default"/>
    <xs:enumeration value="Formula"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for MemberType:

Value	Meaning
Regular	A regular member (3) (section <a href="#">2.2.4.135</a> ).
Operation	The member object represents a member operation (section <a href="#">2.2.4.137</a> ).
Default	The member object represents the default member (section <a href="#">2.2.4.135</a> ).
Formula	The member object represents a calculated member.

## 2.2.5.40 ReportLayout

Specifies the way that row and column headers are displayed in a grid report.

```

<xs:simpleType name="ReportLayout">
  <xs:restriction base="xs:string">
    <xs:enumeration value="TabularForm"/>
    <xs:enumeration value="CompactForm"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for ReportLayout:

Value	Meaning
TabularForm	Row and column headers are flattened so that data is displayed in a space-efficient manner.
CompactForm	Row and column headers are displayed in an indented manner that reflects their hierarchical relationship.

## 2.2.5.41 RollupTypes

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">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AverageWeighted"/>
    <xs:enumeration value="WorstChild"/>
    <xs:enumeration value="IndicatorCount"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for RollupTypes:

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

#### 2.2.5.42 ScorecardEmptyRowsFilterMode

This simple type enumeration specifies whether to display scorecard rows with empty cells. A scorecard **GridCell** (section [2.2.4.100](#)) is considered empty if **DisplayElements** does not contain any **GridDisplayElements** (section [2.2.4.103](#)) with a **Status** of 0, as specified in **GridCellElementStatus** (section [2.2.5.25](#)).

```
<xs:simpleType name="ScorecardEmptyRowsFilterMode">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="AllValuesAreEmpty"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for ScorecardEmptyRowsFilterMode:

Value	Meaning
None	Do not filter rows.
AllValuesAreEmpty	Filter out rows where all non-header cells are empty.

#### 2.2.5.43 ScorecardNamedSetType

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">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="NamedSet"/>
        <xs:enumeration value="CustomFormula"/>
        <xs:enumeration value="TimeFormula"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for ScorecardNamedSetType:

Value	Meaning
None	<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

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">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Member"/>
        <xs:enumeration value="Kpi"/>
        <xs:enumeration value="KpiActual"/>
        <xs:enumeration value="KpiTarget"/>
        <xs:enumeration value="ScorecardDetails"/>
        <xs:enumeration value="DocumentLinks"/>
        <xs:enumeration value="NamedSet"/>
        <xs:enumeration value="Aggregate"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for ScorecardNodeTypes:

Value	Meaning
None	An unknown node type. This value SHOULD NOT be used except for the row and column root nodes. The behavior for this node type is unspecified.
Member	A dimension member node.
Kpi	A KPI node.
KpiActual	A KPI actual value node.
KpiTarget	A KPI target value node.
ScorecardDetails	Additional properties of scorecard elements node.
DocumentLinks	Document links of scorecard elements node.
NamedSet	A named set node.

Value	Meaning
Aggregate	An aggregation node.

#### 2.2.5.45 ScoreTypes

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">
  <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 ScoreTypes:

Value	Meaning
Normalized	Rollup scores are determined using child scores normalized to a common scale.
Raw	Rollup scores are determined using the child scores without any conversion or normalization.

#### 2.2.5.46 SizeType

This simple type enumeration specifies the size unit in **DashboardElementSize** (section [2.2.4.82](#)).

```
<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>
```

The following table specifies the allowable values for SizeType:

Value	Meaning
AutoSize	Auto sized based on internal content. Any related measurement value MUST be ignored if specified.
Absolute	Absolute value in <b>pixels</b> .
Percent	Percentage value relative to the container size. This value MUST NOT be less than 0 and MUST NOT be greater than 100.

#### 2.2.5.47 SortType

The **SortType** simple type specifies the manner in which the values in a query result are sorted.

```
<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>

```

The following table specifies the allowable values for SortType:

Value	Meaning
Off	No sort is applied.
ByIndex	Sort by column index.
ByTuple	Sort by value, which is specified by the measure in the tuple.

#### 2.2.5.48 SqlReportViewDataServerMode

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

```

<xs:simpleType name="SqlReportViewDataServerMode">
  <xs:restriction base="xs:string">
    <xs:enumeration value="SharepointIntegrated"/>
    <xs:enumeration value="ReportCenter"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for SqlReportViewDataServerMode:

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

#### 2.2.5.49 StrategyMapToolBarOptions

This simple type Specifies the view options for a strategy map report.

```

<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:simpleType>
```

The following table specifies the allowable values for StrategyMapToolBarOptions:

Value	Meaning
None	No options are specified.
ShowToolBar	The toolbar is displayed.
ShowPage	The drawing page is displayed.
ShowScrollbars	The scrollbars are displayed.
ShowPageTabs	The page tabs are displayed.

### 2.2.5.50 Trinary

This simple type specifies an enumeration type that has three possible values.

```
<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>
```

The following table specifies the allowable values for Trinary:

Value	Meaning
Undefined	Not Defined.
False	Specified as False.
True	Specified as True.

### 2.2.5.51 ValueSources

This simple type enumeration specifies how roll-up values are computed. The enumeration determines how values for parent scorecard row items (1) will be computed from the values of child scorecard row items (1) within the same scorecard column.

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

```

The following table specifies the allowable values for ValueSources:

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

This simple type enumeration specifies how a variance value is calculated and presented.

```

<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>

```

The following table specifies the allowable values for VarianceDisplayType:

Value	Meaning
ShowPercent	Show variance value as the percentage variance between a target (section <a href="#">2.2.4.171</a> ) value and its associated actual value.
ShowValue	Show the variance value as the difference between a target (section <a href="#">2.2.4.171</a> ) value and its associated actual value.
ShowInvertedPercent	Show the variance value as the inverted percentage variance between a target (section <a href="#">2.2.4.171</a> ) value and its associated actual value.

### 2.2.5.53 VarianceType

This simple type enumeration specifies how a variance calculation uses indicator status band and target values.

```

<xs:simpleType name="VarianceType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="VarianceToTarget"/>
    <xs:enumeration value="VarianceToBestTarget"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for VarianceType:

Value	Meaning
VarianceToTarget	Show the variance value as the inverted percentage variance between a target (section <a href="#">2.2.4.171</a> ) value and its associated actual value.
VarianceToBestTarget	Calculate value as the variance between the actual value and a computed target (section <a href="#">2.2.4.171</a> ) value. The computed target (section <a href="#">2.2.4.171</a> ) value takes into account the nearest threshold of the best indicator status band. See <a href="#">Banding</a> for more information about bands.

## 2.2.5.54 VerticalAlignments

This simply type enumeration specifies a vertical alignment of content within a grid cell or display element.

```

<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>

```

The following table specifies the allowable values for VerticalAlignments:

Value	Meaning
Undefined	Vertical alignment is undefined.
Top	Align at the top.
Middle	Align at the middle.
Bottom	Align at the bottom.

## 2.2.6 Attributes

This specification does not define any common XML Schema attribute definitions.

## 2.2.7 Groups

This specification does not define any common XML Schema group definitions.

## 2.2.8 Attribute Groups

This specification does not define any common XML Schema attribute group definitions.

## 2.2.9 Faults

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

### 2.2.9.1 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** ([2.2.4.62](#)).

### 2.2.9.2 Full List of Possible Error Codes

In the event of an application error, the server MUST return one of these values in the **ErrorCode** element of the **BpmException** ([2.2.4.62](#)) as specified in section [2.2.9.1](#).

The protocol client MUST NOT perform any logical operation on the value of the **ErrorCode**, unless it appears in section [2.2.9.3](#) 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 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 is not configured properly or is not functioning correctly.
<b>CannotGetWindowsIdentity</b>	The server is not configured properly or is not functioning correctly.
<b>CannotGetWindowsIdentityForNonWindowsClaim</b>	The server cannot locate credentials for the user.
<b>CannotPublishReadOnlyElement</b>	The publish event of a read only element was aborted.
<b>CreateReturnedNull</b>	The server is not configured properly or is not functioning correctly.
<b>DatabaseConnectionFailed</b>	The server is not configured properly or is not functioning correctly.
<b>DataSourceConnectionFailed</b>	See section <a href="#">2.2.9.3</a>
<b>DataSourceConnectionUnsupported</b>	See section <a href="#">2.2.9.3</a>
<b>DataSourceCubeNotFound</b>	The user does not have access to the cube specified by a DataSource (section <a href="#">2.2.4.85</a> ) or

Error code	Description
	the cube does not exist
<b>DataSourceDatabaseNotFound</b>	See section <a href="#">2.2.9.3</a> .
<b>DataSourceHostNotFound</b>	See section <a href="#">2.2.9.3</a> .
<b>DataSourceNotRegistered</b>	The server 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="#">2.2.4.150</a> ) is invalid.
<b>ExtInvalidSetting</b>	A value for setting on the server is invalid.
<b>FCOCreateFailed</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOCreateFailedListAccess</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOCreateFailedListType</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOCreateFailedNameCollision</b>	See section <a href="#">2.2.9.3</a> .
<b>FCODeleteFailed</b>	See section <a href="#">2.2.9.3</a> .
<b>FCODeleteFailedListAccess</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOReadFailed</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOReadFailedListAccess</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOUpdateFailed</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOUpdateFailedListAccess</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOUpdateFailedListType</b>	See section <a href="#">2.2.9.3</a> .
<b>FCOUpdateFailedNameCollision</b>	See section <a href="#">2.2.9.3</a> .
<b>ImpersonationLoginFailure</b>	The shared account credentials are not available.
<b>ImportAsKpisException</b>	An error occurred while importing a KPI from Analysis Services.
<b>IncompatibleSiteDomain</b>	The server is not configured properly or is 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

Error code	Description
<b>InvalidBpmPropertyList</b>	An attribute of a <b>BpmPropertyList</b> (section <a href="#">2.2.4.70</a> ) is invalid.
<b>InvalidBpmPropertyText</b>	An attribute of a <b>BpmPropertyText</b> (section <a href="#">2.2.4.73</a> ) is invalid.
<b>InvalidBuiltinIndicatorOperation</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidCategoryName</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidCharacters</b>	The <b>UniqueName</b> of a <b>BpmProperty</b> (section <a href="#">2.2.4.63</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="#">2.2.9.3</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="#">2.2.9.3</a> .
<b>InvalidElementField</b>	See section <a href="#">2.2.9.3</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="#">2.2.9.3</a> .
<b>InvalidId</b>	A KPI or scorecard is missing or not available to the current user.
<b>InvalidIndicator</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidIndicatorBand</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidItemType</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidKpi</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidKpiMeasure</b>	An attribute of a <b>KPIMeasure</b> (section <a href="#">2.2.4.129</a> ) is invalid.
<b>InvalidMember</b>	An attribute of a <b>Member</b> (section <a href="#">2.2.4.135</a> ) is invalid.
<b>InvalidNamedSet</b>	An attribute of a <b>NamedSet</b> (section <a href="#">2.2.4.148</a> ) is invalid.
<b>InvalidNamedSetSetting</b>	A named set expression is invalid.
<b>InvalidObject</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidOdbcDataSource</b>	An attribute of an <b>ODBC DataSource</b> (section <a href="#">2.2.4.85</a> ) is not valid.

Error code	Description
<b>InvalidOverrideFormatProperties</b>	An attribute of a <b>KpiNumberFormatProperties</b> (section <a href="#">2.2.4.130</a> ) is invalid.
<b>InvalidPermission</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidPermissionAdmin</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidQueryChildMembers</b>	The specified member (3) name is invalid.
<b>InvalidQueryDimensionRootMembers</b>	The specified dimension name is invalid.
<b>InvalidReportView</b>	See section <a href="#">2.2.9.3</a> .
<b>InvalidReportViewCubeName</b>	The cube name in an MDX 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="#">2.2.9.3</a> .
<b>InvalidStatusFilterBandIndex</b>	The <b>BandIndex</b> attribute of a <b>StatusFilter</b> (section <a href="#">2.2.4.168</a> ) is invalid.
<b>InvalidTextLength</b>	A string attribute is null, empty or exceeds its specified maximum length.
<b>InvalidTimeIntelligenceConfiguration</b>	The time intelligence configuration of a data source (1) is invalid.
<b>InvalidTimeIntelligenceFormula</b>	A time intelligence expression is invalid.
<b>InvalidTimeIntelligenceSetting</b>	An attribute of a <b>TimeIntelligenceDataSource</b> ( <a href="#">2.2.4.172</a> ), <b>TimeIntelligenceFormula</b> ( <a href="#">2.2.4.174</a> ), <b>TimeIntelligenceLevelBinding</b> ( <a href="#">2.2.4.175</a> ), or <b>TimeIntelligenceMdxSettings</b> ( <a href="#">2.2.4.176</a> ) is invalid.
<b>InvalidUrl</b>	The server 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 is not configured properly or is not functioning correctly.
<b>NewSetting</b>	An attempt was made to update a non-existent setting.
<b>NotAParameterizableControl</b>	The server is not configured properly or is not functioning correctly.
<b>NotTrustedLocation</b>	See section <a href="#">2.2.9.3</a>
<b>OperationContextNull</b>	The server is not configured properly or is not functioning correctly.
<b>ParameterDataProviderNotRegistered</b>	The parameter data provider is not registered.

Error code	Description
<b>QueryTimeout</b>	A timeout occurred while querying a data source (1).
<b>RepositoryLocationAbsoluteUrl</b>	See section <a href="#">2.2.9.3</a>
<b>RepositoryLocationEmpty</b>	See section <a href="#">2.2.9.3</a>
<b>RepositoryLocationUrlLength</b>	See section <a href="#">2.2.9.3</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 is not configured properly or is not functioning correctly.
<b>UnableToLoadCustomParameterDataProvider</b>	The server is not configured properly or is not functioning correctly.
<b>UnableToLoadCustomViewTransform</b>	The server is not configured properly or is not functioning correctly.
<b>UnableToLoadFCODao</b>	The server is not configured properly or is not functioning correctly.
<b>Unknown</b>	See section <a href="#">2.2.9.3</a>

### 2.2.9.3 Common List of Error Codes

In the event of an application error, these values are commonly returned by the server in the **ErrorCode** element of the **BpmException** ([2.2.4.62](#)) as specified in section [2.2.9.1](#). 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 defined by the data source (1) is not a supported server, or the server refused the connection.
<b>DataSourceDatabaseNotFound</b>	A connection to the database defined by the data source (1) could not be established.
<b>DataSourceHostNotFound</b>	A connection to the host server 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.

Error code	Description
<b>FCOCreateFailedListAccess</b>	The content store<6> containing this object no longer exists or there are inadequate permissions to view it. The object cannot be created.
<b>FCOCreateFailedListType</b>	The object cannot be created<7>.
<b>FCOCreateFailedNameCollision</b>	A data source (1) with the requested name already exists. Choose a different name.
<b>FCODeleteFailed</b>	There are inadequate permissions to delete this object or it has already been deleted.
<b>FCODeleteFailedListAccess</b>	The content store<8> containing this object no longer exists or there are inadequate permissions to view it. 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<9> 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<10> 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<11> 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.
<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 (1) does not have the



Error code	Description
	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 report view 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="#">2.2.4.162</a> ) contains the empty string.
<b>RepositoryLocationUrlLength</b>	The URL address supplied in the RepositoryLocation (section <a href="#">2.2.4.162</a> ) exceeds the maximum length of 2048 characters.
<b>RepositoryLocationAbsoluteUrl</b>	The URL address supplied in the RepositoryLocation (section <a href="#">2.2.4.162</a> ) 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.

## 3 Protocol Details

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

Except where specified, protocol clients SHOULD interpret HTTP status codes returned by the server (2) as specified in [RFC2616](#) section 10, Status Code Definitions).

This protocol allows servers (2) to notify protocol clients of application-level faults using SOAP faults. Except where specified, these SOAP faults are not significant for interoperability, and protocol clients can interpret them in an implementation-specific manner.

This protocol allows servers (2) to perform implementation-specific authorization checks and notify protocol clients of authorization faults either using HTTP status codes or using SOAP faults as specified previously in this section.

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

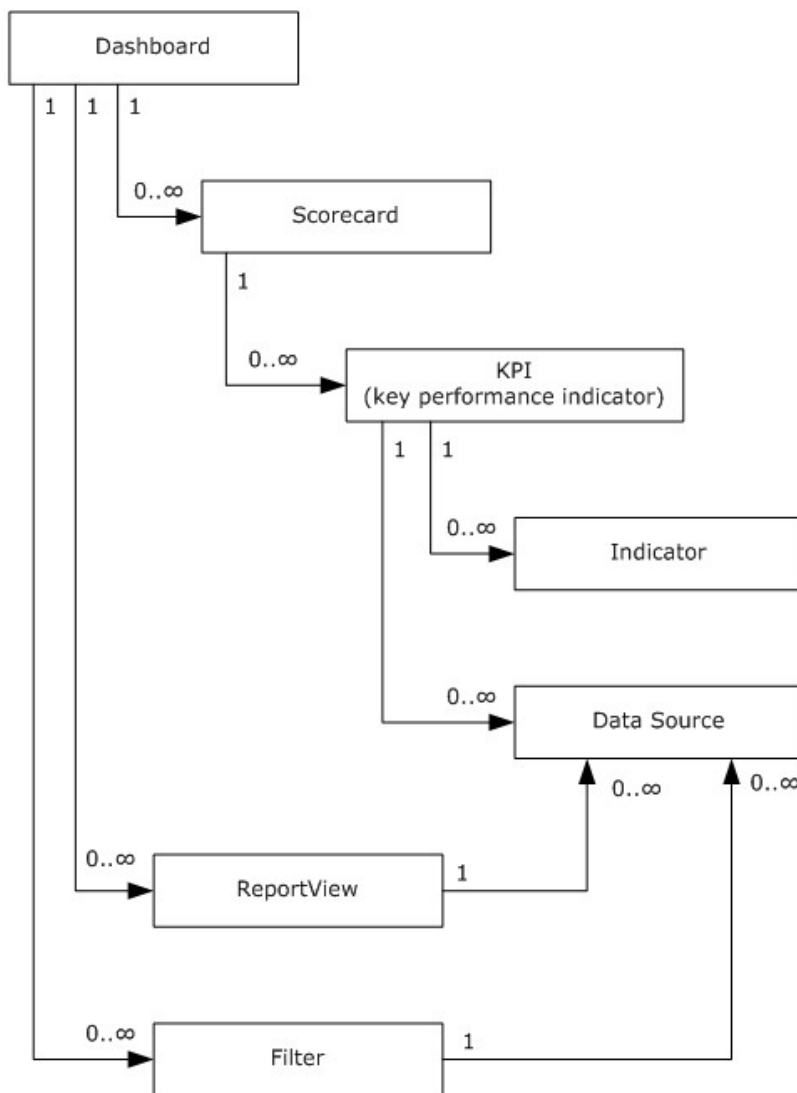
In cases where an argument is optional and the WSDL specifies both `"minOccurs=0"` and `"Nillable=true"`, treat the argument as only `"minOccurs=0"`.

### 3.1 Server Details

#### 3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

The server (2) maintains a collection of first-class elements indexed by unique repository locations. Each first-class element can be independently published to and read from the server. Each first-class element references its dependents by their unique repository locations. The following UML diagram describes how the first-class elements are related:



**Figure 6: Overview of first-class elements**

A first-class element's dependents must be published prior to that first-class element being consumed on the server. For example, all the first-class elements that a dashboard is dependent on must be published prior to that dashboard being deployed or viewed.

The following classes are defined as first-class elements:

**Dashboard:** A customizable landing page for a business application or workspace that uses Web Parts to display selected information. It can provide a comprehensive look at the information inside the application or workspace by consolidating lists (1), libraries, text, images and other data into a dynamic, customizable information portal.

Each Web Part on a dashboard displays the information specified by a single first-class element.

The Filters, Reports, and Scorecards in a Dashboard can be connected together so that changes in the state of one first-class element will change the information displayed by other first-class

elements. For example, a Filter can be connected to Report Views or Scorecards so that changes to the selections made in the Filter are reflected in the information shown by those Report Views and Scorecards.

When Filters, Reports, and Scorecards are connected in a Dashboard, each connection has an explicit source and a destination. State information in a dashboard always flows from a connection source or begin point in one first-class element to a connection destination or endpoint in another first-class element. Filters, Reports, and Scorecards may each have multiple begin points and endpoints. A connection is fully defined by a source element, a begin point on that element, a destination element and an endpoint on that element. For example, the member name begin point on a Filter could be connected to the row endpoint on a Scorecard.

There are limitations on the way different first-class element can be connected in a Dashboard:

First-class element	Can be a source?	Can be a destination?
Filter	Yes	No
Report View	No	Yes
Scorecard	Yes	Yes

- The connection cannot create a circular reference; a user cannot connect a scorecard to a filter that is already linked to the scorecard.
- A begin point is available if:
  - It is not already connected to another begin point or it is connected but its `AcceptMultipleFilterLinks` property is set to true.
  - It is not already connected to the begin point. If the dashboard item is a scorecard it can accept multiple connections from the same begin point.
- Unless the target item is a scorecard a user cannot make multiple connections from a begin point to a target.
- Although a scorecard can accept multiple connections from the same begin point, those connections cannot be to the same end point on the scorecard. In other words, a user can connect a filter to a scorecard's Row end point and its Column end point, but a user cannot connect a begin point to a scorecard's Row end point twice.

**Scorecard:** A report type that depicts organizational performance by displaying a collection of key performance indicators (KPIs) together with performance targets for those KPIs. A scorecard can be organized hierarchically.

**ReportView:** A visual display of data in a dashboard that can be coordinated with other report views by using filters.

**Filter:** A feature that enables users to modify dashboard views by changing the subset of data that is displayed in reports or scorecards.

**KPI (key performance indicator):** A predefined measure that is used to track performance of a strategic goal, objective, plan, initiative, or business process. A KPI is evaluated against a target. An explicit and measurable value taken directly from a data source.

**Indicator:** A set of graphics, text, and colors for defining different levels of performance when comparing an actual value and a target value within a KPI.

**DataSource:** A reference to a disk, file, document, or other collection of information from which data is taken or moved.

The server also maintains a collection of annotations.

**Annotation:** One of possibly several notations associated with a comment. Each comment is associated with a single cell in a scorecard and meant to provide related information about the value in that scorecard cell.

### 3.1.2 Timers

If a request exceeds a query timeout period, the server MUST return a SOAP FAULT response, which MUST contain the **Query Timeout**<12> ErrorCode as specified in section 2.2.9.

### 3.1.3 Initialization

None.

### 3.1.4 Message Processing Events and Sequencing Rules

This section specifies the server operations.

This specification includes the following **WSDL operations**:

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

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

WSDL Operation	Description
	<a href="#">2.2.4.78</a> ) object.
GetCubeNameInfos	This operation retrieves an <b>ArrayOfNameInfo</b> (see section <a href="#">2.2.4.49</a> ) that describes the cubes of the data source (1).
GetCurrentCultureLcid	This operation retrieves the current culture locale identifier.
GetCurrentUserInfo	This operation retrieves the user name and display name information of the current user.
GetDashboard	This operation retrieves a dashboard.
GetDatabaseNamesFromDataSource	This operation retrieves an array of database names associated with the data source (1).
GetDataSource	This operation retrieves a data source (1).
GetDependentElements	<b>GetDependentElements</b> retrieves from the server all <b>FirstClassElements</b> (see 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 KPIs, Indicators, and data sources that the scorecard depends on will also be retrieved.
GetDimensions	This operation retrieves an array of dimension (1) objects.
GetDimensionsFromDataSource	This operation retrieves an array of dimension (1) objects (see section <a href="#">2.2.4.90</a> ).
GetFilter	This operation retrieves a filter.
GetIndicator	This operation retrieves an indicator from the server (2).
GetKpi	This operation retrieves a Kpi object.
GetKpisFromScorecard	This operation retrieves an array of Kpi (see section <a href="#">2.2.4.128</a> ) objects associated with a scorecard.
GetLatestAnalyticReportVersion	This operation retrieves from the server (2) the version number for a report view that has been created through SaveTemporaryAnalyticReport.
GetListItems	GetListItems retrieves all FirstClassElements (see section <a href="#">2.2.4.99</a> ) associated with a given repository list (1) from the server.
GetMdx	This operation retrieves an MDX that can be used to query data sources for the given analytic report. <b>Analytic</b> Chart and <b>Analytic</b> Grid report view types contain custom data that is used to generate MDX queries. See ReportView for more detail.
GetParameterDisplayData	This operation builds a template data table containing only the columns produced by a specific parameter type. The referred parameter represents a specific kind of

WSDL Operation	Description
	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.
GetPreviewDataSet	This method retrieves a data set from a data source, which is suitable for previewing results.
GetQueryResultMembers	This operation retrieves an array of members (3) associated with the specified report.
GetRegisteredCustomFCOs	This operation retrieves custom object definitions registered on the server.
GetReportView	This operation retrieves a report view from the server (2).
GetScorecard	This operation retrieves a scorecard.
QueryChildMembers	This method uses a data source for the specified member and returns a collection of members.
QueryChildMembersByRangeFromDataSource	This method queries the <b>DataSource</b> (see section <a href="#">2.2.4.85</a> ) and returns a collection of child members.
QueryChildMembersFromDataSource	This method uses the data source to retrieve a collection of child members for the specified member name.
QueryDimensionRootMembers	This method uses a data source (1) from the repository location for the specified member and returns a collection of root members.
QueryDimensionRootMembersFromDataSource	This method uses the data source to retrieve a collection of root members for the specified member name.
QueryNamedSets	This operation is used to retrieve the named sets that are defined by a data source (1) when given the RepositoryLocation of the data source (1).
QueryNamedSetsFromDataSource	This operation is used to retrieve the named sets that are defined by the given data source (1).
QueryRelatedMember	This operation is used to retrieve a member (3) having the specified relationship to the specified member from the data source (1) at the given RepositoryLocation.
QueryRelatedMemberFromDataSource	This operation queries the given data source (1) for the member (3) having the specified relationship to the specified member.
QueryTimeIntelligence	This operation queries a data source (1) location for the members (3) that are specified by a time intelligence formula.
QueryTimeIntelligenceDirect	This operation queries the provided data source (1) for the members (3) that are specified by a time intelligence formula.
QueryTransformMembers	This method transforms any collection of member (section <a href="#">2.2.4.135</a> ) into a new set of member collection



WSDL Operation	Description
	based on the operation passed on the transformType parameter as specified in section <a href="#">3.1.4.62.4.1</a> .
SaveTemporaryAnalyticReport	This operation stores a temporary copy of a report view to the server.
TestConnection	This operation is used to determine whether a connection as specified by the dataSource element can be established.
TrimAnnotationByOwner	This operation removes all the annotations that are owned by a specific user.
TrimAnnotationByScorecardLocation	This operation removes all the annotations that belong to a scorecard at a specific location.
TrimAnnotationUntouchedSince	This operation removes all the annotations that haven't been updated since the specified date.
UpdateAnnotation	This operation updates an existing <b>Annotation</b> (section <a href="#">2.2.4.18</a> ).
UpdateDashboard	This operation updates an existing Dashboard (section <a href="#">2.2.4.79</a> ).
UpdateDataSource	This operation updates an existing DataSource (section <a href="#">2.2.4.85</a> ).
UpdateFilter	This operation is used to update the existing filter as specified by the Filter (section <a href="#">2.2.4.98</a> ) object in the <b>UpdateFilter</b> input element.
UpdateIndicator	This operation is used to update the existing indicator as specified by the <b>Indicator</b> (section <a href="#">2.2.4.125</a> ) object in the <b>UpdateIndicator</b> input element.
UpdateKpi	This operation is used to update the existing KPI as specified by the Kpi (section <a href="#">2.2.4.128</a> ) object in the <b>UpdateKpi</b> input element.
UpdateReportView	This operation is used to update the existing report view as specified by the <b>ReportView</b> (section <a href="#">2.2.4.161</a> ) object in the <b>UpdateReportView</b> input element.
UpdateScorecard	This operation is used to update the existing scorecard as specified by the <b>Scorecard</b> (section <a href="#">2.2.4.163</a> ) object in the <b>UpdateScorecard</b> input element.
ValidateKpi	Checks whether a KPI stored on the server is valid.
ValidateScorecard	Checks if a scorecard stored on the server (2) is valid.
ValidateSiteCollection	This operation is used to check if the <b>context site</b> has the server <b>feature</b> installed.

### 3.1.4.1 CreateAnnotation

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

```

<wsdl:operation name="CreateAnnotation">
  <wsdl:input message="tns:CreateAnnotationSoapIn"/>
  <wsdl:output message="tns:CreateAnnotationSoapOut"/>
</wsdl:operation>

```

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

- The protocol client MUST send the Annotation to be created.
- The server (2) MUST create the specified Annotation in the database.
- If creation is successful, the server (2) MUST return the created Annotation whose following fields are updated:
  - CreatedOn
  - Guid
  - LastUpdatedOn

ErrorCode	Description
AnnotationNotEnabled	See Full list of possible ErrorCodes (section <a href="#">2.2.9.2</a> ).
InvalidAnnotation	See Full list of possible ErrorCodes (section <a href="#">2.2.9.2</a> ).
InvalidComment	See Common list of ErrorCodes (section <a href="#">2.2.9.3</a> ).
InvalidPermission	See Common list of ErrorCodes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the ErrorCode MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.1.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.1.1.1 CreateAnnotationSoapIn

The requested 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** method.

The SOAP action value is:

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

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

### 3.1.4.1.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.1.2.1 CreateAnnotation

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

```
<xs:element name="CreateAnnotation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="annotation" type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**annotation:** The [Annotation](#) to be created on the server. MUST be present.

#### 3.1.4.1.2.2 CreateAnnotationResponse

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

```
<xs:element name="CreateAnnotationResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateAnnotationResult"
type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**CreateAnnotationResult:** The [Annotation](#) created on the server. MUST be present. All of the fields MUST be set as described in section [3.1.4.1](#).

#### 3.1.4.1.3 Complex Types

None.

#### 3.1.4.1.4 Simple Types

None.

### 3.1.4.2 CreateDashboard

The **CreateDashboard** operation is used to create a dashboard on the server (2).

```
<wsdl:operation name="CreateDashboard">
  <wsdl:input message="tns:CreateDashboardSoapIn"/>
  <wsdl:output message="tns:CreateDashboardSoapOut"/>
</wsdl:operation>
```

</wsdl:operation>

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

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

Error code	Description
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.2.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.2.1.1 CreateDashboardSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateDashboard
```

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

#### 3.1.4.2.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.2.2.1 CreateDashboard

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

```
<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>
```

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

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

##### 3.1.4.2.2.2 CreateDashboardResponse

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

```
<xs:element name="CreateDashboardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateDashboardResult"
type="tns:Dashboard"/>
    </xs:sequence>
  </xs:complexType>
```

</xs:element>

**CreateDashboardResult:** The **Dashboard** (see section [2.2.4.79](#)) created on the server. MUST be present. All of the fields MUST be set as described in section [3.1.4.2](#).

### 3.1.4.2.3 Complex Types

None.

### 3.1.4.2.4 Simple Types

None.

### 3.1.4.3 CreateDataSource

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

```
<wsdl:operation name="CreateDataSource">
  <wsdl:input message="tns:CreateDataSourceSoapIn"/>
  <wsdl:output message="tns:CreateDataSourceSoapOut"/>
</wsdl:operation>
```

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

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

Error code	Description
<b>InvalidDataSource</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

Error code	Description
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.3.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.3.1.1 CreateDataSourceSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateDataSource
```

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

### 3.1.4.3.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.3.2.1 CreateDataSource

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

```
<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>

```

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

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

### 3.1.4.3.2.2 CreateDataSourceResponse

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

```

<xs:element name="CreateDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateDataSourceResult"
type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

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

### 3.1.4.3.3 Complex Types

None.

### 3.1.4.3.4 Simple Types

None.

### 3.1.4.4 CreateFilter

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

```

<wsdl:operation name="CreateFilter">
  <wsdl:input message="tns:CreateFilterSoapIn"/>
  <wsdl:output message="tns:CreateFilterSoapOut"/>
</wsdl:operation>

```

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

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



- CreatedBy
- CreatedDate
- LastModified
- Location
- ModifiedBy
- Version

Error code	Description
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.4.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.4.1.1 CreateFilterSoapIn

The requested 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** method.

The SOAP action value is:

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

### 3.1.4.4.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.4.2.1 CreateFilter

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

```
<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>
```

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

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

#### 3.1.4.4.2.2 CreateFilterResponse

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

```
<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>
```

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

### 3.1.4.4.3 Complex Types

None.

### 3.1.4.4.4 Simple Types

None.

### 3.1.4.5 CreateIndicator

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

```

<wsdl:operation name="CreateIndicator">
  <wsdl:input message="tns:CreateIndicatorSoapIn"/>
  <wsdl:output message="tns:CreateIndicatorSoapOut"/>
</wsdl:operation>

```

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

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

Error code	Description
<b>InvalidIndicator</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.5.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.5.1.1 CreateIndicatorSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateIndicator
```

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

### 3.1.4.5.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.5.2.1 CreateIndicator

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

```
<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>
```

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

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

#### 3.1.4.5.2.2 CreateIndicatorResponse

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

```
<xs:element name="CreateIndicatorResponse">
  <xs:complexType>
    <xs:sequence>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="CreateIndicatorResult"
type="tns:Indicator"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

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

### 3.1.4.5.3 Complex Types

None.

### 3.1.4.5.4 Simple Types

None.

### 3.1.4.6 CreateKpi

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

```

<wsdl:operation name="CreateKpi">
    <wsdl:input message="tns:CreateKpiSoapIn"/>
    <wsdl:output message="tns:CreateKpiSoapOut"/>
</wsdl:operation>

```

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

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

Error code	Description
<b>InvalidKpi</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

Error code	Description
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.6.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.6.1.1 CreateKpiSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateKpi
```

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

### 3.1.4.6.2 Elements

The following XML Schema element definitions are specific to this operation.

### 3.1.4.6.2.1 CreateKpi

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

```
<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>
```

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

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

### 3.1.4.6.2.2 CreateKpiResponse

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

```
<xs:element name="CreateKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.6.3 Complex Types

None.

### 3.1.4.6.4 Simple Types

None.

### 3.1.4.7 CreateReportView

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

```
<wsdl:operation name="CreateReportView">
  <wsdl:input message="tns:CreateReportViewSoapIn"/>
  <wsdl:output message="tns:CreateReportViewSoapOut"/>
</wsdl:operation>
```

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

- The protocol client MUST send the ReportView (section [2.2.4.161](#)) and URL location.
- The server (2) MUST create the specified ReportView (section [2.2.4.161](#)) at the specified URL location.
- If creation is successful, the server (2) MUST return the created ReportView with the following fields set as specified in FirstClassElement, section [2.2.4.99](#):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

Error code	Description
<b>InvalidReportView</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.7.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.7.1.1 CreateReportViewSoapIn

The requested 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** method.

The SOAP action value is:

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

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

#### 3.1.4.7.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.7.2.1 CreateReportView

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

```
<xs:element name="CreateReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

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

##### 3.1.4.7.2.2 CreateReportViewResponse

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

```
<xs:element name="CreateReportViewResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.7.3 Complex Types

None.

### 3.1.4.7.4 Simple Types

None.

### 3.1.4.8 CreateScorecard

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

```
<wsdl:operation name="CreateScorecard">
  <wsdl:input message="tns:CreateScorecardSoapIn"/>
  <wsdl:output message="tns:CreateScorecardSoapOut"/>
</wsdl:operation>
```

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

- The protocol client MUST send the Scorecard (section [2.2.4.163](#)) and URL location.
- The server (2) MUST create the specified Scorecard (section [2.2.4.163](#)) at the specified URL location.
- If creation is successful, the server (2) MUST return the created Scorecard with the following fields set as specified in FirstClassElement (section [2.2.4.99](#)):
  - Location
  - CreatedBy
  - ModifiedBy
  - CreatedDate
  - LastModified
  - Version

Error code	Description
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

Error code	Description
<b>FCOCreateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOCreateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationUrlLength</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>RepositoryLocationAbsoluteUrl</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.8.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.8.1.1 CreateScorecardSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/CreateScorecard
```

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

### 3.1.4.8.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.8.2.1 CreateScorecard

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

```
<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>
```

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

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

### 3.1.4.8.2.2 CreateScorecardResponse

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

```
<xs:element name="CreateScorecardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CreateScorecardResult"
        type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.8.3 Complex Types

None.

### 3.1.4.8.4 Simple Types

None.

### 3.1.4.9 DeleteAnnotation

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

```
<wsdl:operation name="DeleteAnnotation">
  <wsdl:input message="tns>DeleteAnnotationSoapIn"/>
  <wsdl:output message="tns>DeleteAnnotationSoapOut"/>
</wsdl:operation>
```

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

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

#### Exceptions:

Error code	Description
<b>AnnotationNotEnabled</b>	Annotations are not enabled in the server.
<b>AnnotationDeleteNotEnabled</b>	The operation would remove existing comments and Annotation delete is not enabled in the server. The comments will not be changed on the server.
<b>InvalidAnnotation</b>	The annotation does not exist in the server.

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.9.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.9.1.1 DeleteAnnotationSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteAnnotation
```

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

### 3.1.4.9.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.9.2.1 DeleteAnnotation

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

```
<xs:element name="DeleteAnnotation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="annotationID"
        xmlns:q16="http://microsoft.com/wsdl/types/" type="q16:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

#### 3.1.4.9.2.2 DeleteAnnotationResponse

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

```
<xs:element name="DeleteAnnotationResponse">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.9.3 Complex Types

None.

#### 3.1.4.9.4 Simple Types

None.

#### 3.1.4.10 DeleteDashboard

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

```
<wsdl:operation name="DeleteDashboard">
  <wsdl:input message="tns:DeleteDashboardSoapIn"/>
  <wsdl:output message="tns:DeleteDashboardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteDashboardSoapIn** request message and the server (2) responds with a **DeleteDashboardSoapOut** message as follows:

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

##### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the ErrorCode MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.10.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.10.1.1 DeleteDashboardSoapIn

The requested 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** method.

The SOAP action value is:

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

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

#### 3.1.4.10.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.10.2.1 DeleteDashboard

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

```
<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>
```

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

##### 3.1.4.10.2.2 DeleteDashboardResponse

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

```
<xs:element name="DeleteDashboardResponse">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.10.3 Complex Types

None.

#### 3.1.4.10.4 Simple Types

None.

### 3.1.4.11 DeleteDataSource

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

```
<wsdl:operation name="DeleteDataSource">
  <wsdl:input message="tns:DeleteDataSourceSoapIn"/>
  <wsdl:output message="tns:DeleteDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteDataSourceSoapIn** request message and the server (2) responds with a **DeleteDataSourceSoapOut** message as follows:

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

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.11.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.11.1.1 DeleteDataSourceSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteDataSource
```

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



### 3.1.4.11.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.11.2.1 DeleteDataSource

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

```
<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>
```

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

#### 3.1.4.11.2.2 DeleteDataSourceResponse

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

```
<xs:element name="DeleteDataSourceResponse">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.11.3 Complex Types

None.

### 3.1.4.11.4 Simple Types

None.

### 3.1.4.12 DeleteFilter

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

```
<wsdl:operation name="DeleteFilter">
  <wsdl:input message="tns:DeleteFilterSoapIn"/>
  <wsdl:output message="tns:DeleteFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteFilterSoapIn** request message and the server (2) responds with a **DeleteFilterSoapOut** message as follows:

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

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.12.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.12.1.1 DeleteFilterSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteFilter
```

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

#### 3.1.4.12.1.2 DeleteFilterSoapOut

The response WSDL message for the **DeleteFilter** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteFilter
```

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

### 3.1.4.12.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.12.2.1 DeleteFilter

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

```
<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>
```

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

### 3.1.4.12.2.2 DeleteFilterResponse

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

```
<xs:element name="DeleteFilterResponse">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.12.3 Complex Types

None.

### 3.1.4.12.4 Simple Types

None.

### 3.1.4.13 DeleteIndicator

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

```
<wsdl:operation name="DeleteIndicator">
  <wsdl:input message="tns:DeleteIndicatorSoapIn"/>
  <wsdl:output message="tns:DeleteIndicatorSoapOut"/>
</wsdl:operation>
```

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

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

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.13.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.13.1.1 DeleteIndicatorSoapIn

The requested 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** method.

The SOAP action value is:

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

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

#### 3.1.4.13.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.13.2.1 DeleteIndicator

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

```
<xs:element name="DeleteIndicator">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

##### 3.1.4.13.2.2 DeleteIndicatorResponse

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

```
<xs:element name="DeleteIndicatorResponse">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.13.3 Complex Types

None.

#### 3.1.4.13.4 Simple Types

None.

### 3.1.4.14 DeleteKpi

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

```
<wsdl:operation name="DeleteKpi">
  <wsdl:input message="tns:DeleteKpiSoapIn"/>
  <wsdl:output message="tns:DeleteKpiSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteKpiSoapIn** request message and the server (2) responds with a **DeleteKpiSoapOut** message as follows:

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

#### Exceptions:

Error code	Description
<b>FCODeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCODeleteFailedListAccess</b>	See <b>Common list of ErrorCodes</b> (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.14.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.14.1.1 DeleteKpiSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteKpi
```

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

### 3.1.4.14.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.14.2.1 DeleteKpi

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

```
<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>
```

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

#### 3.1.4.14.2.2 DeleteKpiResponse

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

```
<xs:element name="DeleteKpiResponse">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.14.3 Complex Types

None.

### 3.1.4.14.4 Simple Types

None.

### 3.1.4.15 DeleteReportView

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

```
<wsdl:operation name="DeleteReportView">
  <wsdl:input message="tns:DeleteReportViewSoapIn"/>
  <wsdl:output message="tns:DeleteReportViewSoapOut"/>
</wsdl:operation>
```

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

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

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.15.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.15.1.1 DeleteReportViewSoapIn

The requested 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** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/DeleteReportView
```

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

### 3.1.4.15.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.15.2.1 DeleteReportView

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

```
<xs:element name="DeleteReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.15.2.2 DeleteReportViewResponse

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

```
<xs:element name="DeleteReportViewResponse">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.15.3 Complex Types

None.

### 3.1.4.15.4 Simple Types

None.

### 3.1.4.16 DeleteScorecard

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

```
<wsdl:operation name="DeleteScorecard">
  <wsdl:input message="tns:DeleteScorecardSoapIn"/>
  <wsdl:output message="tns:DeleteScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **DeleteScorecardSoapIn** request message and the server (2) responds with a **DeleteScorecardSoapOut** message as follows:

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

#### Exceptions:

Error code	Description
<b>FCDeleteFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCDeleteFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.16.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.16.1.1 DeleteScorecardSoapIn

The requested 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** method.

The SOAP action value is:

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

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

#### 3.1.4.16.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.16.2.1 DeleteScorecard

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

```
<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>
```

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

##### 3.1.4.16.2.2 DeleteScorecardResponse

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

```
<xs:element name="DeleteScorecardResponse">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.16.3 Complex Types

None.

#### 3.1.4.16.4 Simple Types

None.

### 3.1.4.17 GenerateView

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

```
<wsdl:operation name="GenerateView">
  <wsdl:input message="tns:GenerateViewSoapIn"/>
  <wsdl:output message="tns:GenerateViewSoapOut"/>
</wsdl:operation>
```

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

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

1. The server protocol uses the **scorecardLocation** to retrieve the scorecard for which the view will be generated.
2. **pageFilters** MAY be used to slice the scorecard data.
3. **propertyBags** MUST NOT be null but MAY be empty or MAY contain information that will be consumed by the server defined transforms for the scorecard (see [GridViewTransformReference](#)).
4. If there was an application error on the server (2) during the operation, the server (2) MUST return a SOAP FAULT response, which SHOULD include one of the exceptions specified in [GetScorecard](#), and [GetDataSource](#), but MAY instead contain any other exceptions.

#### 3.1.4.17.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.17.1.1 GenerateViewSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GenerateView
```

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

##### 3.1.4.17.1.2 GenerateViewSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GenerateView
```

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

### 3.1.4.17.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.17.2.1 GenerateView

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

```
<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>
```

**scorecardLocation:** Points to the scorecard for which the grid view will be generated, as defined in [RepositoryLocation](#). It MUST NOT be null or empty and it MUST point to a valid scorecard location. If ANY of those conditions are not met, the returned view is null.

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

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

#### 3.1.4.17.2.2 GenerateViewResponse

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

```
<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>
```

**GenerateViewResult:** Represents a scorecard grid view data as defined in [GridViewData](#). The returned result is **Null** if **scorecardLocation** is null, empty or invalid.

### 3.1.4.17.3 Complex Types

None.

### 3.1.4.17.4 Simple Types

None.

### 3.1.4.18 GenerateViewDirect

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

```
<wsdl:operation name="GenerateViewDirect">
  <wsdl:input message="tns:GenerateViewDirectSoapIn"/>
  <wsdl:output message="tns:GenerateViewDirectSoapOut"/>
</wsdl:operation>
```

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

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

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

#### 3.1.4.18.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.18.1.1 GenerateViewDirectSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect
```

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

##### 3.1.4.18.1.2 GenerateViewDirectSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect
```

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

#### 3.1.4.18.2 Elements

The following XML Schema element definitions are specific to this operation.

### 3.1.4.18.2.1 GenerateViewDirect

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

```
<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>
```

**scorecard:** The scorecard for which the grid view will be generated. It MUST NOT be **null**.

**kpis:** Represents a list (1) of KPIs used by **scorecard**, as defined in [ArrayOfKpi](#). It MAY be **null** and it SHOULD contain all the KPIs referenced by **scorecard**. It MUST contain at least all the KPIs referenced by **scorecard** that are not yet stored on the server.

**dataSources:** Represents a list (1) of data sources (1) used by **scorecard**, as defined in [ArrayOfDataSource](#). It MAY be null and it SHOULD contain all the data sources referenced by **scorecard**. It MUST contain at least all the data sources (1) referenced by **scorecard** that are not yet stored on the server.

**indicators:** Represents a list (1) of indicators used by **scorecard**, as defined in [ArrayOfIndicator](#). It MAY be null and it SHOULD contain all the indicators referenced by **scorecard**. It MUST contain at least all the indicators referenced by **scorecard** that are not yet stored on the server.

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

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

### 3.1.4.18.2.2 GenerateViewDirectResponse

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

```
<xs:element name="GenerateViewDirectResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GenerateViewDirectResult"
type="tns:GridViewData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GenerateViewDirectResult:** Represents a scorecard grid view data as defined in [GridViewData](#). The returned result is **BpmException** ([2.2.4.62](#)) if **scorecard** is null or invalid, or if **kpis**,

**dataSources**, and **indicators** together with the server store do not contain all necessary dependencies.

### 3.1.4.18.3 Complex Types

The following XML Schema complex type definitions are specific to this operation.

#### 3.1.4.18.3.1 ArrayOfIndicator

The **ArrayOfIndicator** complex type specifies an array of indicators for a scorecard.

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

**Indicator:** This element MUST NOT be null and MUST conform to the schema of the **Indicator** (section [2.2.4.125](#)) complex type.

### 3.1.4.18.4 Simple Types

None.

#### 3.1.4.19 GetAllAnnotationsByScorecardLocation

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

```
<wsdl:operation name="GetAllAnnotationsByScorecardLocation">
  <wsdl:input message="tns:GetAllAnnotationsByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:GetAllAnnotationsByScorecardLocationSoapOut"/>
</wsdl:operation>
```

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

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

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	Caused by not having access to the Scorecard. See section <a href="#">2.2.9.3</a> for the <b>Common list of Error Codes</b> .

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.19.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.19.1.1 GetAllAnnotationsByScorecardLocationSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAllAnnotationsByScorecardLocation
```

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

#### 3.1.4.19.1.2 GetAllAnnotationsByScorecardLocationSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAllAnnotationsByScorecardLocation
```

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

### 3.1.4.19.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.19.2.1 GetAllAnnotationsByScorecardLocation

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

```
<xs:element name="GetAllAnnotationsByScorecardLocation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** The location of a scorecard, as specified by **RepositoryLocation** (see section [2.2.4.162](#)). This MUST be present.

#### 3.1.4.19.2.2 GetAllAnnotationsByScorecardLocationResponse

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

```
<xs:element name="GetAllAnnotationsByScorecardLocationResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
name="GetAllAnnotationsByScorecardLocationResult" type="tns:ArrayOfAnnotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

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

```

**GetAllAnnotationsByScorecardLocationResult:** An array of **Annotation** (see section [2.2.4.18](#)) elements associated with the **scorecardLocation** that was requested from the server (2).

### 3.1.4.19.3 Complex Types

The following XML Schema complex type definitions are specific to this operation.

#### 3.1.4.19.3.1 ArrayOfAnnotation

The **ArrayOfAnnotation** complex type specifies an array of **Annotation** elements.

```

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

```

**Annotation:** This element MUST NOT be null and MUST conform to the schema of the **Annotation** (section [2.2.4.18](#)) complex type.

### 3.1.4.19.4 Simple Types

None.

### 3.1.4.20 GetAnalyticReportView

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

```

<wsdl:operation name="GetAnalyticReportView">
  <wsdl:input message="tns:GetAnalyticReportViewSoapIn"/>
  <wsdl:output message="tns:GetAnalyticReportViewSoapOut"/>
</wsdl:operation>

```

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

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the report view to be retrieved.
2. The server (2) sends the corresponding report view.

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	If the report view was created with <b>SaveTemporaryAnalyticReport</b> (see



Error code	Description
	section <a href="#">3.1.4.63</a> ), 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> (see section <a href="#">2.2.4.162</a> ) object "ParentReportViewLocation" embedded within "CustomData" of the report view.
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.20.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.20.1.1 GetAnalyticReportViewSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView
```

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

#### 3.1.4.20.1.2 GetAnalyticReportViewSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView
```

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

### 3.1.4.20.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.20.2.1 GetAnalyticReportView

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

```
<xs:element name="GetAnalyticReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
```

```
</xs:element>
```

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

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

### 3.1.4.20.2.2 GetAnalyticReportViewResponse

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

```
<xs:element name="GetAnalyticReportViewResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAnalyticReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetAnalyticReportViewResult:** The [ReportView](#) object that was requested from the server (2).

### 3.1.4.20.3 Complex Types

None.

### 3.1.4.20.4 Simple Types

None.

### 3.1.4.21 GetAnnotation

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

```
<wsdl:operation name="GetAnnotation">
  <wsdl:input message="tns:GetAnnotationSoapIn"/>
  <wsdl:output message="tns:GetAnnotationSoapOut"/>
</wsdl:operation>
```

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

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

2. The server (2) sends the corresponding annotation.

**Exceptions:**

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.21.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.21.1.1 GetAnnotationSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotation
```

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

#### 3.1.4.21.1.2 GetAnnotationSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotation
```

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

### 3.1.4.21.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.21.2.1 GetAnnotation

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

```
<xs:element name="GetAnnotation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
        type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="tupleCollection"
type="tns:ArrayOfTuple"/>
        <xs:element minOccurs="0" maxOccurs="1" name="cellPath" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

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

- It MUST be present.
- The **ItemUrl** property MUST be set to the location of the report view associated with the annotation.

**tupleCollection:** An array of **Tuple** (see section [2.2.4.162](#)) objects that aggregates all the column, row, and page filter selections corresponding to the cell or cells in the scorecard for which this annotation is applicable. It MUST be present.

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

### 3.1.4.21.2.2 GetAnnotationResponse

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

```

<xs:element name="GetAnnotationResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationResult"
type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

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

### 3.1.4.21.3 Complex Types

The following XML Schema complex type definitions are specific to this operation.

#### 3.1.4.21.3.1 ArrayOfTuple

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

```

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

```

**Tuple:** This element MUST NOT be null and MUST conform to the schema of the **Tuple** (see section [2.2.4.181](#)) complex type.

#### 3.1.4.21.4 Simple Types

None.

#### 3.1.4.22 GetAnnotationByID

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

```
<wsdl:operation name="GetAnnotationByID">
  <wsdl:input message="tns:GetAnnotationByIDSoapIn"/>
  <wsdl:output message="tns:GetAnnotationByIDSoapOut"/>
</wsdl:operation>
```

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

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

##### Exceptions:

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.22.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.22.1.1 GetAnnotationByIDSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotationByID
```

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

##### 3.1.4.22.1.2 GetAnnotationByIDSoapOut

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

The SOAP action value is:

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

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

### 3.1.4.22.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.22.2.1 GetAnnotationByID

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

```
<xs:element name="GetAnnotationByID">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="annotationID"
        xmlns:q15="http://microsoft.com/wsdl/types/" type="q15:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

#### 3.1.4.22.2.2 GetAnnotationByIDResponse

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

```
<xs:element name="GetAnnotationByIDResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationByIDResult"
        type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.22.3 Complex Types

None.

### 3.1.4.22.4 Simple Types

None.

### 3.1.4.23 GetAnnotationSetting

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

```
<wsdl:operation name="GetAnnotationSetting">
```

```

        <wsdl:input message="tns:GetAnnotationSettingSoapIn"/>
        <wsdl:output message="tns:GetAnnotationSettingSoapOut"/>
    </wsdl:operation>

```

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

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

### 3.1.4.23.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.23.1.1 GetAnnotationSettingSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting
```

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

#### 3.1.4.23.1.2 GetAnnotationSettingSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting
```

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

### 3.1.4.23.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.23.2.1 GetAnnotationSetting

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

```

<xs:element name="GetAnnotationSetting">
  <xs:complexType/>
</xs:element>

```

#### 3.1.4.23.2.2 GetAnnotationSettingResponse

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

```

<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>

```

**GetAnnotationSettingResult:** An AnnotationSetting (see section [3.1.4.23.3.1](#)) object that was requested from the server (2).

### 3.1.4.23.3 Complex Types

The following XML Schema complex type definitions are specific to this operation.

#### 3.1.4.23.3.1 AnnotationSetting

The **AnnotationSetting** complex type specifies annotation settings for this service application.

```

<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>

```

**IsAnnotationEnabled:** Specifies whether annotations are enabled for scorecards; if set to **true**, annotations are enabled; otherwise, annotations are not enabled.

**IsAnnotationEnabledDefault:** Specifies the default value of **IsAnnotationEnabled** used by the server (2). The default value is **true**.

**IsDeletionByAuthorEnabled:** Specifies whether annotations can be deleted by the user; if set to **true**, annotations can be deleted; otherwise, annotations cannot be deleted.

**IsDeletionByAuthorEnabledDefault:** Specifies the default value of **IsDeletionByAuthorEnabled** used by the server (2). The default is **true**.

**MaxAnnotationAllowed:** Specifies the maximum number of annotations that can be added for a scorecard. This value **MUST** be an integer greater than or equal to zero.

### 3.1.4.23.4 Simple Types

None.

#### 3.1.4.24 GetAsKpis

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

```

<wsdl:operation name="GetAsKpis">
  <wsdl:input message="tns:GetAsKpisSoapIn"/>
  <wsdl:output message="tns:GetAsKpisSoapOut"/>

```



```
</wsdl:operation>
```

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

### 3.1.4.24.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.24.1.1 GetAsKpisSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAsKpis
```

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

#### 3.1.4.24.1.2 GetAsKpisSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetAsKpis
```

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

### 3.1.4.24.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.24.2.1 GetAsKpis

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

```
<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>
```

**dataSource:** MUST be an Analysis Services data source.

**listUrl:** MUST be a server-relative URL to the KPI (see section [2.2.4.128](#)) list (1).

### 3.1.4.24.2.2 GetAsKpisResponse

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

```
<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>
```

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

### 3.1.4.24.3 Complex Types

None.

### 3.1.4.24.4 Simple Types

None.

### 3.1.4.25 GetCube

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

```
<wsdl:operation name="GetCube">
  <wsdl:input message="tns:GetCubeSoapIn"/>
  <wsdl:output message="tns:GetCubeSoapOut"/>
</wsdl:operation>
```

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

Error code	Description
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceCubeNotFound</b>	See Full List of Possible Error Codes (section <a href="#">2.2.9.2</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.25.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.25.1.1 GetCubeSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCube
```

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

#### 3.1.4.25.1.2 GetCubeSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCube
```

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

#### 3.1.4.25.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.25.2.1 GetCube

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

```
<xs:element name="GetCube">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

##### 3.1.4.25.2.2 GetCubeResponse

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

```
<xs:element name="GetCubeResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeResult" type="tns:Cube"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.25.3 Complex Types

None.

### 3.1.4.25.4 Simple Types

None.

### 3.1.4.26 GetCubeFromDataSource

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

```
<wsdl:operation name="GetCubeFromDataSource">
  <wsdl:input message="tns:GetCubeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeFromDataSourceSoapOut"/>
</wsdl:operation>
```

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

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceCubeNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.26.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.26.1.1 GetCubeFromDataSourceSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeFromDataSource
```

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

##### 3.1.4.26.1.2 GetCubeFromDataSourceSoapOut

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

The SOAP action value is:

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

### 3.1.4.26.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.26.2.1 GetCubeFromDataSource

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

```
<xs:element name="GetCubeFromDataSource">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

#### 3.1.4.26.2.2 GetCubeFromDataSourceResponse

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

```
<xs:element name="GetCubeFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeFromDataSourceResult"
type="tns:Cube"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.26.3 Complex Types

None.

### 3.1.4.26.4 Simple Types

None.

### 3.1.4.27 GetCubeMetaData

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

```

<wsdl:operation name="GetCubeMetaData">
  <wsdl:input message="tns:GetCubeMetaDataSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataSoapOut"/>
</wsdl:operation>

```

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

Error code	Description
<b>UnableToLoadFCODao</b>	See Full List of Possible Error Codes (section <a href="#">2.2.9.2</a> ).
<b>DataSourceCubeNotFound</b>	See Full List of Possible Error Codes (section <a href="#">2.2.9.2</a> ).
<b>DatabaseConnectionNotOpen</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.27.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.27.1.1 GetCubeMetaDataSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData
```

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

#### 3.1.4.27.1.2 GetCubeMetaDataSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData
```

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

### 3.1.4.27.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.27.2.1 GetCubeMetaData

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

```
<xs:element name="GetCubeMetaData">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

#### 3.1.4.27.2.2 GetCubeMetaDataResponse

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

```
<xs:element name="GetCubeMetaDataResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeMetaDataResult" type="tns:Cube"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

### 3.1.4.27.3 Complex Types

None.

### 3.1.4.27.4 Simple Types

None.

### 3.1.4.28 GetCubeMetaDataForDataSource

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

```
<wsdl:operation name="GetCubeMetaDataForDataSource">
  <wsdl:input message="tns:GetCubeMetaDataForDataSourceSoapIn"/>
  <wsdl:output message="tns:GetCubeMetaDataForDataSourceSoapOut"/>
</wsdl:operation>
```

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

Error code	Description
<b>UnableToLoadFCODao</b>	See Full List of Possible Error Codes (section <a href="#">2.2.9.2</a> ).
<b>DataSourceCubeNotFound</b>	See Full List of Possible Error Codes (section <a href="#">2.2.9.2</a> ).
<b>DatabaseConnectionNotOpen</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.28.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.28.1.1 GetCubeMetaForDataSourceSoapIn

The requested WSDL message for the **GetCubeMetaForDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaForDataSource
```

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

#### 3.1.4.28.1.2 GetCubeMetaForDataSourceSoapOut

The response WSDL message for the **GetCubeMetaForDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaForDataSource
```

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

### 3.1.4.28.2 Elements

The following XML Schema element definitions are specific to this operation.



#### 3.1.4.28.2.1 GetCubeMetaDataForDataSource

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

```
<xs:element name="GetCubeMetaDataForDataSource">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** MUST be an Analysis Services data source (see section [2.2.4.85](#)).

#### 3.1.4.28.2.2 GetCubeMetaDataForDataSourceResponse

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

```
<xs:element name="GetCubeMetaDataForDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeMetaDataForDataSourceResult"
type="tns:Cube"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

#### 3.1.4.28.3 Complex Types

None.

#### 3.1.4.28.4 Simple Types

None.

#### 3.1.4.29 GetCubeNameInfos

This operation retrieves an **ArrayOfNameInfo** (see section [2.2.4.49](#)) that describes the cubes of the data source (1).

```
<wsdl:operation name="GetCubeNameInfos">
  <wsdl:input message="tns:GetCubeNameInfosSoapIn"/>
  <wsdl:output message="tns:GetCubeNameInfosSoapOut"/>
</wsdl:operation>
```

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

1. The server (2) receives a data source

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

#### Exceptions:

Error code	Description
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

The error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.29.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.29.1.1 GetCubeNameInfosSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos
```

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

#### 3.1.4.29.1.2 GetCubeNameInfosSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos
```

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

### 3.1.4.29.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.29.2.1 GetCubeNameInfos

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

```
<xs:element name="GetCubeNameInfos">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
```

```
</xs:element>
```

**dataSource:** The data source (1) MUST be present.

### 3.1.4.29.2.2 GetCubeNameInfosResponse

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

```
<xs:element name="GetCubeNameInfosResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetCubeNameInfosResult"
type="tns:ArrayOfNameInfo"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetCubeNameInfosResult:** An ArrayOfNameInfo (see section [2.2.4.49](#)) MUST be present.

### 3.1.4.29.3 Complex Types

None.

### 3.1.4.29.4 Simple Types

None.

### 3.1.4.30 GetCurrentCultureLcid

This operation retrieves the current culture locale identifier.

```
<wsdl:operation name="GetCurrentCultureLcid">
  <wsdl:input message="tns:GetCurrentCultureLcidSoapIn"/>
  <wsdl:output message="tns:GetCurrentCultureLcidSoapOut"/>
</wsdl:operation>
```

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

- The server (2) MUST respond by retrieving the current culture locale identifier.
- If there was an application error on the server (2) during the operation, the server (2) MUST return a SOAP FAULT response, The error code MUST be one of the values specified in section [2.2.9.2](#).

#### 3.1.4.30.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.30.1.1 GetCurrentCultureLcidSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid
```

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

#### 3.1.4.30.1.2 GetCurrentCultureLcidSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid
```

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

#### 3.1.4.30.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.30.2.1 GetCurrentCultureLcid

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

```
<xs:element name="GetCurrentCultureLcid">
  <xs:complexType/>
</xs:element>
```

##### 3.1.4.30.2.2 GetCurrentCultureLcidResponse

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

```
<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>
```

**GetCurrentCultureLcidResult:** An integer representing the current culture locale identifier, which determines how dates, times, numbers, currencies, calendar preferences, input methods, and sorting preferences are formatted.

#### 3.1.4.30.3 Complex Types

None.

#### 3.1.4.30.4 Simple Types

None.

### 3.1.4.31 GetCurrentUserInfo

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

```
<wsdl:operation name="GetCurrentUserInfo">
  <wsdl:input message="tns:GetCurrentUserInfoSoapIn"/>
  <wsdl:output message="tns:GetCurrentUserInfoSoapOut"/>
</wsdl:operation>
```

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

- The protocol client MUST provide out parameters to hold the current user name and display name.
- The server (2) MUST set those parameters to the current user name and user display name.
- In the event of an application error, the server (2) MUST set the current user name to the string "i:Anonymous" and user display name to the string "Anonymous".

#### 3.1.4.31.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.31.1.1 GetCurrentUserInfoSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo
```

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

##### 3.1.4.31.1.2 GetCurrentUserInfoSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo
```

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

#### 3.1.4.31.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.31.2.1 GetCurrentUserInfo

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

```
<xs:element name="GetCurrentUserInfo">
```

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

### 3.1.4.31.2.2 GetCurrentUserInfoResponse

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

```
<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>
```

**userName:** User name information of current user.

**userDisplayName:** Display name information of current user.

### 3.1.4.31.3 Complex Types

None.

### 3.1.4.31.4 Simple Types

None.

### 3.1.4.32 GetDashboard

This operation retrieves a dashboard.

```
<wsdl:operation name="GetDashboard">
  <wsdl:input message="tns:GetDashboardSoapIn"/>
  <wsdl:output message="tns:GetDashboardSoapOut"/>
</wsdl:operation>
```

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

1. The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the dashboard to be retrieved.
2. The server (2) responds with the corresponding dashboard.
3. In the event the dashboard cannot be retrieved, the server (2) SHOULD [<13>](#) return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

Error code	Description
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the **ErrorCode** MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.32.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.32.1.1 GetDashboardSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDashboard
```

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

#### 3.1.4.32.1.2 GetDashboardSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDashboard
```

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

### 3.1.4.32.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.32.2.1 GetDashboard

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

```
<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>
```

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

### 3.1.4.32.2 GetDashboardResponse

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

```
<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>
```

**GetDashboardResult:** A dashboard as specified in [2.2.4.79](#) SHOULD be present.

### 3.1.4.32.3 Complex Types

None.

### 3.1.4.32.4 Simple Types

None.

### 3.1.4.33 GetDatabaseNamesFromDataSource

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

```
<wsdl:operation name="GetDatabaseNamesFromDataSource">
  <wsdl:input message="tns:GetDatabaseNamesFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDatabaseNamesFromDataSourceSoapOut"/>
</wsdl:operation>
```

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

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

#### Exceptions:

Error code	Description
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>NotTrustedLocation</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.33.1 Messages

The following WSDL message definitions are specific to this operation.



#### 3.1.4.33.1.1 GetDatabaseNamesFromDataSourceSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDatabaseNamesFromDataSource
```

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

#### 3.1.4.33.1.2 GetDatabaseNamesFromDataSourceSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDatabaseNamesFromDataSource
```

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

#### 3.1.4.33.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.33.2.1 GetDatabaseNamesFromDataSource

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

```
<xs:element name="GetDatabaseNamesFromDataSource">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The data source (1) MUST be present.

##### 3.1.4.33.2.2 GetDatabaseNamesFromDataSourceResponse

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

```
<xs:element name="GetDatabaseNamesFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDatabaseNamesFromDataSourceResult"
type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetDatabaseNamesFromDataSourceResult:** An array of strings MUST be present.

### 3.1.4.33.3 Complex Types

None.

### 3.1.4.33.4 Simple Types

None.

### 3.1.4.34 GetDataSource

This operation retrieves a data source (1).

```
<wsdl:operation name="GetDataSource">
  <wsdl:input message="tns:GetDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDataSourceSoapOut"/>
</wsdl:operation>
```

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

1. Receives a **RepositoryLocation** (see section [2.2.4.162](#)) for the data source (1) to be retrieved.
2. The server (2) sends the corresponding data source (1).
3. In the event that a data source (1) cannot be retrieved, the server (2) SHOULD [≤14>](#) return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.34.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.34.1.1 GetDataSourceSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDataSource
```

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

### 3.1.4.34.1.2 GetDataSourceSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDataSource
```

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

### 3.1.4.34.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.34.2.1 GetDataSource

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

```
<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>
```

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

#### 3.1.4.34.2.2 GetDataSourceResponse

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

```
<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>
```

**GetDataSourceResult:** A data source (1) as specified in **DataSource** (see section [2.2.4.85](#)) MUST be present.

### 3.1.4.34.3 Complex Types

None.

### 3.1.4.34.4 Simple Types

None.

### 3.1.4.35 GetDependentElements

**GetDependentElements** retrieves from the server all **FirstClassElements** (see section [2.2.4.99](#)) associated with a list (1) of repository locations. In addition, all **FirstClassElements** that are related by reference are also included in the response. For example, for a requested scorecard, all KPIs, Indicators, and data sources that the scorecard depends on will also be retrieved.

```
<wsdl:operation name="GetDependentElements">
  <wsdl:input message="tns:GetDependentElementsSoapIn"/>
  <wsdl:output message="tns:GetDependentElementsSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetDependentElementsSoapIn** message, and the server responds with a **GetDependentElementsSoapOut** response message as follows:

1. The protocol client sends a list (1) of **RepositoryLocations**.
2. The server responds with a **DependentElementInfo** (see section [3.1.4.35.3.2](#)) containing all **FirstClassElement** items (1) specified by the list of **RepositoryLocations**, all associated sub-items, and all containing list URLs.
3. In the event that all **FirstClassElement** items (1) and sub-items referenced by the list cannot be retrieved, the server (2) SHOULD [<15>](#) return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>FCReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.35.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.35.1.1 GetDependentElementsSoapIn

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDependentElements
```

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

##### 3.1.4.35.1.2 GetDependentElementsSoapOut

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

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDependentElements
```

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

### 3.1.4.35.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.35.2.1 GetDependentElements

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

```
<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>
```

**missingItems:** An **ArrayOfRepositoryLocation** as specified in section [3.1.4.35.3.1](#). This specifies which items (1) to retrieve.

#### 3.1.4.35.2.2 GetDependentElementsResponse

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

```
<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>
```

**GetDependentElementsResult:** A **DependentElementInfo** as specified in section [3.1.4.35.3.2](#) MUST be present.

### 3.1.4.35.3 Complex Types

The following XML Schema complex type definitions are specific to this operation.

#### 3.1.4.35.3.1 ArrayOfRepositoryLocation

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

```
<xs:complexType name="ArrayOfRepositoryLocation">
  <xs:sequence>
```

```

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

```

**RepositoryLocation:** This element MUST NOT be **null** and MUST conform to the schema of the **RepositoryLocation** (see section [2.2.4.162](#)) complex type.

### 3.1.4.35.3.2 DependentElementInfo

A complex type that contains elements and associated list references.

```

<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>

```

**DependentLists:** An **ArrayOfRepositoryList** (see section [3.1.4.35.3.3](#)). A collection of lists (1) associated with the items (1) in **DependentElements**.

**DependentElements:** An **ArrayOfFirstClassElement** (see section [2.2.4.35](#)). A collection of **FirstClassElement** items (1) and all items (1) associated through **FirstClassElement** references.

### 3.1.4.35.3.3 ArrayOfRepositoryList

The **ArrayOfRepositoryList** complex type specifies an array of RepositoryList elements (see section [3.1.4.35.3.4](#)).

```

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

```

**RepositoryList:** This element MUST NOT be null and MUST conform to the schema of the **RepositoryList** (section [3.1.4.35.3.4](#)) complex type.

### 3.1.4.35.3.4 RepositoryList

Specifies a location where **FirstClassElement** (section [2.2.4.99](#)) items (1) are stored on the server.

```

<xs:complexType name="RepositoryList">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Location">
      <xs:complexType>
        <xs:sequence>
          <xs:element ref="xs:schema"/>
          <xs:any/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

        </xs:complexType>
    </xs:element>
    <xs:element minOccurs="1" maxOccurs="1" name="SupportedTypes" type="tns:FCOContentType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Title" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ListId"
xmlns:q21="http://microsoft.com/wsdl/types/" type="q21:guid"/>
</xs:sequence>
</xs:complexType>

```

**Location:** Contains the necessary information to identify the location of a list (1) on the server (2).

**SupportedTypes:** The content types that are supported in the form of [FCOContentType](#).

**Title:** Specifies the title for the **RepositoryList**. This element **MUST** be present. The value **MUST** NOT be empty and **MUST** NOT consist of only whitespace characters.

**ListId:** Specifies the identity for this **RepositoryList**. This element **MUST** be formatted as a GUID.

### 3.1.4.35.4 Simple Types

The following XML Schema simple type definitions are specific to this operation.

#### 3.1.4.35.4.1 FCOContentType

Specifies the type of an FCO.

```

<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>

```

The following table specifies the allowable values for FCOContentType:

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> .
PpsKpi	The object is a <a href="#">Kpi</a> .
PpsReportView	The object is a <a href="#">ReportView</a> .

Value	Meaning
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 GetDimensions

This operation retrieves an array of dimension (1) objects.

```
<wsdl:operation name="GetDimensions">
  <wsdl:input message="tns:GetDimensionsSoapIn"/>
  <wsdl:output message="tns:GetDimensionsSoapOut"/>
</wsdl:operation>
```

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

1. Receives a RepositoryLocation (see section [2.2.4.162](#)) for the associated data source (1).
2. The server (2) sends the corresponding ArrayOfDimension (see section [2.2.4.33](#)).

Exceptions

Error code	Description
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.36.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.36.1.1 GetDimensionsSoapIn

The requested WSDL message for the **GetDimensions** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensions
```

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



### 3.1.4.36.1.2 GetDimensionsSoapOut

The response WSDL message for the **GetDimensions** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensions
```

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

### 3.1.4.36.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.36.2.1 GetDimensions

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

```
<xs:element name="GetDimensions">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** A **RepositoryLocation** (see section [2.2.4.162](#)) MUST be present.

#### 3.1.4.36.2.2 GetDimensionsResponse

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

```
<xs:element name="GetDimensionsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsResult"
type="tns:ArrayOfDimension"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetDimensionsResult:** An **ArrayOfDimension** (see section [2.2.4.33](#)) MUST be present.

### 3.1.4.36.3 Complex Types

None.

### 3.1.4.36.4 Simple Types

None.

### 3.1.4.37 GetDimensionsFromDataSource

This operation retrieves an array of dimension (1) objects (see section [2.2.4.90](#)).

```
<wsdl:operation name="GetDimensionsFromDataSource">
  <wsdl:input message="tns:GetDimensionsFromDataSourceSoapIn"/>
  <wsdl:output message="tns:GetDimensionsFromDataSourceSoapOut"/>
</wsdl:operation>
```

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

1. Receives a **DataSource** (see section [2.2.4.85](#)).
2. The server (2) sends the corresponding **ArrayOfDimension** (see section [2.2.4.33](#)).

Exceptions

Error code	Description
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceHostNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceDatabaseNotFound</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.37.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.37.1.1 GetDimensionsFromDataSourceSoapIn

The requested WSDL message for the **GetDimensionsFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource
```

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

##### 3.1.4.37.1.2 GetDimensionsFromDataSourceSoapOut

The response WSDL message for the **GetDimensionsFromDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource
```

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

### 3.1.4.37.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.37.2.1 GetDimensionsFromDataSource

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

```
<xs:element name="GetDimensionsFromDataSource">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The data source (1) (see section [2.2.4.85](#)) MUST be present.

#### 3.1.4.37.2.2 GetDimensionsFromDataSourceResponse

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

```
<xs:element name="GetDimensionsFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsFromDataSourceResult"
type="tns:ArrayOfDimension"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetDimensionsFromDataSourceResult:** An **ArrayOfDimension** (see section [2.2.4.33](#)) MUST be present.

### 3.1.4.37.3 Complex Types

None.

### 3.1.4.37.4 Simple Types

None.

### 3.1.4.38 GetFilter

This operation retrieves a filter.

```
<wsdl:operation name="GetFilter">
  <wsdl:input message="tns:GetFilterSoapIn"/>
  <wsdl:output message="tns:GetFilterSoapOut"/>
</wsdl:operation>
```

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

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the filter to be retrieved.
2. The server (2) responds with the corresponding filter.
3. In the event the filter cannot be retrieved, the server (2) SHOULD [<16>](#) return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.38.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.38.1.1 GetFilterSoapIn

The requested WSDL message for the **GetFilter** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetFilter
```

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

#### 3.1.4.38.1.2 GetFilterSoapOut

The response WSDL message for the **GetFilter** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetFilter
```

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

### 3.1.4.38.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.38.2.1 GetFilter

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

```
<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>

```

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

### 3.1.4.38.2.2 GetFilterResponse

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

```

<xs:element name="GetFilterResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetFilterResult" type="tns:Filter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**GetFilterResult:** A filter as specified in section [2.2.4.98](#) SHOULD be present.

### 3.1.4.38.3 Complex Types

None.

### 3.1.4.38.4 Simple Types

None.

### 3.1.4.39 GetIndicator

This operation retrieves an indicator from the server (2).

```

<wsdl:operation name="GetIndicator">
  <wsdl:input message="tns:GetIndicatorSoapIn"/>
  <wsdl:output message="tns:GetIndicatorSoapOut"/>
</wsdl:operation>

```

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

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the indicator to be retrieved.
2. The server (2) sends the corresponding indicator.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See <b>Common list of ErrorCodes</b> (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.39.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.39.1.1 GetIndicatorSoapIn

The requested WSDL message for the **GetIndicator** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetIndicator
```

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

#### 3.1.4.39.1.2 GetIndicatorSoapOut

The response WSDL message for the **GetIndicator** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetIndicator
```

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

### 3.1.4.39.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.39.2.1 GetIndicator

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

```
<xs:element name="GetIndicator">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**location:** The [RepositoryLocation](#) object that specifies the location of the indicator on the server (2).

- It MUST be present.

- The **ItemUrl** property MUST be set to the location of the indicator.

### 3.1.4.39.2.2 GetIndicatorResponse

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

```
<xs:element name="GetIndicatorResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetIndicatorResult"
type="tns:Indicator"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetIndicatorResult:** The [Indicator](#) object that was requested from the server (2).

### 3.1.4.39.3 Complex Types

None.

### 3.1.4.39.4 Simple Types

None.

### 3.1.4.40 GetKpi

This operation retrieves a [Kpi](#) object.

```
<wsdl:operation name="GetKpi">
  <wsdl:input message="tns:GetKpiSoapIn"/>
  <wsdl:output message="tns:GetKpiSoapOut"/>
</wsdl:operation>
```

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

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

#### Exceptions:

Error code	Description
<b>FCReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCReadFailedListAccess</b>	See <b>Common list of ErrorCodes</b> (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.40.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.40.1.1 GetKpiSoapIn

The requested WSDL message for the **GetKpi** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetKpi
```

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

#### 3.1.4.40.1.2 GetKpiSoapOut

The response WSDL message for the **GetKpi** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetKpi
```

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

### 3.1.4.40.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.40.2.1 GetKpi

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

```
<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>
```

**location:** The location of the key performance indicator (KPI) to be retrieved, as specified by **RepositoryLocation** (see section [2.2.4.162](#)). It MUST be present.

#### 3.1.4.40.2.2 GetKpiResponse

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

```
<xs:element name="GetKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
```



```
</xs:element>
```

**GetKpiResult:** The **Kpi** (see section [2.2.4.128](#)) object that was requested from the server (2).

### 3.1.4.40.3 Complex Types

None.

### 3.1.4.40.4 Simple Types

None.

### 3.1.4.41 GetKpisFromScorecard

This operation retrieves an array of Kpi (see section [2.2.4.128](#)) objects associated with a scorecard.

```
<wsdl:operation name="GetKpisFromScorecard">
  <wsdl:input message="tns:GetKpisFromScorecardSoapIn"/>
  <wsdl:output message="tns:GetKpisFromScorecardSoapOut"/>
</wsdl:operation>
```

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

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

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.41.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.41.1.1 GetKpisFromScorecardSoapIn

The requested 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.

#### 3.1.4.41.1.2 GetKpisFromScorecardSoapOut

The response WSDL message for the **GetKpisFromScorecard** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetKpisFromScorecard
```

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

#### 3.1.4.41.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.41.2.1 GetKpisFromScorecard

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

```
<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>
```

**scorecardLocation:** The location of a scorecard, as specified by **RepositoryLocation** (see section [2.2.4.162](#)). It MUST be present.

##### 3.1.4.41.2.2 GetKpisFromScorecardResponse

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

```
<xs:element name="GetKpisFromScorecardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpisFromScorecardResult"
type="tns:ArrayOfKpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetKpisFromScorecardResult:** An array of **Kpi** (see section [2.2.4.128](#)) elements that was requested from the server (2).

#### 3.1.4.41.3 Complex Types

None.

#### 3.1.4.41.4 Simple Types

None.

### 3.1.4.42 GetLatestAnalyticReportVersion

This operation retrieves from the server (2) the version number for a report view that has been created through [SaveTemporaryAnalyticReport](#).

```
<wsdl:operation name="GetLatestAnalyticReportVersion">
  <wsdl:input message="tns:GetLatestAnalyticReportVersionSoapIn"/>
  <wsdl:output message="tns:GetLatestAnalyticReportVersionSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **GetReportViewSoapIn** request and the server (2) responds with a **GetReportViewSoapOut** message as follows:

1. The protocol client sends a GUID that uniquely identifies a report view.
2. The server (2) sends an integer representing the latest version number of the corresponding report view.

In case of failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is specified in section [2.2.9](#).

#### 3.1.4.42.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.42.1.1 GetLatestAnalyticReportVersionSoapIn

The requested WSDL message for the **GetLatestAnalyticReportVersion** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetLatestAnalyticReportVersion
```

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

##### 3.1.4.42.1.2 GetLatestAnalyticReportVersionSoapOut

The response WSDL message for the **GetLatestAnalyticReportVersion** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetLatestAnalyticReportVersion
```

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

#### 3.1.4.42.2 Elements

The following XML Schema element definitions are specific to this operation.

### 3.1.4.42.2.1 GetLatestAnalyticReportVersion

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

```
<xs:element name="GetLatestAnalyticReportVersion">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="analyticReportViewId"
        xmlns:q11="http://microsoft.com/wsdl/types/" type="q11:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewId:** The identifier that was returned from the call to [SaveTemporaryAnalyticReport](#) that created the report view for which the version number is to be retrieved. It **MUST** be present.

### 3.1.4.42.2.2 GetLatestAnalyticReportVersionResponse

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

```
<xs:element name="GetLatestAnalyticReportVersionResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="GetLatestAnalyticReportVersionResult"
        type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetLatestAnalyticReportVersionResult:** The version number of the report view. It **MUST** be present.

### 3.1.4.42.3 Complex Types

None.

### 3.1.4.42.4 Simple Types

None.

### 3.1.4.43 GetListItems

GetListItems retrieves all FirstClassElements (see section [2.2.4.99](#)) associated with a given repository list (1) from the server.

```
<wsdl:operation name="GetListItems">
  <wsdl:input message="tns:GetListItemsSoapIn"/>
  <wsdl:output message="tns:GetListItemsSoapOut"/>
</wsdl:operation>
```

This proceeds as follows:

1. The protocol client sends the URL of the list (1) from which to retrieve items (1).

2. The server (2) responds with a collection of corresponding **FirstClassElement** items (1).
3. In the event that all **FirstClassElement** items (1) in the list (1) cannot be retrieved, the server (2) SHOULD<17> return a SOAP fault response, as detailed in section [2.2.9](#).

**Exceptions:**

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.43.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.43.1.1 GetListItemsSoapIn

The requested WSDL message for the **GetListItems** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetListItems
```

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

#### 3.1.4.43.1.2 GetListItemsSoapOut

The response WSDL message for the **GetListItems** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetListItems
```

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

### 3.1.4.43.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.43.2.1 GetListItems

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

```
<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>
```

**listUrl:** A server-relative URL that references the list (1) on the server (2) from which to retrieve the items (1). This MUST be present and MUST be a valid URL.

### 3.1.4.43.2.2 GetListItemsResponse

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

```
<xs:element name="GetListItemsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetListItemsResult"
type="tns:ArrayOfFirstClassElement"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetListItemsResult:** An array **FirstClassElement** as specified in section [2.2.4.35](#) MUST be present. This array MUST contain one element for each item (1) in the requested list (1), and SHOULD NOT contain null elements.

### 3.1.4.43.3 Complex Types

None.

### 3.1.4.43.4 Simple Types

None.

### 3.1.4.44 GetMdx

This operation retrieves an MDX that can be used to query data sources for the given analytic report. **Analytic** Chart and **Analytic** Grid report view types contain custom data that is used to generate MDX queries. See [ReportView](#) for more detail.

```
<wsdl:operation name="GetMdx">
  <wsdl:input message="tns:GetMdxSoapIn"/>
  <wsdl:output message="tns:GetMdxSoapOut"/>
</wsdl:operation>
```

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

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) referencing the analytic report from which to generate the MDX.
2. The server (2) responds with an MDX expression.
3. In the event the MDX cannot be retrieved, the server (2) SHOULD [2.2.9](#) return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.44.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.44.1.1 GetMdxSoapIn

The requested WSDL message for the **GetMdx** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetMdx
```

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

#### 3.1.4.44.1.2 GetMdxSoapOut

The response WSDL message for the **GetMdx** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetMdx
```

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

### 3.1.4.44.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.44.2.1 GetMdx

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

```
<xs:element name="GetMdx">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewLocation:** A **RepositoryLocation** as specified in section [2.2.4.162](#) MUST be present.

- If the report view was created with **CreateReportView**, the **ItemUrl** property MUST contain a valid URL. **ItemType** and **ItemGuid** are set by the server (2).
- If the report view was created with **SaveTemporaryAnalyticReport**:
  - The **ItemGuid** property MUST equal the GUID that was returned from **SaveTemporaryAnalyticReport**.
  - The **ItemType** property MUST equal **TempReportView** as specified by **FirstClassObjectType** (section [2.2.5.20](#)).
  - The **ItemUrl** property MUST equal an empty string.

### 3.1.4.44.2.2 GetMdxResponse

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

```
<xs:element name="GetMdxResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetMdxResult" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetMdxResult:** A string that represents an MDX. This string SHOULD NOT be empty.

### 3.1.4.44.3 Complex Types

None.

### 3.1.4.44.4 Simple Types

None.

### 3.1.4.45 GetParameterDisplayData

This operation builds a template data table containing only the columns produced by a specific parameter type. The referred parameter represents a specific kind of connection between two Web Parts. The resulting **DataTable** (as described in [\[DataTable\]](#)) represents an empty sample of the information that gets passed on that connection.

```
<wsdl:operation name="GetParameterDisplayData">
  <wsdl:input message="tns:GetParameterDisplayDataSoapIn"/>
  <wsdl:output message="tns:GetParameterDisplayDataSoapOut"/>
</wsdl:operation>
```

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

1. The server (2) uses the **ParameterProviderId** property from **ParameterDefinition** (section [2.2.4.156](#)) to identify one of the parameter providers registered on the server.



- 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** <19> (section [2.2.4.121](#)) referenced by **gridViewData** to create the DataTable.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.45.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.45.1.1 GetParameterDisplayDataSoapIn

The requested WSDL message for the **GetParameterDisplayData** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData
```

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

#### 3.1.4.45.1.2 GetParameterDisplayDataSoapOut

The response WSDL message for the **GetParameterDisplayData** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData
```

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

### 3.1.4.45.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.45.2.1 GetParameterDisplayData

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

```
<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>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="gridViewData" type="tns:GridViewData"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

**parameterDefinition:** Specifies the parameter definition (section [2.2.4.156](#)). It MUST NOT be null and the property `ParameterProviderId` MUST refer to one of the parameter data providers registered on the server. This function supports only filter-type parameters shown in the following table.

ParameterProviderId	CustomDefinition
MDXParameterDataProvider	A <a href="#">MdxParameterDefinition</a> object.
MemberParameterDataProvider	A <a href="#">MemberParameterDefinition</a> object.
NamedSetParameterDataProvider	A <a href="#">NamedSetParameterDefinition</a> object.
TimeIntelligencePostFormulaProvider	A <a href="#">TimeIntelligencePostFormulaDefinition</a> object.
TimeIntelligenceProvider	A <a href="#">TimeIntelligenceDefinition</a> object.

**parameterSourceLocation:** Specifies a data source location as defined in `RepositoryLocation` (section [2.2.4.162](#)). It MAY be null or empty, in which case if the parameter type requires a data source location, the resulting `DataTable` (as described in [\[DataTable\]](#)) is NULL.

The following parameter providers require an MDX capable OLAP data source(1).

ParameterProviderId	CustomDefinition
MDXParameterDataProvider	A <code>MdxParameterDefinition</code> object.
MemberParameterDataProvider	A <code>MemberParameterDefinition</code> object.
NamedSetParameterDataProvider	A <code>NamedSetParameterDefinition</code> object.

**gridViewData:** Unused. MUST be set to NULL and MUST be ignored by the protocol client.

### 3.1.4.45.2.2 GetParameterDisplayDataResponse

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

```

<xs:element name="GetParameterDisplayDataResponse">
  <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>
```

**GetParameterDisplayDataResult:** This defines the template data table that contains only the columns produced by a specific parameter type.

### 3.1.4.45.3 Complex Types

None.

### 3.1.4.45.4 Simple Types

None.

### 3.1.4.46 GetPreviewDataSet

This method retrieves a data set from a data source, which is suitable for previewing results.

```
<wsdl:operation name="GetPreviewDataSet">
  <wsdl:input message="tns:GetPreviewDataSetSoapIn"/>
  <wsdl:output message="tns:GetPreviewDataSetSoapOut"/>
</wsdl:operation>
```

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

1. The protocol client sends a **DataSource** (section [2.2.4.85](#)) that defines the data to be retrieved.
2. The server (2) responds with a data set suitable for previewing the data.
3. In the event a data set cannot be retrieved, the server (2) MUST return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>DataSourceConnectionUnsupported</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.46.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.46.1.1 GetPreviewDataSetSoapIn

The requested WSDL message for the **GetPreviewDataSet** WSDL operation.

The SOAP action value is:

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

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

#### 3.1.4.46.1.2 GetPreviewDataSetSoapOut

The response WSDL message for the **GetPreviewDataSet** method.

The SOAP action value is:

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

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

#### 3.1.4.46.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.46.2.1 GetPreviewDataSet

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

```
<xs:element name="GetPreviewDataSet">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="maxRecords" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**maxRecords:** The maximum number of records to retrieve.

**dataSource:** The **DataSource** (section [2.2.4.85](#)) to be used in the query. This MUST NOT be null or empty. The **DataSource** MUST allow the query of preview data sets. [<20>](#)

##### 3.1.4.46.2.2 GetPreviewDataSetResponse

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

```
<xs:element name="GetPreviewDataSetResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPreviewDataSetResult">
        <xs:complexType>
          <xs:sequence>
            <xs:element ref="xs:schema"/>
            <xs:any/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
```

```
</xs:element>
```

**GetPreviewDataSetResult:** The data set matching the specifications in the **dataSource**. The data set MUST include two elements: a schema element and a data element. The content of the data element MUST conform to the schema in the schema element. The data set SHOULD include one table, but MAY be empty if the **dataSource** is invalid. The data table MUST include the columns specified in **dataSource**.

### 3.1.4.46.3 Complex Types

None.

### 3.1.4.46.4 Simple Types

None.

### 3.1.4.47 GetQueryResultMembers

This operation retrieves an array of members (3) associated with the specified report.

```
<wsdl:operation name="GetQueryResultMembers">
  <wsdl:input message="tns:GetQueryResultMembersSoapIn"/>
  <wsdl:output message="tns:GetQueryResultMembersSoapOut"/>
</wsdl:operation>
```

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

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the report view. It also sends a unique dimension (1) name.
2. The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

#### Exceptions:

Error code	Description
<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="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.47.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.47.1.1 GetQueryResultMembersSoapIn

The requested WSDL message for the **GetQueryResultMembers** WSDL operation.

The SOAP action value is:

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

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

### 3.1.4.47.1.2 GetQueryResultMembersSoapOut

The response WSDL message for the **GetQueryResultMembers** method.

The SOAP action value is:

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

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

### 3.1.4.47.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.47.2.1 GetQueryResultMembers

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

```
<xs:element name="GetQueryResultMembers">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formattingDimensionName"
type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**analyticReportViewLocation:** A **RepositoryLocation** (see section [2.2.4.162](#)) MUST be present.

**formattingDimensionName:** The unique name of the formatting dimension (1) MUST be present.

#### 3.1.4.47.2.2 GetQueryResultMembersResponse

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

```
<xs:element name="GetQueryResultMembersResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetQueryResultMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetQueryResultMembersResult:** MUST return an **ArrayOfMember** (see section [2.2.4.46](#)).

### 3.1.4.47.3 Complex Types

None.

### 3.1.4.47.4 Simple Types

None.

### 3.1.4.48 GetRegisteredCustomFCOs

This operation retrieves custom object definitions registered on the server.

```
<wsdl:operation name="GetRegisteredCustomFCOs">
  <wsdl:input message="tns:GetRegisteredCustomFCOsSoapIn"/>
  <wsdl:output message="tns:GetRegisteredCustomFCOsSoapOut"/>
</wsdl:operation>
```

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

1. The protocol client sends the type of custom objects to be returned by the server (2). The informed type **MUST** be one of the following: **All**, **DataSource**, **Filter**, and **ReportView**, as defined in **CustomFCOType** (see section [3.1.4.48.4.1](#)).
2. The server (2) reads all the custom object entries registered on the server and returns only those matching the type provided by the client protocol.
3. The result is a collection of **CustomFCODefinition** (see section [3.1.4.48.3.2](#)) objects, as defined in **ArrayOfCustomFCODefinition** (see section [3.1.4.48.3.1](#)).

### 3.1.4.48.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.48.1.1 GetRegisteredCustomFCOsSoapIn

The requested WSDL message for the **GetRegisteredCustomFCOs** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs
```

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

#### 3.1.4.48.1.2 GetRegisteredCustomFCOsSoapOut

The response WSDL message for the **GetRegisteredCustomFCOs** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs
```

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

### 3.1.4.48.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.48.2.1 GetRegisteredCustomFCOs

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

```
<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>
```

**type:** Specifies the type of custom objects to be returned by the server (2). The informed type MUST be one of the following: **All**, **DataSource**, **Filter**, and **ReportView**, as defined in **CustomFCOType** (see section [3.1.4.48.4.1](#)).

#### 3.1.4.48.2.2 GetRegisteredCustomFCOsResponse

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

```
<xs:element name="GetRegisteredCustomFCOsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRegisteredCustomFCOsResult"
type="tns:ArrayOfCustomFCODefinition"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetRegisteredCustomFCOsResult:** Specifies a collection of [CustomFCODefinition](#) objects, as defined in [ArrayOfCustomFCODefinition](#). This collection MUST contain all the valid custom objects registered on the server that equal the type sent from the protocol client.

### 3.1.4.48.3 Complex Types

The following XML Schema complex type definitions are specific to this operation.

#### 3.1.4.48.3.1 ArrayOfCustomFCODefinition

The [ArrayOfCustomFCODefinition](#) complex type specifies an array of definitions for a custom object.

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

**CustomFCODefinition:** This element MUST NOT be null and MUST conform to the schema of the **CustomFCODefinition** (section [3.1.4.48.3.2](#)) complex type.



### 3.1.4.48.3.2 CustomFCODefinition

The **CustomFCODefinition** complex type specifies how instances of a custom object class are created, modified, and rendered in dashboards.

```
<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>
```

**TemplateIconSerialized:** Specifies an image that represents the custom object. The value **MUST** be either empty, or a Base 64 encoding of a bitmap.

**Type:** The type of custom object class instance, as specified in **CustomFCOType** (see section [3.1.4.48.4.1](#)). The value **MUST** be **DataSource**, **Filter**, or **ReportView**.

**SubType:** The sub-type instances of the custom object class.

- The value **MUST NOT** be empty.
- The value **MUST NOT** be longer than 60 characters.
- The value **MUST NOT** contain the following characters: apostrophe ('), quotation mark ("), or backslash (\).

**Name:** The name of the custom object class.

**Description:** The description of the custom object class.

**RendererClass:** The assembly-qualified name of a type that renders the custom object. When the **Type** attribute equals "DataSource", the value **MUST** be empty. =

**EditorUri:** The URL (Uniform Resource Locator) of the associated application used to create and modify the custom object. The value **MUST NOT** be empty.

### 3.1.4.48.4 Simple Types

The following XML Schema simple type definitions are specific to this operation.

#### 3.1.4.48.4.1 CustomFCOType

This enumeration specifies the type of a custom object.

```
<xs:simpleType name="CustomFCOType">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="DataSource"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

        <xs:enumeration value="Filter"/>
        <xs:enumeration value="ReportView"/>
        <xs:enumeration value="All"/>
    </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

The following table specifies the allowable values for CustomFCOType:

Value	Meaning
None	The object type is not specified.
DataSource	The object is a DataSource (see section <a href="#">2.2.4.85</a> ).
Filter	The object is a Filter (see section <a href="#">2.2.4.98</a> ).
ReportView	The object is a ReportView (see section <a href="#">2.2.4.161</a> ).
All	This object is a DataSource (see section <a href="#">2.2.4.85</a> ), Filter (see section <a href="#">2.2.4.98</a> ) or ReportView (see section <a href="#">2.2.4.161</a> ). This value MUST only be used when GetRegisteredCustomFCOs (see section <a href="#">3.1.4.48</a> ) is invoked.

### 3.1.4.49 GetReportView

This operation retrieves a report view from the server (2).

```

<wsdl:operation name="GetReportView">
  <wsdl:input message="tns:GetReportViewSoapIn"/>
  <wsdl:output message="tns:GetReportViewSoapOut"/>
</wsdl:operation>

```

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

1. The protocol client sends a **RepositoryLocation** (see section [2.2.4.162](#)) for the report view to be retrieved.
2. The server (2) sends the corresponding report view.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.49.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.49.1.1 GetReportViewSoapIn

The requested WSDL message for the **GetReportView** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetReportView
```

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

#### 3.1.4.49.1.2 GetReportViewSoapOut

The response WSDL message for the **GetReportView** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetReportView
```

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

### 3.1.4.49.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.49.2.1 GetReportView

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

```
<xs:element name="GetReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

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

- It MUST be present.
- The **ItemUrl** property MUST be set to the location of the report view.

#### 3.1.4.49.2.2 GetReportViewResponse

The result data for the **GetReportView** WSDL operation.

```
<xs:element name="GetReportViewResponse">
  <xs:complexType>
```

```

<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="1" name="GetReportViewResult"
type="tns:ReportView"/>
</xs:sequence>
</xs:complexType>
</xs:element>

```

**GetReportViewResult:** The **ReportView** (see section [2.2.4.161](#)) object that was requested from the server (2).

### 3.1.4.49.3 Complex Types

None.

### 3.1.4.49.4 Simple Types

None.

### 3.1.4.50 GetScorecard

This operation retrieves a scorecard.

```

<wsdl:operation name="GetScorecard">
  <wsdl:input message="tns:GetScorecardSoapIn"/>
  <wsdl:output message="tns:GetScorecardSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **GetScorecardSoapIn** message, and the server (2) responds with a **GetScorecardSoapOut** response message as follows:

1. The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the scorecard to be retrieved.
2. The server (2) responds with the corresponding scorecard.
3. In the event that the scorecard cannot be retrieved, the server (2) SHOULD [21](#) return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.50.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.50.1.1 GetScorecardSoapIn

The requested WSDL message for the **GetScorecard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetScorecard
```

The SOAP body contains the **GetScorecard** element.

#### 3.1.4.50.1.2 GetScorecardSoapOut

The response WSDL message for the **GetScorecard** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/GetScorecard
```

The SOAP body contains the **GetScorecardResponse** element.

#### 3.1.4.50.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.50.2.1 GetScorecard

The input data for the **GetScorecard** WSDL operation.

```
<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>
```

**location:** A **RepositoryLocation** as specified in section [2.2.4.162](#) MUST be present. The **ItemUrl** property MUST contain a valid URL.

##### 3.1.4.50.2.2 GetScorecardResponse

The result data for the **GetScorecard** WSDL operation.

```
<xs:element name="GetScorecardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetScorecardResult"
        type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**GetScorecardResult:** A scorecard, as specified in section [2.2.4.163](#), SHOULD be present.

### 3.1.4.50.3 Complex Types

None.

### 3.1.4.50.4 Simple Types

None.

### 3.1.4.51 QueryChildMembers

This method uses a data source for the specified member and returns a collection of members.

```
<wsdl:operation name="QueryChildMembers">
  <wsdl:input message="tns:QueryChildMembersSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersSoapIn** request message, and the server (2) responds with a **QueryChildMembersSoapOut** response message as follows:

- The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

Error code	Description
<b>InvalidPermission</b>	See the Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.51.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.51.1.1 QueryChildMembersSoapIn

The requested WSDL message for the **QueryChildMembers** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers
```

The SOAP body contains the **QueryChildMembers** element.

#### 3.1.4.51.1.2 QueryChildMembersSoapOut

The response WSDL message for the **QueryChildMembers** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers
```

The SOAP body contains the **QueryChildMembersResponse** element.

### 3.1.4.51.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.51.2.1 QueryChildMembers

The input data for the **QueryChildMembers** WSDL operation.

```
<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>
```

**dataSourceLocation:** The **RepositoryLocation** (section [2.2.4.162](#)) object that specifies the location of data source for the members (3) on the server.

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified URL.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of child members for a specified member name.

**memberUniqueName:** A value that uniquely identifies this element within the hierarchy. The value MUST be less than 255 characters and MUST NOT be null or empty.

#### 3.1.4.51.2.2 QueryChildMembersResponse

The result data for the **QueryChildMembers** WSDL operation.

```
<xs:element name="QueryChildMembersResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryChildMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryChildMembersResult:** MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

### 3.1.4.51.3 Complex Types

None.

### 3.1.4.51.4 Simple Types

None.

### 3.1.4.52 QueryChildMembersByRangeFromDataSource

This method queries the **DataSource** (see section [2.2.4.85](#)) and returns a collection of child members.

```
<wsdl:operation name="QueryChildMembersByRangeFromDataSource">
  <wsdl:input message="tns:QueryChildMembersByRangeFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersByRangeFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersByRangeFromDataSourceSoapIn** request message, and the server (2) responds with a **QueryChildMembersByRangeFromDataSourceSoapOut** response message as follows:

- The protocol client sends a **DataSource** to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

Error code	Description
<b>InvalidPermission</b>	See the Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.52.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.52.1.1 QueryChildMembersByRangeFromDataSourceSoapIn

The requested WSDL message for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFromDataSource
```

The SOAP body contains the **QueryChildMembersByRangeFromDataSource** element.

##### 3.1.4.52.1.2 QueryChildMembersByRangeFromDataSourceSoapOut

The response WSDL message for the **QueryChildMembersByRangeFromDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFromDataSource
```

The SOAP body contains the **QueryChildMembersByRangeFromDataSourceResponse** element.



### 3.1.4.52.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.52.2.1 QueryChildMembersByRangeFromDataSource

The input data for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

```
<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>
```

**dataSource:** The **DataSource** (see section [2.2.4.85](#)) to be used in the query. This MUST NOT be null or empty. The **DataSource** MUST allow the query of child members for a specified member.

**self:** A name identifying a member within a **DataSource**. This MUST NOT be null or empty or contain more than 255 characters.

**start:** The starting index of the records in the returned [ArrayOfMember](#). The starting index MUST NOT be greater than the number of members in the requested range.

**count:** The number of records to be returned in the [ArrayOfMember](#). The value MUST NOT be less than 0.

#### 3.1.4.52.2.2 QueryChildMembersByRangeFromDataSourceResponse

The result data for the **QueryChildMembersByRangeFromDataSource** WSDL operation.

```
<xs:element name="QueryChildMembersByRangeFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
name="QueryChildMembersByRangeFromDataSourceResult" type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryChildMembersByRangeFromDataSourceResult:** MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

### 3.1.4.52.3 Complex Types

None.

### 3.1.4.52.4 Simple Types

None.

### 3.1.4.53 QueryChildMembersFromDataSource

This method uses the data source to retrieve a collection of child members for the specified member name.

```
<wsdl:operation name="QueryChildMembersFromDataSource">
  <wsdl:input message="tns:QueryChildMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryChildMembersFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryChildMembersFromDataSourceSoapIn** request message, and the server (2) responds with a **QueryChildMembersFromDataSourceSoapOut** response message as follows:

- The protocol client sends a **DataSource** (see section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

Error code	Description
<b>InvalidPermission</b>	See the Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.53.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.53.1.1 QueryChildMembersFromDataSourceSoapIn

The requested WSDL message for the **QueryChildMembersFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource
```

The SOAP body contains the **QueryChildMembersFromDataSource** element.

##### 3.1.4.53.1.2 QueryChildMembersFromDataSourceSoapOut

The response WSDL message for the **QueryChildMembersFromDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource
```

The SOAP body contains the **QueryChildMembersFromDataSourceResponse** element.

#### 3.1.4.53.2 Elements

The following XML Schema element definitions are specific to this operation.

### 3.1.4.53.2.1 QueryChildMembersFromDataSource

The input data for the **QueryChildMembersFromDataSource** WSDL operation.

```
<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>
```

**dataSource:** The **DataSource** (see section [2.2.4.85](#)) to be used in the query. This MUST NOT be null or empty. The **DataSource** MUST support the query of child members for a specified member.

**memberUniqueName:** A value that uniquely identifies this element within the hierarchy. This value MUST NOT be null or empty and MUST be less than 255 characters.

### 3.1.4.53.2.2 QueryChildMembersFromDataSourceResponse

The result data for the **QueryChildMembersFromDataSource** WSDL operation.

```
<xs:element name="QueryChildMembersFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryChildMembersFromDataSourceResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryChildMembersFromDataSourceResult:** MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

### 3.1.4.53.3 Complex Types

None.

### 3.1.4.53.4 Simple Types

None.

### 3.1.4.54 QueryDimensionRootMembers

This method uses a data source (1) from the repository location for the specified member and returns a collection of root members.

```
<wsdl:operation name="QueryDimensionRootMembers">
  <wsdl:input message="tns:QueryDimensionRootMembersSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryDimensionRootMembersSoapIn** request message, and the server (2) responds with a **QueryDimensionRootMembersSoapOut** response message as follows:

- The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

Error code	Description
<b>InvalidPermission</b>	See the Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.54.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.54.1.1 QueryDimensionRootMembersSoapIn

The requested WSDL message for the **QueryDimensionRootMembers** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers
```

The SOAP body contains the **QueryDimensionRootMembers** element.

#### 3.1.4.54.1.2 QueryDimensionRootMembersSoapOut

The response WSDL message for the **QueryDimensionRootMembers** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers
```

The SOAP body contains the **QueryDimensionRootMembersResponse** element.

### 3.1.4.54.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.54.2.1 QueryDimensionRootMembers

The input data for the **QueryDimensionRootMembers** WSDL operation.

```
<xs:element name="QueryDimensionRootMembers">
  <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>
```

```

    </xs:complexType>
  </xs:element>

```

**dataSourceLocation:** The **RepositoryLocation** (section [2.2.4.162](#)) that specifies the location of the data source for the members (3) on the server.

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified URL.
- The **RepositoryLocation** object MUST be the location of the data source that allows the query of root members for a specified member name.

**dimensionName:** A value that uniquely identifies this dimension. The value MUST be less than 255 characters and MUST NOT be null or empty.

### 3.1.4.54.2.2 QueryDimensionRootMembersResponse

The result data for the **QueryDimensionRootMembers** WSDL operation.

```

<xs:element name="QueryDimensionRootMembersResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryDimensionRootMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**QueryDimensionRootMembersResult:** MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

### 3.1.4.54.3 Complex Types

None.

### 3.1.4.54.4 Simple Types

None.

### 3.1.4.55 QueryDimensionRootMembersFromDataSource

This method uses the data source to retrieve a collection of root members for the specified member name.

```

<wsdl:operation name="QueryDimensionRootMembersFromDataSource">
  <wsdl:input message="tns:QueryDimensionRootMembersFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryDimensionRootMembersFromDataSourceSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **QueryDimensionRootMembersFromDataSourceSoapIn** request message, and the server (2) responds with a **QueryDimensionRootMembersFromDataSourceSoapOut** response message as follows:

- The protocol client sends a **DataSource** (see section [2.2.4.85](#)) to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

Error code	Description
<b>InvalidPermission</b>	See the Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.55.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.55.1.1 QueryDimensionRootMembersFromDataSourceSoapIn

The requested WSDL message for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource
```

The SOAP body contains the **QueryDimensionRootMembersFromDataSource** element.

#### 3.1.4.55.1.2 QueryDimensionRootMembersFromDataSourceSoapOut

The response WSDL message for the **QueryDimensionRootMembersFromDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource
```

The SOAP body contains the **QueryDimensionRootMembersFromDataSourceResponse** element.

### 3.1.4.55.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.55.2.1 QueryDimensionRootMembersFromDataSource

The input data for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

```
<xs:element name="QueryDimensionRootMembersFromDataSource">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dimensionName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The **DataSource** (see section [2.2.4.85](#)) to be used in the query. This MUST NOT be null or empty. The **DataSource** MUST support the query of root members for a specified dimension.

**dimensionName:** A value that uniquely identifies this dimension. This value MUST NOT be null or empty and MUST be less than 255 characters.

### 3.1.4.55.2.2 QueryDimensionRootMembersFromDataSourceResponse

The result data for the **QueryDimensionRootMembersFromDataSource** WSDL operation.

```
<xs:element name="QueryDimensionRootMembersFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
name="QueryDimensionRootMembersFromDataSourceResult" type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryDimensionRootMembersFromDataSourceResult:** MUST return a collection of [Member](#) objects as specified in [ArrayOfMember](#).

### 3.1.4.55.3 Complex Types

None.

### 3.1.4.55.4 Simple Types

None.

### 3.1.4.56 QueryNamedSets

This operation is used to retrieve the named sets that are defined by a data source (1) when given the [RepositoryLocation](#) of the data source (1).

```
<wsdl:operation name="QueryNamedSets">
  <wsdl:input message="tns:QueryNamedSetsSoapIn"/>
  <wsdl:output message="tns:QueryNamedSetsSoapOut"/>
</wsdl:operation>
```

**QueryNamedSetsSoapIn** sends a request message, and the **QueryNamedSetsSoapOut** responds with a message as follows:

1. Receives a [RepositoryLocation](#) for the data source (1) to be queried for named sets.
2. The server (2) queries the corresponding data source (1).
3. The server (2) responds with the result.
4. In the event that a data source (1) cannot be retrieved, the server (2) SHOULD [<22>](#) return a SOAP fault response, as detailed in section [2.2.9](#).

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.56.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.56.1.1 QueryNamedSetsSoapIn

The requested WSDL message for the **QueryNamedSets** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets
```

The SOAP body contains the **QueryNamedSets** element.

#### 3.1.4.56.1.2 QueryNamedSetsSoapOut

The response WSDL message for the **QueryNamedSets** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets
```

The SOAP body contains the **QueryNamedSetsResponse** element.

### 3.1.4.56.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.56.2.1 QueryNamedSets

The input data for the **QueryNamedSets** WSDL operation.

```
<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>
```

**dataSourceLocation:** The location (See [RepositoryLocation](#) for specification) for the data source (1) being queried for named sets. This element **MUST** be present. The element **MUST** be a RepositoryLocation to a data source (1).



### 3.1.4.56.2.2 QueryNamedSetsResponse

The result data for the **QueryNamedSets** WSDL operation.

```
<xs:element name="QueryNamedSetsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryNamedSetsResult"
        type="tns:ArrayOfNamedSet"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryNamedSetsResult:** MUST be either a collection of [NamedSet](#) objects (specified in [ArrayOfNamedSet](#)) or null if there are no named sets defined for the data source (1).

### 3.1.4.56.3 Complex Types

None.

### 3.1.4.56.4 Simple Types

None.

### 3.1.4.57 QueryNamedSetsFromDataSource

This operation is used to retrieve the named sets that are defined by the given data source (1).

```
<wsdl:operation name="QueryNamedSetsFromDataSource">
  <wsdl:input message="tns:QueryNamedSetsFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryNamedSetsFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a message and the server (2) responds with a response message.

**QueryNamedSetsFromDataSourceSoapIn** sends a request message, and the **QueryNamedSetsFromDataSourceSoapOut** responds with a message as follows:

1. Receives a [DataSource](#) to be queried for named sets.
2. The server (2) queries the received data source (1).
3. The server (2) responds with the result.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.57.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.57.1.1 QueryNamedSetsFromDataSourceSoapIn

The requested WSDL message for the **QueryNamedSetsFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSource
```

The SOAP body contains the **QueryNamedSetsFromDataSource** element.

#### 3.1.4.57.1.2 QueryNamedSetsFromDataSourceSoapOut

The response WSDL message for the **QueryNamedSetsFromDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSource
```

The SOAP body contains the **QueryNamedSetsFromDataSourceResponse** element.

### 3.1.4.57.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.57.2.1 QueryNamedSetsFromDataSource

The input data for the **QueryNamedSetsFromDataSource** WSDL operation.

```
<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>
```

**dataSource:** The data source (1) to be queried for named sets. See **DataSource** (section [2.2.4.85](#)) for specification. This element **MUST** be present.

#### 3.1.4.57.2.2 QueryNamedSetsFromDataSourceResponse

The result data for the **QueryNamedSetsFromDataSource** WSDL operation.

```
<xs:element name="QueryNamedSetsFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryNamedSetsFromDataSourceResult"
        type="tns:ArrayOfNamedSet"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

**QueryNamedSetsFromDataSourceResult:** MUST be either a collection of [NamedSet](#) objects (specified in [ArrayOfNamedSet](#)) or null if there are no named sets defined for the data source (1).

### 3.1.4.57.3 Complex Types

None.

### 3.1.4.57.4 Simple Types

None.

### 3.1.4.58 QueryRelatedMember

This operation is used to retrieve a member (3) having the specified relationship to the specified member from the data source (1) at the given [RepositoryLocation](#).

```
<wsdl:operation name="QueryRelatedMember">
  <wsdl:input message="tns:QueryRelatedMemberSoapIn"/>
  <wsdl:output message="tns:QueryRelatedMemberSoapOut"/>
</wsdl:operation>
```

The protocol client sends a message, and the server (2) responds with a response message.

**QueryRelatedMemberSoapIn** sends a request message and the **QueryRelatedMemberSoapOut** responds with a message as follows:

1. Receives [RepositoryLocation](#) for the data source (1) to be queried for a related member (3) along with the unique member (3) name and the [MemberRelationship](#) being queried for.
2. The server (2) queries the corresponding data source (1) for the related member (3).
3. The server (2) responds with the result.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.58.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.58.1.1 QueryRelatedMemberSoapIn

The requested WSDL message for the **QueryRelatedMember** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember
```

The SOAP body contains the **QueryRelatedMember** element.

### 3.1.4.58.1.2 QueryRelatedMemberSoapOut

The response WSDL message for the **QueryRelatedMember** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember
```

The SOAP body contains the **QueryRelatedMemberResponse** element.

### 3.1.4.58.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.58.2.1 QueryRelatedMember

The input data for the **QueryRelatedMember** WSDL operation.

```
<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>
```

**dataSourceLocation:** The location (see section [2.2.4.162](#)) for the data source (1) being queried for a related member (3). This element **MUST** be present. The element **MUST** be a **RepositoryLocation** (section [2.2.4.162](#)) to a data source (1).

**memberUniqueName:** A value that uniquely identifies this element within the data source (1).

**relationship:** The relationship (see section [2.2.5.36](#)) between memberUniqueName and the result.

#### 3.1.4.58.2.2 QueryRelatedMemberResponse

The result data for the **QueryRelatedMember** WSDL operation.

```
<xs:element name="QueryRelatedMemberResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryRelatedMemberResult"
type="tns:Member"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

**QueryRelatedMemberResult:** MUST be either the related member (3) (specified in [Member](#)) or null if there are no related members (3) or if the **MemberRelationship** (see section [2.2.5.36](#)) is "Children".

### 3.1.4.58.3 Complex Types

None.

### 3.1.4.58.4 Simple Types

None.

### 3.1.4.59 QueryRelatedMemberFromDataSource

This operation queries the given data source (1) for the member (3) having the specified relationship to the specified member.

```
<wsdl:operation name="QueryRelatedMemberFromDataSource">
  <wsdl:input message="tns:QueryRelatedMemberFromDataSourceSoapIn"/>
  <wsdl:output message="tns:QueryRelatedMemberFromDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a message, and the server (2) responds with a response message.

**QueryRelatedMemberFromDataSourceSoapIn** sends a request message and the **QueryRelatedMemberFromDataSourceSoapOut** responds with a message as follows:

1. Receives [DataSource](#) to be queried for the related member (3) along with the unique member (3) name and the [MemberRelationship](#) being queried for.
2. The server (2) queries the corresponding data source (1) for the related member (3).
3. The server (2) responds with the result.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.59.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.59.1.1 QueryRelatedMemberFromDataSourceSoapIn

The requested WSDL message for the **QueryRelatedMemberFromDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSource
```

The SOAP body contains the **QueryRelatedMemberFromDataSource** element.

#### 3.1.4.59.1.2 QueryRelatedMemberFromDataSourceSoapOut

The response WSDL message for the **QueryRelatedMemberFromDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSource
```

The SOAP body contains the **QueryRelatedMemberFromDataSourceResponse** element.

### 3.1.4.59.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.59.2.1 QueryRelatedMemberFromDataSource

The input data for the **QueryRelatedMemberFromDataSource** WSDL operation.

```
<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>
```

**dataSource:** The data source (1) to be queried for a related member. See **DataSource** (section [2.2.4.85](#)) for specification. This element **MUST** be present.

**memberUniqueName:** A value that uniquely identifies this element within the data source (1).

**relationship:** The relationship (see [MemberRelationship](#) for specification) between **memberUniqueName** and the result.

#### 3.1.4.59.2.2 QueryRelatedMemberFromDataSourceResponse

The result data for the **QueryRelatedMemberFromDataSource** WSDL operation.

```
<xs:element name="QueryRelatedMemberFromDataSourceResponse">
  <xs:complexType>
```

```

<xs:sequence>
  <xs:element minOccurs="0" maxOccurs="1" name="QueryRelatedMemberFromDataSourceResult"
type="tns:Member"/>
</xs:sequence>
</xs:complexType>
</xs:element>

```

**QueryRelatedMemberFromDataSourceResult:** MUST be either the related member (3) (specified in [Member](#)) or null if there are no related members (3).

### 3.1.4.59.3 Complex Types

None.

### 3.1.4.59.4 Simple Types

None.

### 3.1.4.60 QueryTimeIntelligence

This operation queries a data source (1) location for the members (3) that are specified by a time intelligence formula.

```

<wsdl:operation name="QueryTimeIntelligence">
  <wsdl:input message="tns:QueryTimeIntelligenceSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceSoapOut"/>
</wsdl:operation>

```

**QueryTimeIntelligenceSoapIn** sends a request message, and the **QueryTimeIntelligenceSoapOut** responds with a message as follows:

1. Receives **RepositoryLocation** (see section [2.2.4.162](#)) for the data source (1) to be queried for time intelligence, along with the current time and date and a formula.
2. The server (2) queries the corresponding data source (1) using the current time and date and formula for the related member (3).
3. The server (2) responds with the result.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</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

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.60.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.60.1.1 QueryTimeIntelligenceSoapIn

The requested WSDL message for the **QueryTimeIntelligence** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence
```

The SOAP body contains the **QueryTimeIntelligence** element.

#### 3.1.4.60.1.2 QueryTimeIntelligenceSoapOut

The response WSDL message for the **QueryTimeIntelligence** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence
```

The SOAP body contains the **QueryTimeIntelligenceResponse** element.

### 3.1.4.60.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.60.2.1 QueryTimeIntelligence

The input data for the **QueryTimeIntelligence** WSDL operation.

```
<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>
```

**dataSourceLocation:** The location (See [RepositoryLocation](#) for specification) for the data source (1) being queried for time intelligence. This element **MUST** be present. The element **MUST** be a **RepositoryLocation** to a data source.

**currentTime:** The current time and date. This element **MUST** be present and its value **MUST** be a valid **dateTime**.

**formula:** The Simple Time Period Specification (STPS) formula, as described in [\[MSFT-TimeIntelligence\]](#). This element **MUST** be present and its value **MUST** be a STPS formula for the data source.



### 3.1.4.60.2.2 QueryTimeIntelligenceResponse

The result data for the **QueryTimeIntelligence** WSDL operation.

```
<xs:element name="QueryTimeIntelligenceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryTimeIntelligenceResult"
        type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryTimeIntelligenceResult:** MUST return either a collection of [Member](#) objects as specified in [ArrayOfMember](#) or null if there are no Members returned from the specified formula.

### 3.1.4.60.3 Complex Types

None.

### 3.1.4.60.4 Simple Types

None.

### 3.1.4.61 QueryTimeIntelligenceDirect

This operation queries the provided data source (1) for the members (3) that are specified by a time intelligence formula.

```
<wsdl:operation name="QueryTimeIntelligenceDirect">
  <wsdl:input message="tns:QueryTimeIntelligenceDirectSoapIn"/>
  <wsdl:output message="tns:QueryTimeIntelligenceDirectSoapOut"/>
</wsdl:operation>
```

**QueryTimeIntelligenceDirectSoapIn** sends a request message, and the **QueryTimeIntelligenceDirectSoapOut** responds with a message as follows:

1. Receives [DataSource](#) to be queried for the time intelligence, along with the current time and date and a formula.
2. The server (2) queries the corresponding data source (1) using the current time and date and formula for the related member (3).
3. The server (2) responds with the result.

#### Exceptions:

Error code	Description
<b>FCOReadFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOReadFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>TimeIntelligenceNotConfigured</b>	The data source (1) has an invalid Time Intelligence configuration or Time Intelligence is not configured.

Error code	Description
<b>InvalidTimeIntelligenceFormula</b>	The Time Intelligence formula is invalid.

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.61.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.61.1.1 QueryTimeIntelligenceDirectSoapIn

The requested WSDL message for the **QueryTimeIntelligenceDirect** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect
```

The SOAP body contains the **QueryTimeIntelligenceDirect** element.

#### 3.1.4.61.1.2 QueryTimeIntelligenceDirectSoapOut

The response WSDL message for the **QueryTimeIntelligenceDirect** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect
```

The SOAP body contains the **QueryTimeIntelligenceDirectResponse** element.

### 3.1.4.61.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.61.2.1 QueryTimeIntelligenceDirect

The input data for the **QueryTimeIntelligenceDirect** WSDL operation.

```
<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>
```

**dataSource:** The data source (1) to be queried for Time Intelligence members. See **DataSource** (section [2.2.4.85](#)) for specification. This element MUST be present.

**currentTime:** The current time and date. This element MUST be present and its value MUST be a valid **dateTime**.

**formula:** The Simple Time Period Specification (STPS) formula. This element MUST be present and its value MUST be a STPS formula for the data source.

### 3.1.4.61.2.2 QueryTimeIntelligenceDirectResponse

The result data for the **QueryTimeIntelligenceDirect** WSDL operation.

```
<xs:element name="QueryTimeIntelligenceDirectResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryTimeIntelligenceDirectResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryTimeIntelligenceDirectResult:** MUST return either a collection of **Member** (section [2.2.4.135](#)) objects as specified in **ArrayOfMember** (section [2.2.4.46](#)) or null if there are no **Members** returned from the specified formula.

### 3.1.4.61.3 Complex Types

None.

### 3.1.4.61.4 Simple Types

None.

### 3.1.4.62 QueryTransformMembers

This method transforms any collection of member (section [2.2.4.135](#)) into a new set of member collection based on the operation passed on the transformType parameter as specified in section [3.1.4.62.4.1](#).

```
<wsdl:operation name="QueryTransformMembers">
  <wsdl:input message="tns:QueryTransformMembersSoapIn"/>
  <wsdl:output message="tns:QueryTransformMembersSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **QueryTransformMembersSoapIn** request message, and the server (2) responds with a **QueryTransformMembersSoapOut** response message as follows:

- The protocol client sends a **RepositoryLocation** (section [2.2.4.162](#)) for the data source to use for retrieving members.
- The server (2) sends the corresponding **ArrayOfMember** (see section [2.2.4.46](#)).

Error code	Description
<b>InvalidPermission</b>	See the Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the errorcode MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.62.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.62.1.1 QueryTransformMembersSoapIn

The requested WSDL message for the **QueryTransformMembers** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers
```

The SOAP body contains the **QueryTransformMembers** element.

#### 3.1.4.62.1.2 QueryTransformMembersSoapOut

The response WSDL message for the **QueryTransformMembers** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers
```

The SOAP body contains the **QueryTransformMembersResponse** element.

### 3.1.4.62.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.62.2.1 QueryTransformMembers

The input data for the **QueryTransformMembers** WSDL operation.

```
<xs:element name="QueryTransformMembers">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation"/>
      <xs:element minOccurs="0" maxOccurs="1" name="memberCollection"
type="tns:ArrayOfMember"/>
      <xs:element minOccurs="1" maxOccurs="1" name="transformType"
type="tns:QueryTransformMembersType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSourceLocation:** The **RepositoryLocation** (section [2.2.4.162](#)) object that specifies the location of data source for the members (3) on the server.

- The **RepositoryLocation** object MUST NOT be null or empty.
- The **RepositoryLocation** object MUST NOT be a fully specified URL.

- The **RepositoryLocation** object MUST be the location of the data source that allows the query of child members for a specified member name.

**memberCollection:** The collection of members (section [2.2.4.135](#)) that will be transformed based on the type of transformation specified in the **transformType** parameter.

**transformType:** The type of operation (section [3.1.4.62.4.1](#)) that will be applied to the member collection.

### 3.1.4.62.2.2 QueryTransformMembersResponse

The result data for the **QueryTransformMembers** WSDL operation.

```
<xs:element name="QueryTransformMembersResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="QueryTransformMembersResult"
type="tns:ArrayOfMember"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**QueryTransformMembersResult:** MUST return a collection of **Member** objects (section [2.2.4.135](#)) as specified in **ArrayOfMember** (section [2.2.4.46](#)).

### 3.1.4.62.3 Complex Types

None.

### 3.1.4.62.4 Simple Types

The following XML Schema simple type definitions are specific to this operation.

#### 3.1.4.62.4.1 QueryTransformMembersType

Specifies the transformation type that will be applied to the collection of member (section [2.2.4.135](#)).

```
<xs:simpleType name="QueryTransformMembersType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Hierarchize"/>
    <xs:enumeration value="Parents"/>
    <xs:enumeration value="Ancestors"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for QueryTransformMembersType:

Value	Meaning
Hierarchize	Returns the hierarchized representation of the member set.
Parents	Returns the parent of each member on the set. This operation type is reserved and MUST NOT be called.

Value	Meaning
Ancestors	Returns the ancestor of each member on the set. This operation type is reserved and MUST NOT be called.

### 3.1.4.63 SaveTemporaryAnalyticReport

This operation stores a temporary copy of a report view to the server.

```
<wsdl:operation name="SaveTemporaryAnalyticReport">
  <wsdl:input message="tns:SaveTemporaryAnalyticReportSoapIn"/>
  <wsdl:output message="tns:SaveTemporaryAnalyticReportSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **SaveTemporaryAnalyticReportSoapIn** message, and the server (2) responds with a **SaveTemporaryAnalyticReportSoapOut** response message as follows:

- The protocol client MUST send a **ReportView** (section [2.2.4.161](#)).
- If the server contains a **ReportView** where all attributes and elements except Location equal those of the passed in **ReportView**, the server (2) MUST return the GUID of the **ReportView** on the server. The GUID MUST be equal to the **RepositoryLocation** (section [2.2.4.162](#)) **ItemGuid** GUID. The stored ReportView MUST NOT be altered.
- If the server does not contain a **ReportView** where all attributes and elements except **Location** equal those of the passed in ReportView, the server (2) MUST store a copy of the **ReportView** and MUST return a unique GUID for it. The server (2) MUST replace the **Location** element for the stored copy which MUST conform to the schema of the **RepositoryLocation** complex type, such that the **ItemType** attribute equals **TempReportView**, as specified in **FirstClassObjectType** (section [2.2.5.20](#)), and the ItemGuid attribute equals the returned GUID.

#### Exceptions:

Error code	Description
<b>InvalidPermission</b>	See the Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.63.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.63.1.1 SaveTemporaryAnalyticReportSoapIn

The requested WSDL message for the **SaveTemporaryAnalyticReport** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport
```

The SOAP body contains the **SaveTemporaryAnalyticReport** element.

### 3.1.4.63.1.2 SaveTemporaryAnalyticReportSoapOut

The response WSDL message for the **SaveTemporaryAnalyticReport** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport
```

The SOAP body contains the **SaveTemporaryAnalyticReportResponse** element.

### 3.1.4.63.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.63.2.1 SaveTemporaryAnalyticReport

The input data for the **SaveTemporaryAnalyticReport** WSDL operation.

```
<xs:element name="SaveTemporaryAnalyticReport">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**reportView:** The report view to store. MUST be present and MUST conform to the schema of the **ReportView** (section [2.2.4.161](#)) complex type.

#### 3.1.4.63.2.2 SaveTemporaryAnalyticReportResponse

The result data for the **SaveTemporaryAnalyticReport** WSDL operation.

```
<xs:element name="SaveTemporaryAnalyticReportResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="SaveTemporaryAnalyticReportResult"
        xmlns:q12="http://microsoft.com/wsdl/types/" type="q12:guid"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**SaveTemporaryAnalyticReportResult:** A GUID that uniquely identifies the **ReportView** (section [2.2.4.161](#)) and the values of all attributes and elements except **Location**. MUST be present.

### 3.1.4.63.3 Complex Types

None.

### 3.1.4.63.4 Simple Types

None.

### 3.1.4.64 TestConnection

This operation is used to determine whether a connection as specified by the **dataSource** element can be established.

```
<wsdl:operation name="TestConnection">
  <wsdl:input message="tns:TestConnectionSoapIn"/>
  <wsdl:output message="tns:TestConnectionSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TestConnectionSoapIn** request message, and the server (2) responds with a **TestConnectionSoapOut** response message as follows:

- The protocol client MUST set the **dataSource** element to a non-empty value. If the **Location** attribute of the **dataSource** element refers to a location for which the user does not have read permissions, then the server MUST return a SOAP fault containing the error code **InvalidPermission**.
- The server (2) MUST return **true** if a connection as specified by the data source (1) can be established, and if the **Location** attribute of the **dataSource** element refers to a trusted location (1). Otherwise it MUST return **false**.
- Any errors that occur while making a connection as specified by the data source (1) MUST NOT result in a SOAP fault, and MUST result in a return value of false.

#### 3.1.4.64.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.64.1.1 TestConnectionSoapIn

The requested WSDL message for the **TestConnection** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TestConnection
```

The SOAP body contains the **TestConnection** element.

##### 3.1.4.64.1.2 TestConnectionSoapOut

The response WSDL message for the **TestConnection** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TestConnection
```

The SOAP body contains the **TestConnectionResponse** element.

#### 3.1.4.64.2 Elements

The following XML Schema element definitions are specific to this operation.



### 3.1.4.64.2.1 TestConnection

The input data for the **TestConnection** WSDL operation.

```
<xs:element name="TestConnection">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**dataSource:** The data source (1) to be tested. See **DataSource** (section [2.2.4.85](#)) for specification. MUST NOT be empty.

### 3.1.4.64.2.2 TestConnectionResponse

The result data for the **TestConnection** WSDL operation.

```
<xs:element name="TestConnectionResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="TestConnectionResult" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**TestConnectionResult:** Set to **true** if the connection specified by the data source (1) can be made; otherwise, **false**.

### 3.1.4.64.3 Complex Types

None.

### 3.1.4.64.4 Simple Types

None.

### 3.1.4.65 TrimAnnotationByOwner

This operation removes all the annotations that are owned by a specific user.

```
<wsdl:operation name="TrimAnnotationByOwner">
  <wsdl:input message="tns:TrimAnnotationByOwnerSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByOwnerSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationByOwnerSoapIn** request message, and the server (2) responds with a **TrimAnnotationByOwnerSoapOut** response message as follows:

- The protocol client MUST send the name of a user as the **Owner** element of the **TrimAnnotationByOwner** element.

- The server (2) MUST delete all **Annotations** (section [2.2.4.18](#)) for which the **Owner** element equals the **Owner** element of the passed in **TrimAnnotationByOwner** element. The server (2) MUST ignore the case when comparing the strings.

Error code	Description
<b>InvalidPermissionAdmin</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.65.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.65.1.1 TrimAnnotationByOwnerSoapIn

The requested WSDL message for the **TrimAnnotationByOwner** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByOwner
```

The SOAP body contains the **TrimAnnotationByOwner** element.

#### 3.1.4.65.1.2 TrimAnnotationByOwnerSoapOut

The response WSDL message for the **TrimAnnotationByOwner** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByOwner
```

The SOAP body contains the **TrimAnnotationByOwnerResponse** element.

### 3.1.4.65.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.65.2.1 TrimAnnotationByOwner

The input data for the **TrimAnnotationByOwner** WSDL operation.

```
<xs:element name="TrimAnnotationByOwner">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Owner" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**Owner:** Specifies the name of the user. MUST be present and MUST have a length greater than 0.

### 3.1.4.65.2.2 TrimAnnotationByOwnerResponse

The result data for the **TrimAnnotationByOwner** WSDL operation.

```
<xs:element name="TrimAnnotationByOwnerResponse">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.65.3 Complex Types

None.

### 3.1.4.65.4 Simple Types

None.

### 3.1.4.66 TrimAnnotationByScorecardLocation

This operation removes all the annotations that belong to a scorecard at a specific location.

```
<wsdl:operation name="TrimAnnotationByScorecardLocation">
  <wsdl:input message="tns:TrimAnnotationByScorecardLocationSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationByScorecardLocationSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationByScorecardLocationSoapIn** request message, and the server (2) responds with a **TrimAnnotationByScorecardLocationSoapOut** response message as follows:

- The protocol client MUST send the location of a scorecard as the **scorecardLocation** element of the **TrimAnnotationByScorecardLocation** element.
- The server (2) MUST delete all **Annotations** (section [2.2.4.18](#)) for which the **ScorecardLocation** element's **ItemUrl** attribute, as specified by **RepositoryLocation** (section [2.2.4.162](#)), equals the **ItemUrl** attribute of the passed in **scorecardLocation** element.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.66.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.66.1.1 TrimAnnotationByScorecardLocationSoapIn

The requested WSDL message for the **TrimAnnotationByScorecardLocation** WSDL operation.

The SOAP action value is:

<http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByScorecardLocation>

The SOAP body contains the **TrimAnnotationByScorecardLocation** element.

#### 3.1.4.66.1.2 TrimAnnotationByScorecardLocationSoapOut

The response WSDL message for the **TrimAnnotationByScorecardLocation** method.

The SOAP action value is:

<http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByScorecardLocation>

The SOAP body contains the **TrimAnnotationByScorecardLocationResponse** element.

#### 3.1.4.66.2 Elements

The following XML Schema element definitions are specific to this operation.

##### 3.1.4.66.2.1 TrimAnnotationByScorecardLocation

The input data for the **TrimAnnotationByScorecardLocation** WSDL operation.

```
<xs:element name="TrimAnnotationByScorecardLocation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**scorecardLocation:** Specifies the location of the scorecard for which all annotations will be deleted. It MUST conform to the schema of the [RepositoryLocation](#) complex type, it MUST be present, and the ItemType attribute MUST NOT equal TempReportView, as specified in **FirstClassObjectType** (section [2.2.5.20](#)).

##### 3.1.4.66.2.2 TrimAnnotationByScorecardLocationResponse

The result data for the **TrimAnnotationByScorecardLocation** WSDL operation.

```
<xs:element name="TrimAnnotationByScorecardLocationResponse">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.66.3 Complex Types

None.

#### 3.1.4.66.4 Simple Types

None.

### 3.1.4.67 TrimAnnotationUntouchedSince

This operation removes all the annotations that haven't been updated since the specified date.

```
<wsdl:operation name="TrimAnnotationUntouchedSince">
  <wsdl:input message="tns:TrimAnnotationUntouchedSinceSoapIn"/>
  <wsdl:output message="tns:TrimAnnotationUntouchedSinceSoapOut"/>
</wsdl:operation>
```

The protocol client sends a **TrimAnnotationUntouchedSinceSoapIn** request message, and the server (2) responds with a **TrimAnnotationUntouchedSinceSoapOut** response message as follows:

- The protocol client MUST send the last modified date as the **untouchedSince** element of the **TrimAnnotationUntouchedSince** element.
- The server (2) MUST delete all the **Annotations** (section [2.2.4.18](#)) for which the date specified by **LastUpdatedOn** property is before or equal to the date specified by the client.

Error code	Description
<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 [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

#### 3.1.4.67.1 Messages

The following WSDL message definitions are specific to this operation.

##### 3.1.4.67.1.1 TrimAnnotationUntouchedSinceSoapIn

The requested 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.

##### 3.1.4.67.1.2 TrimAnnotationUntouchedSinceSoapOut

The response WSDL message for the **TrimAnnotationUntouchedSince** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationUntouchedSince
```

The SOAP body contains the **TrimAnnotationUntouchedSinceResponse** element.

### 3.1.4.67.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.67.2.1 TrimAnnotationUntouchedSince

The input data for the **TrimAnnotationUntouchedSince** WSDL operation.

```
<xs:element name="TrimAnnotationUntouchedSince">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="untouchedSince" type="xs:dateTime"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**untouchedSince:** Specifies the last modified date of the **Annotations** which MUST be deleted. MUST be present and MUST be a valid dateTime.

#### 3.1.4.67.2.2 TrimAnnotationUntouchedSinceResponse

The result data for the **TrimAnnotationUntouchedSince** WSDL operation.

```
<xs:element name="TrimAnnotationUntouchedSinceResponse">
  <xs:complexType/>
</xs:element>
```

### 3.1.4.67.3 Complex Types

None.

### 3.1.4.67.4 Simple Types

None.

### 3.1.4.68 UpdateAnnotation

This operation updates an existing **Annotation** (section [2.2.4.18](#)).

```
<wsdl:operation name="UpdateAnnotation">
  <wsdl:input message="tns:UpdateAnnotationSoapIn"/>
  <wsdl:output message="tns:UpdateAnnotationSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateAnnotationSoapIn** request message, and the server (2) responds with an **UpdateAnnotationSoapOut** response message as follows:

- The protocol client MUST send a valid **Annotation** object that specifies the new state of the annotation that is being updated.
- The server (2) MUST validate the **Annotation** object following the schema of the **Annotation**.

- The server (2) MUST verify that the **Annotation** object exists by using the **AnnotationId**, and MUST verify that the **Annotation** object is unchanged since received by the client by comparing the **LastModifiedOn** value. If the **LastModifiedOn** value is not the same, which means the **Annotation** object has been changed since it was received by the client, the update MUST be ignored and an application error raised using the **Unknown** error code.
- The server (2) MUST update the stored copy of the **Annotation** object and SHOULD generate a new **LastModifiedOn** date value with the server current date. MUST NOT update the **CreatedOn** value and MUST ignore the value if changed by the protocol client.
- The server (2) MUST return the updated copy of the **Annotation** object, including the updated **LastModifiedOn** value.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</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 annotation properties did not validate to the conforming schema.
<b>InvalidComment</b>	The updated annotation comments did not validate to the conforming schema.
<b>AnnotationNotEnabled</b>	Annotations are not enabled in the server.
<b>AnnotationDeleteNotEnabled</b>	The operation would remove existing comments, and <b>Annotation</b> delete is not enabled in the server. The comments will not be changed on the server.

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.68.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.68.1.1 UpdateAnnotationSoapIn

The requested WSDL message for the **UpdateAnnotation** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateAnnotation
```

The SOAP body contains the **UpdateAnnotation** element.

#### 3.1.4.68.1.2 UpdateAnnotationSoapOut

The response WSDL message for the **UpdateAnnotation** method.

The SOAP action value is:

<http://www.microsoft.com/performancepoint/scorecards/UpdateAnnotation>

The SOAP body contains the **UpdateAnnotationResponse** element.

### 3.1.4.68.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.68.2.1 UpdateAnnotation

The input data for the **UpdateAnnotation** WSDL operation.

```
<xs:element name="UpdateAnnotation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="annotation" type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**annotation:** The updated **Annotation** object. This element MUST NOT be null and MUST conform to the schema of the **Annotation** (section [2.2.4.18](#)) complex type. MUST contain the original **AnnotationId** and **LastModifiedOn** values.

#### 3.1.4.68.2.2 UpdateAnnotationResponse

The result data for the **UpdateAnnotation** WSDL operation.

```
<xs:element name="UpdateAnnotationResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateAnnotationResult"
type="tns:Annotation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateAnnotationResult:** The updated Annotation object. MUST be a copy of the updated annotation with the new LastModifiedOn value, as stored in the server (2).

### 3.1.4.68.3 Complex Types

None.

### 3.1.4.68.4 Simple Types

None.

### 3.1.4.69 UpdateDashboard

This operation updates an existing Dashboard (section [2.2.4.79](#)).

```
<wsdl:operation name="UpdateDashboard">
```



```

    <wsdl:input message="tns:UpdateDashboardSoapIn"/>
    <wsdl:output message="tns:UpdateDashboardSoapOut"/>
</wsdl:operation>

```

The protocol client sends an **UpdateDashboardSoapIn** request message, and the server (2) responds with an **UpdateDashboardSoapOut** response message as follows:

- The protocol client MUST send a valid **Dashboard** object that specifies the new state of the dashboard that is being updated.
- The server (2) MUST validate the **Dashboard** following the schema of the **Dashboard** (section [2.2.4.79](#)).
- The server (2) MUST verify that the **Dashboard** exists by using the **Location** attribute as specified in the base class **FirstClassElement** (section [2.2.4.99](#)).
- The server (2) MUST update the stored copy of the Dashboard.
  - ModifiedBy SHOULD be updated by the server (2) with the login name of the **current user**.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the dashboard was updated on the server storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the **current version** of the dashboard object. If **Version** is updated by the server then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
  - The other properties of the dashboard SHOULD be equal to the **Dashboard** object submitted to the server (2)
- The server (2) MUST return a copy of the updated **Dashboard** object.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedNameCollision</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.69.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.69.1.1 UpdateDashboardSoapIn

The requested WSDL message for the **UpdateDashboard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard
```

The SOAP body contains the **UpdateDashboard** element.

#### 3.1.4.69.1.2 UpdateDashboardSoapOut

The response WSDL message for the **UpdateDashboard** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard
```

The SOAP body contains the **UpdateDashboardResponse** element.

### 3.1.4.69.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.69.2.1 UpdateDashboard

The input data for the **UpdateDashboard** WSDL operation.

```
<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>
```

**dashboard:** The updated dashboard. This element MUST NOT be null and MUST conform to the schema of the **Dashboard** (section [2.2.4.79](#)) complex type.

#### 3.1.4.69.2.2 UpdateDashboardResponse

The result data for the **UpdateDashboard** WSDL operation.

```
<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:complexType>
</xs:element>
```

**UpdateDashboardResult:** The updated **Dashboard** object. MUST be a copy of the updated dashboard, as stored in the server (2).

### 3.1.4.69.3 Complex Types

None.

### 3.1.4.69.4 Simple Types

None.

### 3.1.4.70 UpdateDataSource

This operation updates an existing DataSource (section [2.2.4.85](#)).

```
<wsdl:operation name="UpdateDataSource">
  <wsdl:input message="tns:UpdateDataSourceSoapIn"/>
  <wsdl:output message="tns:UpdateDataSourceSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateDataSourceSoapIn** request message, and the server (2) responds with an **UpdateDataSourceSoapOut** response message as follows:

- The protocol client MUST send a valid **DataSource** object that specifies the new state of the data source (1) that is being updated.
- The server (2) MUST validate the **DataSource** following the schema of the **DataSource** (section [2.2.4.85](#)).
- The server (2) MUST verify that the **DataSource** exists by using the Location attribute as specified in the base class **FirstClassElement** (section [2.2.4.99](#)).
- The server (2) MUST update the stored copy of the **DataSource**. MUST NOT update the **SourceName** value and MUST ignore the value if changed by the protocol client.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the data source was updated on the server storage.
  - **Version** SHOULD be updated by the server (2) with the current version of the **DataSource** object. If **Version** is updated by the server then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
- The other properties of the data source (1) SHOULD be equal to the data source (1) submitted to the server (2).
- The server (2) MUST return a copy of the updated **DataSource** object.

Error code	Description
<b>InvalidPermission</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</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="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedNameCollision</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.70.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.70.1.1 UpdateDataSourceSoapIn

The requested WSDL message for the **UpdateDataSource** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource
```

The SOAP body contains the **UpdateDataSource** element.

#### 3.1.4.70.1.2 UpdateDataSourceSoapOut

The response WSDL message for the **UpdateDataSource** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource
```

The SOAP body contains the **UpdateDataSourceResponse** element.

### 3.1.4.70.2 Elements

The following XML Schema element definitions are specific to this operation.

### 3.1.4.70.2.1 UpdateDataSource

The input data for the **UpdateDataSource** WSDL operation.

```
<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>
```

**dataSource:** The updated datasource. This element MUST NOT be null and MUST conform to the schema of the **DataSource** section [2.2.4.85](#)) complex type.

### 3.1.4.70.2.2 UpdateDataSourceResponse

The result data for the **UpdateDataSource** WSDL operation.

```
<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>
```

**UpdateDataSourceResult:** The updated datasource. MUST be a copy of the updated datasource as stored in the server (2).

### 3.1.4.70.3 Complex Types

None.

### 3.1.4.70.4 Simple Types

None.

### 3.1.4.71 UpdateFilter

This operation is used to update the existing filter as specified by the Filter (section [2.2.4.98](#)) object in the **UpdateFilter** input element.

```
<wsdl:operation name="UpdateFilter">
  <wsdl:input message="tns:UpdateFilterSoapIn"/>
  <wsdl:output message="tns:UpdateFilterSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateFilterSoapIn** request message, and the server (2) responds with an **UpdateFilterSoapOut** response message as follows:

- The protocol client MUST send a valid **Filter** (section [2.2.4.98](#)) object instance that specifies the new state of the filter.

- The server (2) MUST validate the filter following the schema of the **Filter**.
- The server (2) MUST verify that the filter exists by using the Location attribute as specified in the base class **FirstClassElement** (section [2.2.4.99](#)) and the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the filter.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the filter was updated on the server storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the current version of the filter object. If **Version** is updated by the server then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
  - The other properties of the filter SHOULD be equal to the **Filter** object submitted to the server (2).
- The server (2) MUST return a new **Filter** object instance that represents the updated filter.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.71.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.71.1.1 UpdateFilterSoapIn

The requested WSDL message for the **UpdateFilter** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateFilter
```

The SOAP body contains the **UpdateFilter** element.

### 3.1.4.71.1.2 UpdateFilterSoapOut

The response WSDL message for the **UpdateFilter** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateFilter
```

The SOAP body contains the **UpdateFilterResponse** element.

### 3.1.4.71.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.71.2.1 UpdateFilter

The input data for the **UpdateFilter** WSDL operation.

```
<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>
```

**filter:** **Filter** (section [2.2.4.98](#)) object instance that specifies the new state of the filter that is being updated.

#### 3.1.4.71.2.2 UpdateFilterResponse

The result data for the **UpdateFilter** WSDL operation.

```
<xs:element name="UpdateFilterResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateFilterResult" type="tns:Filter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateFilterResult:** **Filter** (section [2.2.4.98](#)) object instance that specifies the updated filter.

### 3.1.4.71.3 Complex Types

None.

### 3.1.4.71.4 Simple Types

None.

### 3.1.4.72 UpdateIndicator

This operation is used to update the existing indicator as specified by the **Indicator** (section [2.2.4.125](#)) object in the **UpdateIndicator** input element.

```
<wsdl:operation name="UpdateIndicator">
  <wsdl:input message="tns:UpdateIndicatorSoapIn"/>
  <wsdl:output message="tns:UpdateIndicatorSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateIndicatorSoapIn** request message, and the server (2) responds with an **UpdateIndicatorSoapOut** response message as follows:

- The protocol client MUST send a valid **Indicator** object instance that specifies the new state of the indicator.
- The server (2) MUST validate the indicator following the schema of the **Indicator**.
- The server (2) MUST verify that the indicator exists by using the Location attribute as specified in the base class **FirstClassElement** (section [2.2.4.99](#)) and the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the indicator.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the indicator was updated on the server storage. The new value of **LastModified** MUST be greater than or equal to the LastModified that was initially submitted to the server (2). **Version** SHOULD be updated by the server (2) with the current version of the indicator object. If **Version** is updated by the server then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
  - **CreatedBy** SHOULD be updated by the server (2).
  - **CreatedDate** SHOULD be updated by the server (2).
  - The other properties of the indicator SHOULD be equal to the **Indicator** object submitted to the server (2).
- The server (2) MUST return a new **Indicator** object instance that represents the updated indicator.

Error code	Description
<b>InvalidBuiltinIndicatorOperation</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidIndicator</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).



Error code	Description
<b>InvalidIndicatorBand</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidSetting</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>Unknown</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.72.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.72.1.1 UpdateIndicatorSoapIn

The requested 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.

#### 3.1.4.72.1.2 UpdateIndicatorSoapOut

The response WSDL message for the **UpdateIndicator** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateIndicator
```

The SOAP body contains the **UpdateIndicatorResponse** element.

### 3.1.4.72.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.72.2.1 UpdateIndicator

The input data for the **UpdateIndicator** WSDL operation.

```
<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>

```

**indicator: Indicator** (section [2.2.4.125](#)) object instance that specifies the new state of the indicator that is being updated.

### 3.1.4.72.2 UpdateIndicatorResponse

The result data for the **UpdateIndicator** WSDL operation.

```

<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>

```

**UpdateIndicatorResult: Indicator** (section [2.2.4.125](#)) object instance that specifies the updated indicator.

### 3.1.4.72.3 Complex Types

None.

### 3.1.4.72.4 Simple Types

None.

### 3.1.4.73 UpdateKpi

This operation is used to update the existing KPI as specified by the Kpi (section [2.2.4.128](#)) object in the **UpdateKpi** input element.

```

<wsdl:operation name="UpdateKpi">
  <wsdl:input message="tns:UpdateKpiSoapIn"/>
  <wsdl:output message="tns:UpdateKpiSoapOut"/>
</wsdl:operation>

```

The protocol client sends an **UpdateKpiSoapIn** request message, and the server (2) responds with an **UpdateKpiSoapOut** response message as follows:

- The protocol client MUST send a valid **Kpi** object instance that specifies the new state of the KPI.
- The server (2) MUST validate the KPI following the schema of the **Kpi**.
- The server (2) MUST verify that the KPI exists by using the **Location** attribute as specified in the base class **FirstClassElement** (section [2.2.4.99](#)) and the user has permissions to access and modify it.

- The server (2) MUST update the stored copy of the KPI.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the KPI was updated on the server storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the current version of the KPI object. If **Version** is updated by the server then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
  - The other properties of the KPI SHOULD be equal to the **Kpi** object submitted to the server (2).
- The server (2) MUST return a new **Kpi** object instance that represents the updated KPI.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidKpi</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.73.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.73.1.1 UpdateKpiSoapIn

The requested WSDL message for the **UpdateKpi** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateKpi
```

The SOAP body contains the **UpdateKpi** element.

### 3.1.4.73.1.2 UpdateKpiSoapOut

The response WSDL message for the **UpdateKpi** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateKpi
```

The SOAP body contains the **UpdateKpiResponse** element.

### 3.1.4.73.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.73.2.1 UpdateKpi

The input data for the **UpdateKpi** WSDL operation.

```
<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>
```

**kpi: Kpi** (section [2.2.4.128](#)) object instance that specifies the new state of the KPI that is being updated.

#### 3.1.4.73.2.2 UpdateKpiResponse

The result data for the **UpdateKpi** WSDL operation.

```
<xs:element name="UpdateKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateKpiResult" type="tns:Kpi"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateKpiResult: Kpi** (section [2.2.4.128](#)) object instance that specifies the updated KPI.

### 3.1.4.73.3 Complex Types

None.

### 3.1.4.73.4 Simple Types

None.

### 3.1.4.74 UpdateReportView

This operation is used to update the existing report view as specified by the **ReportView** (section [2.2.4.161](#)) object in the **UpdateReportView** input element.

```
<wsdl:operation name="UpdateReportView">
  <wsdl:input message="tns:UpdateReportViewSoapIn"/>
  <wsdl:output message="tns:UpdateReportViewSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateReportViewSoapIn** request message, and the server (2) responds with an **UpdateReportViewSoapOut** response message as follows:

- The protocol client MUST send a valid **ReportView** object instance that specifies the new state of the report view.
- The server (2) MUST validate the report view following the schema of the **ReportView**.
- The server (2) MUST verify that the report view exists by using the Location attribute as specified in the base class **FirstClassElement** (section [2.2.4.99](#)) and the user has permissions to access and modify it.
- The server (2) MUST update the stored copy of the report view.
  - **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
  - **LastModified** SHOULD be updated by the server (2) with the date and time of when the report view was updated on the server storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
  - **Version** SHOULD be updated by the server (2) with the current version of the report view object. If **Version** is updated by the server then it MUST NOT be null and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
  - The other properties of the report view SHOULD be equal to the **Indicator** (section [2.2.4.125](#)) object submitted to the server (2).

The server (2) MUST return a new **ReportView** object instance that represents the updated report view.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidReportView</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

Error code	Description
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code MUST be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.74.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.74.1.1 UpdateReportViewSoapIn

The requested WSDL message for the **UpdateReportView** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateReportView
```

The SOAP body contains the **UpdateReportView** element.

#### 3.1.4.74.1.2 UpdateReportViewSoapOut

The response WSDL message for the **UpdateReportView** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateReportView
```

The SOAP body contains the **UpdateReportViewResponse** element.

### 3.1.4.74.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.74.2.1 UpdateReportView

The input data for the **UpdateReportView** WSDL operation.

```
<xs:element name="UpdateReportView">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**reportView: ReportView** (section [2.2.4.161](#)) object instance that specifies the new state of the report view that is being updated.

### 3.1.4.74.2.2 UpdateReportViewResponse

The result data for the **UpdateReportView** WSDL operation.

```
<xs:element name="UpdateReportViewResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateReportViewResult"
type="tns:ReportView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**UpdateReportViewResult: ReportView** (section [2.2.4.161](#)) object instance that specifies the updated report view.

### 3.1.4.74.3 Complex Types

None.

### 3.1.4.74.4 Simple Types

None.

### 3.1.4.75 UpdateScorecard

This operation is used to update the existing scorecard as specified by the **Scorecard** (section [2.2.4.163](#)) object in the **UpdateScorecard** input element.

```
<wsdl:operation name="UpdateScorecard">
  <wsdl:input message="tns:UpdateScorecardSoapIn"/>
  <wsdl:output message="tns:UpdateScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **UpdateScorecardSoapIn** request message, and the server (2) responds with an **UpdateScorecardSoapOut** message as follows:

- The scorecard to be updated **MUST** be a valid **Scorecard**.
- The **Location** of the scorecard ([FirstClassElement](#) section 2.2.4.99) **MUST** exist.
- The current user **MUST** have read and write permissions to the **Location** (FirstClassElement) of the scorecard;
- The **Location** of the scorecard **MUST** support storing objects of type **Scorecard**.
- The stored copy on the server **MUST** be updated with the scorecard provided by the protocol client in the **UpdateScorecardSoapIn** request message.

Error code	Description
<b>FCOUpdateFailed</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListAccess</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

Error code	Description
<b>InvalidItemType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>FCOUpdateFailedListType</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidObject</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidCategoryName</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidFirstClassElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElement</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).
<b>InvalidElementField</b>	See Common List of Error Codes (section <a href="#">2.2.9.3</a> ).

In case of any other failure, the error code **MUST** be one of the values specified in section [2.2.9.2](#). A detailed specification of how exceptions are reported by the server (2) is in section [2.2.9](#).

### 3.1.4.75.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.75.1.1 UpdateScorecardSoapIn

The requested WSDL message for the **UpdateScorecard** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateScorecard
```

The SOAP body contains the **UpdateScorecard** element.

#### 3.1.4.75.1.2 UpdateScorecardSoapOut

The response WSDL message for the **UpdateScorecard** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/UpdateScorecard
```

The SOAP body contains the **UpdateScorecardResponse** element.

### 3.1.4.75.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.75.2.1 UpdateScorecard

The input data for the **UpdateScorecard** WSDL operation.

```
<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>

```

**scorecard:** The scorecard to be updated, which MUST be a valid **Scorecard**. This operation is used to update the existing scorecard as specified by the **Scorecard**.

### 3.1.4.75.2.2 UpdateScorecardResponse

The result data for the **UpdateScorecard** WSDL operation.

```

<xs:element name="UpdateScorecardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateScorecardResult"
        type="tns:Scorecard"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**UpdateScorecardResult:** the original scorecard object submitted to the server (2), modified as follows:

- **ModifiedBy** SHOULD be updated by the server (2) with the login name of the current user.
- **LastModified** SHOULD be updated by the server (2) with the date and time of when the scorecard was last updated on the server storage. The new value of **LastModified** MUST be greater than or equal to the **LastModified** that was initially submitted to the server (2).
- **Version** SHOULD be updated by the server (2) with the current version of the scorecard object. If **Version** is updated by the server, it MUST NOT be **null** and MUST be a valid **ElementVersion** (section [2.2.4.92](#)) object.
- The other properties of the scorecard SHOULD be equal to the original scorecard submitted to the server (2).

### 3.1.4.75.3 Complex Types

None.

### 3.1.4.75.4 Simple Types

None.

### 3.1.4.76 ValidateKpi

Checks whether a KPI stored on the server is valid.

```

<wsdl:operation name="ValidateKpi">
  <wsdl:input message="tns:ValidateKpiSoapIn"/>
  <wsdl:output message="tns:ValidateKpiSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **ValidateKpiSoapIn** request message, and the server (2) responds with a **ValidateKpiSoapOut** message, as follows:

1. If the KPI contains any **Actuals** (see section [2.2.4.128](#)), each MUST be a valid **KpiMeasure** (see section [2.2.4.129](#)) as follows:
  - If the **DataSourceLocation** field of **KpiMeasure** (see section [2.2.4.129](#)) is not empty, it MUST refer to an existing data source (1) element (see section [2.2.4.85](#)), and the connection to the data source MUST be successful.
  - If the data source at **DataSourceLocation** is of type ADOMD.NET (see section [2.2.4.85](#)), each **DefaultDimensionSetting** (see section [2.2.4.87](#)) MUST be valid as follows:
    - If the **DefaultDimensionSetting** contains any **Member** element (see section [2.2.4.135](#)), each **Member** MUST exist in the data source.
  - If the data source at **DataSourceLocation** is of type ODBC (See section [2.2.4.85](#)), the **OdbcQuery** attribute of the **KpiMeasure** (see section [2.2.4.129](#)) MUST be valid in that data source.
2. If the KPI contains any **Targets** (see section [2.2.4.128](#)), each MUST be a valid Target (see section [2.2.4.171](#)) as follows:
  - If the property **RelatedActualId** (see section [2.2.4.171](#)) is not empty, it MUST refer to an existing Actual, which MUST be valid according to item 1.
  - The **Target** itself MUST be a valid **KpiMeasure** according to item 1.
  - If **IndicatorLocation** (see section [2.2.4.128](#)) is not empty, it MUST refer to an existing **Indicator**.
  - If **StatedScore** (see section [2.2.4.171](#)) is not empty, then it MUST be a valid **KpiMeasure** according to item 1.

### 3.1.4.76.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.76.1.1 ValidateKpiSoapIn

The requested WSDL message for the **ValidateKpi** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateKpi
```

The SOAP body contains the **ValidateKpi** element.

#### 3.1.4.76.1.2 ValidateKpiSoapOut

The response WSDL message for the **ValidateKpi** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateKpi
```

The SOAP body contains the **ValidateKpiResponse** element.

### 3.1.4.76.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.76.2.1 ValidateKpi

The input data for the **ValidateKpi** WSDL operation.

```
<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>
```

**location:** Location of the KPI to be validated (see section [RepositoryLocation](#)).

#### 3.1.4.76.2.2 ValidateKpiResponse

The result data for the **ValidateKpi** WSDL operation.

```
<xs:element name="ValidateKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ValidateKpiResult"
type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

**ValidateKpiResult:** An array of strings. If the KPI is valid, then this array MUST be empty. Otherwise, it SHOULD contain one localized error message per validation failure.

### 3.1.4.76.3 Complex Types

None.

### 3.1.4.76.4 Simple Types

None.

### 3.1.4.77 ValidateScorecard

Checks if a scorecard stored on the server (2) is valid.

```
<wsdl:operation name="ValidateScorecard">
  <wsdl:input message="tns:ValidateScorecardSoapIn"/>
  <wsdl:output message="tns:ValidateScorecardSoapOut"/>
</wsdl:operation>
```

The protocol client sends an **ValidateScorecardSoapIn** request message, and the server (2) responds with an **ValidateScorecardSoapOut** message as follows:

- If the scorecard contains one or more KPIs, each KPI MUST be valid according to the specification in section [ValidateKPI](#) (section [3.1.4.76](#));
- If the scorecard contains any **ConfiguredViews** (section [2.2.4.77](#)), each MUST be valid as follows:
  - If the **DataSourceLocation** field is not empty, then it MUST refer to an existing data source element (section [2.2.4.85](#)) and the connection to the data source MUST be successful;
  - The column and row headers defined in **GridViewDefinition** (section [2.2.4.122](#)) and [GridHeaderItem](#) (section [2.2.4.116](#)) MUST be valid according to the following:
    - Each column or row header that is of type **Member** (section [2.2.5.39](#)) MUST refer to a valid member in the data source.
    - Each column or row header that is of type **NamedSet** (section [2.2.5.39](#)) MUST be a well-formed named set MDX.

### 3.1.4.77.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.77.1.1 ValidateScorecardSoapIn

The requested 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.

#### 3.1.4.77.1.2 ValidateScorecardSoapOut

The response WSDL message for the **ValidateScorecard** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateScorecard
```

The SOAP body contains the **ValidateScorecardResponse** element.

### 3.1.4.77.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.77.2.1 ValidateScorecard

The input data for the **ValidateScorecard** WSDL operation.

```
<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>

```

**location:** Location of the Scorecard to be validated [RepositoryLocation](#) (section [2.2.4.162](#)).

### 3.1.4.77.2.2 ValidateScorecardResponse

The result data for the **ValidateScorecard** WSDL operation.

```

<xs:element name="ValidateScorecardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ValidateScorecardResult"
type="tns:ArrayOfString"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

**ValidateScorecardResult:** An array of strings. If the scorecard is valid, then this array MUST be empty. Otherwise, it SHOULD contain one localized error message per validation failure.

### 3.1.4.77.3 Complex Types

None.

### 3.1.4.77.4 Simple Types

None.

### 3.1.4.78 ValidateSiteCollection

This operation is used to check if the context site has the server feature installed.

```

<wsdl:operation name="ValidateSiteCollection">
  <wsdl:input message="tns:ValidateSiteCollectionSoapIn"/>
  <wsdl:output message="tns:ValidateSiteCollectionSoapOut"/>
</wsdl:operation>

```

The protocol client sends a **ValidateSiteCollectionSoapIn** request message, and the server (2) responds with a **ValidateSiteCollectionSoapOut** message as follows:

- If the context site is the top-level site(2) of a site collection that has the server (2) feature installed, **ValidateSiteCollectionResult** MUST be "SiteCollection".
- If the context site is a subsite of a site collection that has the server (2) feature installed, **ValidateSiteCollectionResult** MUST be "Site".
- If the context site is NULL, **ValidateSiteCollectionResult** MUST be "NonexistentSiteCollection".

- If the context site is not a valid site (2) or a site collection and **siteCollectionUrl** is not empty, **ValidateSiteCollectionResult** MUST be "Nonexistentsite".
- If the context site is not a valid site (2) or a site collection and **siteCollectionUrl** is empty, **ValidateSiteCollectionResult** MUST be "NonexistentSiteCollection".
- If the site collection of the context site does not have the server (2) feature installed, **ValidateSiteCollectionResult** MUST be "PPSNotActivatedOnSiteCollection".
- **ValidateSiteCollectionResult** MUST NOT have any other values from the **URLValidationResult** enumeration other than those enumerated in items 1 to 6.

### 3.1.4.78.1 Messages

The following WSDL message definitions are specific to this operation.

#### 3.1.4.78.1.1 ValidateSiteCollectionSoapIn

The requested WSDL message for the **ValidateSiteCollection** WSDL operation.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection
```

The SOAP body contains the **ValidateSiteCollection** element.

#### 3.1.4.78.1.2 ValidateSiteCollectionSoapOut

The response WSDL message for the **ValidateSiteCollection** method.

The SOAP action value is:

```
http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection
```

The SOAP body contains the **ValidateSiteCollectionResponse** element.

### 3.1.4.78.2 Elements

The following XML Schema element definitions are specific to this operation.

#### 3.1.4.78.2.1 ValidateSiteCollection

The input data for the **ValidateSiteCollection** WSDL operation.

```
<xs:element name="ValidateSiteCollection">
  <xs:complexType/>
</xs:element>
```

#### 3.1.4.78.2.2 ValidateSiteCollectionResponse

The result data for the **ValidateSiteCollection** WSDL operation.

```

<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>

```

**ValidateSiteCollectionResult:** A value of type **URLValidationResult** indicating the result of the validation process. See the definition of [URLValidationResult](#) for more details.

**siteCollectionUrl:** The site collection URL of the context site.

**siteUrl:** The URL of the context site.

### 3.1.4.78.3 Complex Types

None.

### 3.1.4.78.4 Simple Types

The following XML Schema simple type definitions are specific to this operation.

#### 3.1.4.78.4.1 URLValidationResult

The **URLValidationResult** is an enumeration used to specify the possible results of URL Validation.

```

<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:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for URLValidationResult:

Value	Meaning
SiteCollectionOrSite	The context site is a subsite of a site collection or the top-level site (2) of a site collection that has the server (2) feature installed.
SiteCollection	The context site is the top-level site (2) of a site collection and the site collection has the server feature installed.

Value	Meaning
Site	The context site is a subsite of a site collection and the site collection has the protocol feature installed.
List	The context site is a list (1) of a site collection.
DocumentLibrary	The context site is a document library of a site collection.
InvalidURL	The URL is not valid.
AlreadyExists	The URL already exists.
NonexistentSiteCollection	The context site is not a valid site collection.
NonexistentSite	The context site is not a valid site (2).
PPSNotActivatedOnSiteCollection	The site collection of the context site does not have the server feature activated.
URLZoneNotAllowed	The URL is not in the following <b>security zones</b> : Local, Intranet, or Trusted.

### 3.1.5 Timer Events

No timer events are required on the server beyond those required by the underlying RPC transport.

### 3.1.6 Other Local Events

None.



## 4 Protocol Examples

The following subsections contain examples of this protocol's usage.

### 4.1 Scorecard Update

In this example, a protocol client creates a new KPI, adds that KPI to an existing scorecard, gets the result data set for that scorecard, then deletes the scorecard.

The example assumes that the following objects are known to the server (2) with the following identifiers:

Type	Name	Path	ID
Scorecard	New <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**. This call will create a KPI with an Analysis Services actual value using the Internet Sales Amount measure. The target value is a fixed data source with a value of 1. The KPI will use a built-in indicator and normalized banding type.

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateKpi xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <listUrl>/PerformancePoint/Lists/Dashboard Content</listUrl>
      <kpi Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:13:06"
Content="PpsKpi" LastModified="2009-05-21T13:13:47" ModifiedBy="Sample User"
CheckedOutTo="">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="InternetSales" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="1" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content" />
        <Actuals>
          <KpiMeasure Guid="6b25b5bc-ffed-4f36-823c-d919b9f4716f" AggregateBy="Default"
DisableScorecardFilters="false" CustomData="" MeasureType="Fixed" ModelCurrent="1"
Pattern="IncreasingIsBetter" CurrentFormula="" IsCustomCurrentFormula="false" OdbcQuery=""
OverrideHoverText="" TimeFilterFormula="" ValueSource="Default">
            <Properties>
```

```

        <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Actual" />
        <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
        <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
    </Properties>
    <Comments />
    <OwnerKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content" />
    <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_000"
ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
    <DefaultDimensionSettings>
        <DefaultDimensionSetting DisplayName="{[Measures].[Measures]}" UniqueName="[Measures]"
IsMeasureDimension="true" DefaultMemberName="" IsVisible="true" ShowAsSlider="false">
            <MeasureGroupNames />
            <Type>Unknown</Type>
            <Hierarchies />
            <Levels>
                <Level DisplayName="MeasureLevel" UniqueName="MeasureLevel"
DimensionUniqueName="[Measures]" IsAllLevel="false" LevelNumber="0" />
            </Levels>
            <Members Caption="Internet Sales Amount" UniqueName="[Measures].[Internet Sales
Amount]" LevelName="[Measures].[MeasuresLevel]" DimensionName="Measures.Measures"
LevelDepth="0" ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
DimensionUniqueName="[Measures]" MemberType="Regular" />
        </DefaultDimensionSetting>
    </DefaultDimensionSettings>
    <OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
</KpiMeasure>
</Actuals>
<Targets>
    <Target Guid="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" />
        <DataSourceLocation ItemUrl="/%%fixedvalues%%" />
        <DefaultDimensionSettings />
        <OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
        <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_000" />
        <Banding Type="Normalized" ActualWorst="0" SpreadMinimum="0" SpreadMaximum="1.2">
            <CustomBoundary>

```

```

        <decimal>0.50</decimal>
        <decimal>1</decimal>
    </CustomBoundary>
</Banding>
    <RelatedActualId>6b25b5bc-ffed-4f36-823c-d919b9f4716f</RelatedActualId>
</Target>
</Targets>
</kpi>
</CreateKpi>
</soap:Body>
</soap:Envelope>

```

The server (2) responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateKpiResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <CreateKpiResult Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:14:28"
        ContentType="PpsKpi" LastModified="2009-05-21T13:14:28" ModifiedBy="Sample User"
        CheckedOutTo="">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
            Description="Name Description" Required="false" Visible="true" Text="InternetSales" />
          <BpmProperty xsi:type="BpmPropertyLongText"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
            Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
            Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="1" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000" ItemType="Kpi"
          ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791" SpSiteCollectionGuid="7d7875a5-583b-419c-
          ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
          a268-4cfl-a9fc-76d4b2ddabe0" />
        <Actuals>
          <KpiMeasure Guid="6b25b5bc-ffed-4f36-823c-d919b9f4716f" AggregateBy="Default"
            DisableScorecardFilters="false" CustomData="" MeasureType="Fixed" ModelCurrent="1"
            Pattern="IncreasingIsBetter" CurrentFormula="" IsCustomCurrentFormula="false" OdbcQuery=""
            OverrideHoverText="" TimeFilterFormula="" ValueSource="Default">
            <Properties>
              <BpmProperty xsi:type="BpmPropertyText"
                UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
                Description="Name Description" Required="false" Visible="true" Text="Actual" />
              <BpmProperty xsi:type="BpmPropertyLongText"
                UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
                Description="Description Description" Required="false" Visible="true" Text="" />
              <BpmProperty xsi:type="BpmPropertyUser"
                UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
                Description="Person Responsible Description" Required="false" Visible="true" Login="" />
            </Properties>
            <Comments />
            <OwnerKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
              ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"

```

```

SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
  <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000"
  ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2"
  SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
    <DefaultDimensionSettings>
      <DefaultDimensionSetting DisplayName="{[Measures].[Measures]}" UniqueName="[Measures]"
      IsMeasureDimension="true" DefaultMemberName="" IsVisible="true" ShowAsSlider="false">
        <MeasureGroupNames />
        <Type>Unknown</Type>
        <Hierarchies />
        <Levels>
          <Level DisplayName="MeasureLevel" UniqueName="MeasureLevel"
          DimensionUniqueName="[Measures]" IsAllLevel="false" LevelNumber="0" />
        </Levels>
        <Members Caption="Internet Sales Amount" UniqueName="[Measures].[Internet Sales Amount]" LevelName="[Measures].[MeasuresLevel]" DimensionName="Measures.Measures"
        LevelDepth="0" ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
        DimensionUniqueName="[Measures]" MemberType="Regular" />
      </DefaultDimensionSetting>
    </DefaultDimensionSettings>
    <OverrideFormatProperties Multiplier="1" FormatType="Default" DecimalPlaces="0"
    NegativeSymbol="NegativeSign" UseThousandsSeparator="true" />
    </KpiMeasure>
    </Actuals>
    <Targets>
      <Target Guid="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="94d89bc7-7a1d-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=94de004b6e3fcc5">
        <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>
      <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
        HorizontalAlignment="Left">
        <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
          Underline="False" Strikeout="False" />
        <ForeColor A="255" R="0" G="0" B="0" />
        <BackColor A="255" R="255" G="255" B="255" />
      </DefaultCellFormatInfo>
      <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
        HorizontalAlignment="Left">
        <BackColor A="0" R="252" G="252" B="252" />
      </DefaultRowHeaderFormatInfo>
      <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
        HorizontalAlignment="Center">
        <BackColor A="0" R="235" G="243" B="255" />
      </DefaultColumnHeaderFormatInfo>
      <RootRowHeader Id="0" Guid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f"
        DefinitionGuid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f" DisplayText="" HeaderType="None"
        GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="1" IsCollapsed="false"
        IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
        IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
        MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
        IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
        NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
        IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
        Weight="1" AggregationType="None">
        <Children>
          <GridHeaderItem Id="1" Guid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3"
            DefinitionGuid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3" DisplayText="InternetSales"
            DimensionName="Scorecard_" DimensionValue="/PerformancePoint/Lists/Dashboard Content/4_.000"
            HeaderType="Kpi" GroupId="-4" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
            IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
            IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
            MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
            IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
            NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"

```

```

IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children />
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
ItemTypes="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-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" />
<DefaultCellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>
</ConfiguredView>
</ConfiguredViews>
<EndPoints>
    <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
date-time" AcceptsMultipleFilterLinks="true" />
</EndPoints>
<BeginPoints>
<ParameterDefinition>
    <ParameterUniqueName>2833def6-63f3-43d5-9bfd-ebd371113b27</ParameterUniqueName>
    <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">

```



```

        <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
        <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:element name="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
        <xs:sequence>
        <xs:element name="Key" type="xs:string" minOccurs="0" />
        <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
        <xs:element name="KpiId" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
        <xs:element name="Name" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
        <xs:element name="Description" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
        <xs:element name="Person_x0020_Responsible" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
        </xs:sequence>
        </xs:complexType>
        </xs:element>
        </xs:choice>
        </xs:complexType>
        </xs:element>
        </xs:schema>
        <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
        </DisplayValues>
        <CustomDefinition>BeginPoint_Kpi</CustomDefinition>
        <ParameterProviderId>ParameterScorecardKpiProvider</ParameterProviderId>
        <DisplayName>KPI</DisplayName>
        <EmitterType>BothAConditionalVisibilityAndParameterEmitter</EmitterType>
        <KeyColumn>Key</KeyColumn>
        <ParentKeyColumn>ParentKey</ParentKeyColumn>
        <DisplayColumn>DisplayValue</DisplayColumn>
        <IsDefaultColumn>IsDefault</IsDefaultColumn>
        <DefaultPostFormula />
        </ParameterDefinition>
        <ParameterDefinition>
        <ParameterUniqueName>dd5820fe-d454-4a30-8980-1e37a5bc2341</ParameterUniqueName>
        <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
        <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
        <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:element name="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
        <xs:sequence>
        <xs:element name="Key" type="xs:string" minOccurs="0" />
        <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
        <xs:element name="CellDisplay" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />

```

```

        </xs:sequence>
        </xs:complexType>
    </xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_ScorecardCell</CustomDefinition>
<ParameterProviderId>ParameterScorecardCellProvider</ParameterProviderId>
<DisplayName>Cell</DisplayName>
<EmitterType>ParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
    <ParameterUniqueName>c6441909-fc12-4f5f-a1aa-8c5d6729e7de</ParameterUniqueName>
    <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
            <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                    <xs:choice minOccurs="0" maxOccurs="unbounded">
                        <xs:element name="ParameterData" msdata:Locale="en-US">
                            <xs:complexType>
                                <xs:sequence>
                                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                                    <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                </xs:sequence>
                            </xs:complexType>
                        </xs:element>
                    </xs:choice>
                </xs:complexType>
            </xs:element>
        </xs:schema>
        <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
        </DisplayValues>
        <CustomDefinition>BeginPoint_ScorecardRowMember</CustomDefinition>
        <ParameterProviderId>ParameterScorecardRowMemberProvider</ParameterProviderId>
        <DisplayName>Row Member</DisplayName>
        <EmitterType>ParameterEmitter</EmitterType>
        <KeyColumn>Key</KeyColumn>
        <ParentKeyColumn>ParentKey</ParentKeyColumn>
        <DisplayColumn>DisplayValue</DisplayColumn>
        <IsDefaultColumn>IsDefault</IsDefaultColumn>
        <DefaultPostFormula />

```

```

    </ParameterDefinition>
    <ParameterDefinition>
      <ParameterUniqueName>957d3ae6-c5db-4d06-a432-0f5df8d07ce7</ParameterUniqueName>
      <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-com:xml-msprop">
          <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
            <xs:complexType>
              <xs:choice minOccurs="0" maxOccurs="unbounded">
                <xs:element name="ParameterData" msdata:Locale="en-US">
                  <xs:complexType>
                    <xs:sequence>
                      <xs:element name="Key" type="xs:string" minOccurs="0" />
                      <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                      <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                      <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                      <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                    </xs:sequence>
                  </xs:complexType>
                </xs:element>
              </xs:choice>
            </xs:complexType>
          </xs: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"
      ContentType="PpsScorecard" LastModified="2009-05-21T13:12:24" ModifiedBy="Sample User"
      CheckedOutTo="" TemplateType="General"
      RendererClassName="Microsoft.PerformancePoint.Scorecards.ServerRendering.ScorecardCtrl,
      Microsoft.PerformancePoint.Scorecards.ServerRendering, Version=14.0.0.0, Culture=neutral,
      PublicKeyToken=94de0004b6e3fcc5">
      <Properties>
        <BpmProperty xsi:type="BpmPropertyText"
          UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
          Description="Name Description" Required="false" Visible="true" Text="MyScorecard" />
        <BpmProperty xsi:type="BpmPropertyLongText"
          UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
          Description="Description Description" Required="false" Visible="true" Text="" />
        <BpmProperty xsi:type="BpmPropertyUser"
          UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
          Description="Person Responsible Description" Required="false" Visible="true" Login="" />
      </Properties>
      <Comments />
      <Version Major="2" Minor="0" />
      <Location ItemUrl="/PerformancePoint/Lists/Dashboard Content/2_000" ItemType="Scorecard"
        ItemGuid="22dd6dc3-247c-43b1-b246-6ab222e9001e" SpSiteCollectionGuid="7d7875a5-583b-419c-
        ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
        a268-4cfl-a9fc-76d4b2ddabe0" />
      <ConfiguredViews>
        <ConfiguredView Guid="9bb8d042-eff9-415c-baa4-3d0c5507e441" AllowStatusFilter="true"
          AllowFilter="true" AllowSort="true" AllowAnnotations="true" EmptyRowsFilterMode="None"
          AllowShowDetails="true" ShowInfoToolTips="false" EnableTextwrap="false"
          MaintainMemberLevelDepth="true" AllowDynamicRowMemberExpansion="true"
          AllowDynamicColumnMemberExpansion="true" AllowRowDrill="true" AllowColumnDrill="true"
          AlwaysShowAnnotationCellFlags="false" ExpandToFitWidth="false" HideScorecard="false"
          ShowStatusFiltersByDefault="false">
          <Properties>
            <BpmProperty xsi:type="BpmPropertyText"
              UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
              Description="Name Description" Required="false" Visible="true" Text="Default View" />
            <BpmProperty xsi:type="BpmPropertyLongText"
              UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
              Description="Description Description" Required="false" Visible="true" Text="" />
            <BpmProperty xsi:type="BpmPropertyUser"
              UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
              Description="Person Responsible Description" Required="false" Visible="true" Login="" />
          </Properties>
          <Comments />
          <ToolbarOptions ShowInlineText="true" ShowToolbar="false" ShowPageFilters="true"
            ShowRefresh="true" ShowStatusFilter="true" ShowToolTips="true" ShowCollapse="true"
            ShowMode="true" ShowPrint="true" ShowExpand="true" ShowCellSelection="false"
            AnnotationOnByDefault="true" ShowPageFiltersByDefault="false"
            ShowStatusFilterByDefault="false" ShowToolbarItemsLabel="false" ShowDefaultRollup="true"
            ShowWorstChildRollup="true" ShowIndicatorCount="true" />
          <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_000"
            ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7cla350ce3e2"
            SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
            9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
          <GridViewDefinition EmptyCell="" InvalidCell="Error" ShowGridLines="true"
            ShowHiddenHeaders="false" ShowMetricHeaders="true" ShowPlusMinus="true">
            <CornerCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
              HorizontalAlignment="Center">
              <BackColor A="0" R="235" G="243" B="255" />
            </CornerCellFormatInfo>
          </GridViewDefinition>
        </ConfiguredView>
      </ConfiguredViews>
    </scorecard>
  </UpdateScorecard>
</soap:Body>

```

```

        <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
            <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
Underline="False" Strikeout="False" />
            <ForeColor A="255" R="0" G="0" B="0" />
            <BackColor A="255" R="255" G="255" B="255" />
        </DefaultCellFormatInfo>
        <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
            <BackColor A="0" R="252" G="252" B="252" />
        </DefaultRowHeaderFormatInfo>
        <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
            <BackColor A="0" R="235" G="243" B="255" />
        </DefaultColumnHeaderFormatInfo>
        <RootRowHeader Id="0" Guid="fd56bee3-dba4-400b-99e2-f1e14f5956a3"
DefinitionGuid="fd56bee3-dba4-400b-99e2-f1e14f5956a3" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
            <Children>
                <GridHeaderItem Id="1" Guid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d"
DefinitionGuid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d" DisplayText=""
DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard Content/1_.000"
HeaderType="Kpi" GroupId="-1" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
                    <Children />
                    <OverrideIndicatorLocation ItemUrl="" />
                    <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/1_.000"
ItemType="Kpi" ItemGuid="87b809c4-bda0-4670-9c5d-3fbcac4102ab"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
                    <BpmProperties />
                    <TrendIndicatorLocation ItemUrl="" />
                </GridHeaderItem>
                <GridHeaderItem Id="2" Guid="db9f17e1-a0a3-41d6-a492-56240189204d"
DefinitionGuid="db9f17e1-a0a3-41d6-a492-56240189204d" DisplayText="InternetSales"
DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard Content/4_.000"
HeaderType="Kpi" GroupId="-5" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
                    <Children />
                    <OverrideIndicatorLocation ItemUrl="" />
                    <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />

```

```

        <BpmProperties />
        <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootRowHeader>
<RootColumnHeader Id="0" Guid="09055f3f-77da-4fb0-9482-d434fa95f81c"
DefinitionGuid="09055f3f-77da-4fb0-9482-d434fa95f81c" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
    <Children>
        <GridHeaderItem Id="1" Guid="13c063f8-e3ba-459d-a7f9-526fdc3b29de"
DefinitionGuid="13c063f8-e3ba-459d-a7f9-526fdc3b29de" DisplayText="Actual"
DimensionName="Scorecard_Measures__" DimensionValue="Actual" HeaderType="KpiActual"
GroupId="-3" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Actual" AggregationType="None">
            <Children />
            <OverrideIndicatorLocation ItemUrl="" />
            <LinkedKpiLocation ItemUrl="" />
            <BpmProperties />
            <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
                <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
                <FilterEmptyRows>false</FilterEmptyRows>
                <Position>NotDisplayed</Position>
                <PositionActual>NotDisplayed</PositionActual>
                <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
                <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
                    <Position>Center</Position>
                </IndicatorSettings>
            </TargetSettings>
            <TrendIndicatorLocation ItemUrl="" />
        </GridHeaderItem>
        <GridHeaderItem Id="2" Guid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f"
DefinitionGuid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f" DisplayText="Target"
DimensionName="Scorecard_Measures__" DimensionValue="Target" HeaderType="KpiTarget"
GroupId="-4" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Target" AggregationType="None">

```

```

        <Children />
        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TargetSettings ShowValue="true" ShowActualAsTarget="false"
IgnoreScoreFilter="false">
            <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right" />
            <FilterEmptyRows>false</FilterEmptyRows>
            <Position>Left</Position>
            <PositionActual>NotDisplayed</PositionActual>
            <ScoreSettings ShowValue="false" ScoreType="Normalized"
RollupType="AverageWeighted" Position="NotDisplayed" />
            <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
                <Position>Center</Position>
            </IndicatorSettings>
        </TargetSettings>
        <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
</Children>
    <OverrideIndicatorLocation ItemUrl="" />
    <LinkedKpiLocation ItemUrl="" />
    <BpmProperties />
    <TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
    <DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
    <DefaultRollupIndicatorLocation ItemUrl="" />
    <CellBorderColor A="255" R="208" G="216" B="229" />
    <DefaultCellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>
</ConfiguredView>
</ConfiguredViews>
<EndPoints>
    <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
date-time" AcceptsMultipleFilterLinks="true" />
</EndPoints>
<BeginPoints>
    <ParameterDefinition>
        <ParameterUniqueName>0f6ca5f9-e8d9-4fd9-bf4e-d6aa03f2d745</ParameterUniqueName>
        <DisplayValues>
            <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
                <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                    <xs:complexType>
                        <xs:choice minOccurs="0" maxOccurs="unbounded">
                            <xs:element name="ParameterData" msdata:Locale="en-US">
                                <xs:complexType>
                                    <xs:sequence>

```

```

        <xs:element name="Key" type="xs:string" minOccurs="0" />
        <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
        <xs:element name="KpiId" msprop:NotShowColumnForCondVisibility="True"
msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
        <xs:element name="Name" msprop:NotShowColumnForCondVisibility="True"
msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
        <xs:element name="Description" msprop:NotShowColumnForCondVisibility="True"
msprop:ShowColumn="True" type="xs:string" minOccurs="0" />
        <xs:element name="Person_x0020_Responsible"
msprop:NotShowColumnForCondVisibility="True" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
    </xs:sequence>
</xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_Kpi</CustomDefinition>
<ParameterProviderId>ParameterScorecardKpiProvider</ParameterProviderId>
<DisplayName>KPI</DisplayName>
<EmitterType>BothAConditionalVisibilityAndParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
    <ParameterUniqueName>c9b6e4c4-4f13-4d17-99b9-1b7f77fafd34</ParameterUniqueName>
    <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
            <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                    <xs:choice minOccurs="0" maxOccurs="unbounded">
                        <xs:element name="ParameterData" msdata:Locale="en-US">
                            <xs:complexType>
                                <xs:sequence>
                                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                                    <xs:element name="CellDisplay" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                </xs:sequence>
                            </xs:complexType>
                        </xs:element>
                    </xs:choice>
                </xs:complexType>
            </xs:element>
        </xs:schema>
    </DisplayValues>

```



```

    </xs:schema>
    <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
  </DisplayValues>
  <CustomDefinition>BeginPoint_ScorecardCell</CustomDefinition>
  <ParameterProviderId>ParameterScorecardCellProvider</ParameterProviderId>
  <DisplayName>Cell</DisplayName>
  <EmitterType>ParameterEmitter</EmitterType>
  <KeyColumn>Key</KeyColumn>
  <ParentKeyColumn>ParentKey</ParentKeyColumn>
  <DisplayColumn>DisplayValue</DisplayColumn>
  <IsDefaultColumn>IsDefault</IsDefaultColumn>
  <DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>cb138e38-09b0-42e1-8219-b26d3ffba337</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="ParameterData" msdata:Locale="en-US">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="Key" type="xs:string" minOccurs="0" />
                  <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                  <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                  <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:element>
    </xs:schema>
    <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
  </DisplayValues>
  <CustomDefinition>BeginPoint_ScorecardRowMember</CustomDefinition>
  <ParameterProviderId>ParameterScorecardRowMemberProvider</ParameterProviderId>
  <DisplayName>Row Member</DisplayName>
  <EmitterType>ParameterEmitter</EmitterType>
  <KeyColumn>Key</KeyColumn>
  <ParentKeyColumn>ParentKey</ParentKeyColumn>
  <DisplayColumn>DisplayValue</DisplayColumn>
  <IsDefaultColumn>IsDefault</IsDefaultColumn>
  <DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>fbf44bbb-d222-431b-930a-ac41c9a58127</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">

```

```

        <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
        <xs:choice minOccurs="0" maxOccurs="unbounded">
        <xs:element name="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
        <xs:sequence>
        <xs:element name="Key" type="xs:string" minOccurs="0" />
        <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
        <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
        <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
        </xs:sequence>
        </xs:complexType>
        </xs:element>
        </xs:choice>
        </xs:complexType>
        </xs:element>
        </xs:schema>
        <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
        </DisplayValues>
        <CustomDefinition>BeginPoint_ScorecardColumnMember</CustomDefinition>
        <ParameterProviderId>ParameterScorecardColumnMemberProvider</ParameterProviderId>
        <DisplayName>Column Member</DisplayName>
        <EmitterType>ParameterEmitter</EmitterType>
        <KeyColumn>Key</KeyColumn>
        <ParentKeyColumn>ParentKey</ParentKeyColumn>
        <DisplayColumn>DisplayValue</DisplayColumn>
        <IsDefaultColumn>IsDefault</IsDefaultColumn>
        <DefaultPostFormula />
        </ParameterDefinition>
        </BeginPoints>
        </scorecard>
        </UpdateScorecard>
        </soap:Body>
    </soap:Envelope>

```

The server (2) responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <soap:Body>
        <UpdateScorecardResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
            <UpdateScorecardResult Folder="" CreatedBy="Sample User" CreatedDate="2009-05-21T13:10:54"
ContentType="PpsScorecard" LastModified="2009-05-21T15:39:11" ModifiedBy="Sample User"
CheckedOutTo="" TemplateType="General"
RendererClassName="Microsoft.PerformancePoint.Scorecards.ServerRendering.ScorecardCtrl,
Microsoft.PerformancePoint.Scorecards.ServerRendering, Version=14.0.0.0, Culture=neutral,
PublicKeyToken=94de0004b6e3fcc5">
                <Properties>
                    <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="MyScorecard" />
                </Properties>
            </UpdateScorecardResult>
        </UpdateScorecardResponse>
    </soap:Body>
</soap:Envelope>

```

```

    <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-
a268-4cfl-a9fc-76d4b2ddabe0" />
  <ConfiguredViews>
    <ConfiguredView Guid="9bb8d042-eff9-415c-baa4-3d0c5507e441" AllowStatusFilter="true"
AllowFilter="true" AllowSort="true" AllowAnnotations="true" EmptyRowsFilterMode="None"
AllowShowDetails="true" ShowInfoToolTips="false" EnableTextwrap="false"
MaintainMemberLevelDepth="true" AllowDynamicRowMemberExpansion="true"
AllowDynamicColumnMemberExpansion="true" AllowRowDrill="true" AllowColumnDrill="true"
AlwaysShowAnnotationCellFlags="false" ExpandToFitWidth="false" HideScorecard="false"
ShowStatusFiltersByDefault="false">
  <Properties>
    <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="Default View" />
    <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
    <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
  </Properties>
  <Comments />
  <ToolbarOptions ShowInlineText="true" ShowToolbar="false" ShowPageFilters="true"
ShowRefresh="true" ShowStatusFilter="true" ShowToolTips="true" ShowCollapse="true"
ShowMode="true" ShowPrint="true" ShowExpand="true" ShowCellSelection="false"
AnnotationOnByDefault="true" ShowPageFiltersByDefault="false"
ShowStatusFilterByDefault="false" ShowToolbarItemsLabel="false" ShowDefaultRollup="true"
ShowWorstChildRollup="true" ShowIndicatorCount="true" />
  <DataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000"
ItemType="DataSource" ItemGuid="571b7526-4246-4926-b05c-7cla350ce3e2"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="d5f0d9e4-7473-4845-820a-920dedeb0593" />
  <GridViewDefinition EmptyCell="" InvalidCell="Error" ShowGridLines="true"
ShowHiddenHeaders="false" ShowMetricHeaders="true" ShowPlusMinus="true">
    <CornerCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
      <BackColor A="0" R="235" G="243" B="255" />
    </CornerCellFormatInfo>
    <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
      <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
Underline="False" Strikeout="False" />
      <ForeColor A="255" R="0" G="0" B="0" />
      <BackColor A="255" R="255" G="255" B="255" />
    </DefaultCellFormatInfo>
    <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
      <BackColor A="0" R="252" G="252" B="252" />
    </DefaultRowHeaderFormatInfo>
    <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">

```

```

        <BackColor A="0" R="235" G="243" B="255" />
    </DefaultColumnHeaderFormatInfo>
    <RootRowHeader Id="0" Guid="fd56bee3-dba4-400b-99e2-f1e14f5956a3"
    DefinitionGuid="fd56bee3-dba4-400b-99e2-f1e14f5956a3" DisplayText="" HeaderType="None"
    GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
    IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
    MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
    IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
    NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
    IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
    Weight="1" AggregationType="None">
        <Children>
            <GridHeaderItem Id="1" Guid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d"
            DefinitionGuid="b70a0ba9-ea56-4ffa-bc41-bd190f06cc1d" DisplayText=""
            DimensionName="Scorecard_" DimensionValue="/PerformancePoint/Lists/Dashboard Content/1_.000"
            HeaderType="Kpi" GroupId="-1" Depth="0" LevelDepth="0" DescendantSpan="0" LeafSpan="0"
            IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
            IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
            MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
            IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
            NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
            IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
            Weight="1" AggregationType="None">
                <Children />
                <OverrideIndicatorLocation ItemUrl="" />
                <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/1_.000"
                ItemType="Kpi" ItemGuid="87b809c4-bda0-4670-9c5d-3fbcac4102ab"
                SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
                9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
                <BpmProperties />
                <TrendIndicatorLocation ItemUrl="" />
            </GridHeaderItem>
            <GridHeaderItem Id="2" Guid="db9f17e1-a0a3-41d6-a492-56240189204d"
            DefinitionGuid="db9f17e1-a0a3-41d6-a492-56240189204d" DisplayText="InternetSales"
            DimensionName="Scorecard_" DimensionValue="/PerformancePoint/Lists/Dashboard Content/4_.000"
            HeaderType="Kpi" GroupId="-5" Depth="0" LevelDepth="0" DescendantSpan="0" LeafSpan="0"
            IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
            IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
            MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
            IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
            NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
            IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
            Weight="1" AggregationType="None">
                <Children />
                <OverrideIndicatorLocation ItemUrl="" />
                <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
                ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
                SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
                9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
                <BpmProperties />
                <TrendIndicatorLocation ItemUrl="" />
            </GridHeaderItem>
        </Children>
        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TrendIndicatorLocation ItemUrl="" />
    </RootRowHeader>
    <RootColumnHeader Id="0" Guid="09055f3f-77da-4fb0-9482-d434fa95f81c"
    DefinitionGuid="09055f3f-77da-4fb0-9482-d434fa95f81c" DisplayText="" HeaderType="None"
    GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
    IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"

```

```

IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children>
    <GridHeaderItem Id="1" Guid="13c063f8-e3ba-459d-a7f9-526fdc3b29de"
      DefinitionGuid="13c063f8-e3ba-459d-a7f9-526fdc3b29de" DisplayText="Actual"
      DimensionName="Scorecard Measures__" DimensionValue="Actual" HeaderType="KpiActual"
      GroupId="-3" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
      IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
      IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
      MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
      IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
      NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
      IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
      Weight="1" KpiTargetName="Actual" AggregationType="None">
        <Children />
        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TargetSettings ShowValue="true" ShowActualAsTarget="false"
          IgnoreScoreFilter="false">
          <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
            DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
          <FilterEmptyRows>false</FilterEmptyRows>
          <Position>NotDisplayed</Position>
          <PositionActual>NotDisplayed</PositionActual>
          <ScoreSettings ShowValue="false" ScoreType="Normalized"
            RollupType="AverageWeighted" Position="NotDisplayed" />
          <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
            ShowBackColor="false">
            <Position>Center</Position>
          </IndicatorSettings>
        </TargetSettings>
        <TrendIndicatorLocation ItemUrl="" />
      </GridHeaderItem>
    <GridHeaderItem Id="2" Guid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f"
      DefinitionGuid="f6b2afe4-fe5b-47a1-974b-c7e59ab3f80f" DisplayText="Target"
      DimensionName="Scorecard Measures__" DimensionValue="Target" HeaderType="KpiTarget"
      GroupId="-4" Depth="0" LevelDepth="-1" DescendantSpan="0" LeafSpan="0" IsCollapsed="false"
      IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
      IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
      MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
      IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
      NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
      IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
      Weight="1" KpiTargetName="Target" AggregationType="None">
        <Children />
        <OverrideIndicatorLocation ItemUrl="" />
        <LinkedKpiLocation ItemUrl="" />
        <BpmProperties />
        <TargetSettings ShowValue="true" ShowActualAsTarget="false"
          IgnoreScoreFilter="false">
          <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
            DisplayType="ShowPercent" ShowValue="false" Position="Right" />
          <FilterEmptyRows>false</FilterEmptyRows>
          <Position>Left</Position>
          <PositionActual>NotDisplayed</PositionActual>
          <ScoreSettings ShowValue="false" ScoreType="Normalized"
            RollupType="AverageWeighted" Position="NotDisplayed" />

```

```

        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
            <Position>Center</Position>
        </IndicatorSettings>
    </TargetSettings>
    <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
    <TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
<DefaultRollupIndicatorId>00000000-0000-0000-0000-
000000000000</DefaultRollupIndicatorId>
<DefaultRollupIndicatorLocation ItemUrl="" />
<CellBorderColor A="255" R="208" G="216" B="229" />
<DefaultCellBorderColor A="255" R="208" G="216" B="229" />
</GridViewDefinition>
</ConfiguredView>
</ConfiguredViews>
<EndPoints>
    <EndPoint Category="Axis" UniqueName="EndPoint_Page" DisplayName="Page"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Row" DisplayName="Row"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_Column" DisplayName="Column"
AcceptsMultipleFilterLinks="false" />
    <EndPoint Category="Axis" UniqueName="EndPoint_TIFormula" DisplayName="TI formula"
AcceptsMultipleFilterLinks="true" />
    <EndPoint Category="Axis" UniqueName="EndPoint_CurrentDate-Time" DisplayName="Current
date-time" AcceptsMultipleFilterLinks="true" />
</EndPoints>
<BeginPoints>
<ParameterDefinition>
    <ParameterUniqueName>0f6ca5f9-e8d9-4fd9-bf4e-d6aa03f2d745</ParameterUniqueName>
    <DisplayValues>
        <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
            <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
                <xs:complexType>
                    <xs:choice minOccurs="0" maxOccurs="unbounded">
                        <xs:element name="ParameterData" msdata:Locale="en-US">
                            <xs:complexType>
                                <xs:sequence>
                                    <xs:element name="Key" type="xs:string" minOccurs="0" />
                                    <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                                    <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                                    <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                                    <xs:element name="KpiId" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                    <xs:element name="Name" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                    <xs:element name="Description" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                    <xs:element name="Person_x0020_Responsible" msprop:ShowColumn="True"
msprop:NotShowColumnForCondVisibility="True" type="xs:string" minOccurs="0" />
                                </xs:sequence>
                            </xs:complexType>
                        </xs:element>
                    </xs:choice>
                </xs:complexType>
            </xs:element>
        </xs:schema>
    </DisplayValues>

```

```

        </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>

```

```

</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>cb138e38-09b0-42e1-8219-b26d3ffba337</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="ParameterData" msdata:Locale="en-US">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="Key" type="xs:string" minOccurs="0" />
                  <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                  <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                  <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:element>
    </xs:schema>
    <diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
  </DisplayValues>
  <CustomDefinition>BeginPoint_ScorecardRowMember</CustomDefinition>
  <ParameterProviderId>ParameterScorecardRowMemberProvider</ParameterProviderId>
  <DisplayName>Row Member</DisplayName>
  <EmitterType>ParameterEmitter</EmitterType>
  <KeyColumn>Key</KeyColumn>
  <ParentKeyColumn>ParentKey</ParentKeyColumn>
  <DisplayColumn>DisplayValue</DisplayColumn>
  <IsDefaultColumn>IsDefault</IsDefaultColumn>
  <DefaultPostFormula />
</ParameterDefinition>
<ParameterDefinition>
  <ParameterUniqueName>fbf44bbb-d222-431b-930a-ac41c9a58127</ParameterUniqueName>
  <DisplayValues>
    <xs:schema id="NewDataSet" xmlns="" xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" xmlns:msprop="urn:schemas-microsoft-
com:xml-msprop">
      <xs:element name="NewDataSet" msdata:IsDataSet="true"
msdata:MainDataTable="ParameterData" msdata:Locale="en-US">
        <xs:complexType>
          <xs:choice minOccurs="0" maxOccurs="unbounded">
            <xs:element name="ParameterData" msdata:Locale="en-US">
              <xs:complexType>
                <xs:sequence>
                  <xs:element name="Key" type="xs:string" minOccurs="0" />
                  <xs:element name="ParentKey" type="xs:string" minOccurs="0" />
                  <xs:element name="DisplayValue" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
                  <xs:element name="IsDefault" type="xs:boolean" minOccurs="0" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:choice>
        </xs:complexType>
      </xs:element>
    </xs:schema>
  </DisplayValues>

```



```

        <xs:element name="MemberUniqueName" msprop:ShowColumn="True" type="xs:string"
minOccurs="0" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>
<diffgr:diffgram xmlns:msdata="urn:schemas-microsoft-com:xml-msdata"
xmlns:diffgr="urn:schemas-microsoft-com:xml-diffgram-v1" />
</DisplayValues>
<CustomDefinition>BeginPoint_ScorecardColumnMember</CustomDefinition>
<ParameterProviderId>ParameterScorecardColumnMemberProvider</ParameterProviderId>
<DisplayName>Column Member</DisplayName>
<EmitterType>ParameterEmitter</EmitterType>
<KeyColumn>Key</KeyColumn>
<ParentKeyColumn>ParentKey</ParentKeyColumn>
<DisplayColumn>DisplayValue</DisplayColumn>
<IsDefaultColumn>IsDefault</IsDefaultColumn>
<DefaultPostFormula />
</ParameterDefinition>
</BeginPoints>
</UpdateScorecardResult>
</UpdateScorecardResponse>
</soap:Body>
</soap:Envelope>

```

#### 4.1.4 GenerateView

The protocol client then calls **GenerateView** to get the scorecard result data set.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GenerateView xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <scorecardLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/8_.000" />
      <propertyBags>
        <Keys />
        <Values />
      </propertyBags>
    </GenerateView>
  </soap:Body>
</soap:Envelope>

```

The server (2) responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>

```

```

<GenerateViewResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
  <GenerateViewResult ScorecardViewId="7675ef55-d456-469e-9381-8c1eddd94c1d" Cached="false"
DefaultRollupIndicatorId="00000000-0000-0000-0000-000000000000" EmptyCell=""
InvalidCell="Error" TIFormula="" TICurrentDateTime="">
  <DefaultCellFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
    <FontInfo FamilyName="Tahoma" SizeInPoints="8.25" Bold="False" Italic="False"
Underline="False" Strikeout="False" />
    <ForeColor A="255" R="0" G="0" B="0" />
    <BackColor A="255" R="255" G="255" B="255" />
  </DefaultCellFormatInfo>
  <DefaultRowHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Left">
    <BackColor A="0" R="252" G="252" B="252" />
  </DefaultRowHeaderFormatInfo>
  <DefaultColumnHeaderFormatInfo TextWrap="Undefined" VerticalAlignment="Middle"
HorizontalAlignment="Center">
    <BackColor A="0" R="235" G="243" B="255" />
  </DefaultColumnHeaderFormatInfo>
  <Cells>
    <Table>
      <Keys>
        <string>/PerformancePoint/Lists/Dashboard
Content/4_.000:/PerformancePoint/Lists/Dashboard Content/4_.0001_Actual:Actual1_</string>
        <string>/PerformancePoint/Lists/Dashboard
Content/4_.000:/PerformancePoint/Lists/Dashboard Content/4_.0001_Target:Target2_</string>
        <string>Actual:Actual1_</string>
        <string>Target:Target2_</string>
      </Keys>
      <Values>
        <GridCell Value="29358677.2207" ActualValue="29358677.2207" Score="0" Weight="1"
BestChildScore="0" WorstChildScore="0" IsValueInError="false" HasAnnotation="false"
IsRollupScore="false" ValueSource="SourceData" IsValidScore="true">
          <Properties>
            <Keys />
            <Values />
          </Properties>
          <DisplayElements>
            <GridDisplayElement xsi:type="GridDisplayElementActual" Status="0"
Value="29358677.2207" OverrideValue="29358677.2207">
              <Text>$29,358,677.22</Text>
              <TooltipText />
            </GridDisplayElement>
          </DisplayElements>
          <IndicatorLocation ItemUrl="" />
          <InBand>-1</InBand>
        </GridCell>
        <GridCell Value="1" ActualValue="29358677.2207" Score="100" Weight="1"
BestChildScore="100" WorstChildScore="100" IsValueInError="false" HasAnnotation="false"
IsRollupScore="false" ValueSource="SourceData" IsValidScore="true">
          <Properties>
            <Keys />
            <Values />
          </Properties>
          <DisplayElements>
            <GridDisplayElement xsi:type="GridDisplayElementTarget" Status="0" Value="1"
OverrideValue="1">
              <Text>1</Text>
              <TooltipText />
            </GridDisplayElement>

```

```

        <GridDisplayElement xsi:type="GridDisplayElementIndicator" Status="0"
IndicatorBand="3">
        <Text>On Target</Text>
        <TooltipText>On Target</TooltipText>
        <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_.000" />
        </GridDisplayElement>
        <GridDisplayElement xsi:type="GridDisplayElementVariance" Status="0"
Value="29358676.2207" OverrideValue="2935867622">
        <Text>2,935,867,622%</Text>
        <TooltipText />
        </GridDisplayElement>
    </DisplayElements>
    <IndicatorLocation ItemUrl="/PPSBUILTININDICATOR/0_.000" />
    <InBand>3</InBand>
</GridCell>
    <GridCell Value="0" ActualValue="0" Score="0" Weight="1" BestChildScore="0"
WorstChildScore="0" IsValueInError="false" HasAnnotation="false" IsRollupScore="false"
ValueSource="Default" IsValidScore="true">
    <Properties>
    <Keys />
    <Values />
    </Properties>
    <DisplayElements />
    <IndicatorLocation ItemUrl="" />
    <InBand>-1</InBand>
</GridCell>
    <GridCell Value="0" ActualValue="0" Score="0" Weight="1" BestChildScore="0"
WorstChildScore="0" IsValueInError="false" HasAnnotation="false" IsRollupScore="false"
ValueSource="Default" IsValidScore="true">
    <Properties>
    <Keys />
    <Values />
    </Properties>
    <DisplayElements />
    <IndicatorLocation ItemUrl="" />
    <InBand>-1</InBand>
</GridCell>
</Values>
</Table>
</Cells>
<RootRowHeader Id="0" Guid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f"
DefinitionGuid="ffa9ff3b-ea47-4149-8a9e-d5f06d938f2f" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="0" DescendantSpan="1" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
    <Children>
        <GridHeaderItem Id="1" Guid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3"
DefinitionGuid="af0bd13a-2ad5-4470-b81c-14ef2e7cafd3" DisplayText="InternetSales"
DimensionName="Scorecard__" DimensionValue="/PerformancePoint/Lists/Dashboard Content/4_.000"
HeaderType="Kpi" GroupId="-4" Depth="1" LevelDepth="0" DescendantSpan="0" LeafSpan="1"
IsCollapsed="false" IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false"
IsDrillDownDisabled="false" IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"

```

```

IsHierarchyHeader="false" IsColumnHeader="false" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children />
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/4_.000"
ItemType="Kpi" ItemGuid="d4a177e7-721b-4793-981b-94e6b44fb791"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
  <BpmProperties />
  <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootRowHeader>
<RootColumnHeader Id="0" Guid="ab5c8048-cae2-4054-88bb-917449fda92e"
DefinitionGuid="ab5c8048-cae2-4054-88bb-917449fda92e" DisplayText="" HeaderType="None"
GroupId="0" Depth="0" LevelDepth="-1" DescendantSpan="1" LeafSpan="2" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" AggregationType="None">
  <Children>
    <GridHeaderItem Id="1" Guid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5"
DefinitionGuid="c3d60c40-8627-4a07-8e74-2e9bbc6776c5" DisplayText="Actual"
DimensionName="Scorecard Measures__" DimensionValue="Actual" HeaderType="KpiActual"
GroupId="-2" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"
IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Actual" AggregationType="None">
      <Children />
      <OverrideIndicatorLocation ItemUrl="" />
      <LinkedKpiLocation ItemUrl="" />
      <BpmProperties />
      <TargetSettings ShowValue="true" ShowActualAsTarget="false" IgnoreScoreFilter="false">
        <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="NotDisplayed" />
        <FilterEmptyRows>false</FilterEmptyRows>
        <Position>NotDisplayed</Position>
        <PositionActual>NotDisplayed</PositionActual>
        <ScoreSettings ShowValue="false" ScoreType="Normalized" RollupType="AverageWeighted"
Position="NotDisplayed" />
        <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
          <Position>Center</Position>
        </IndicatorSettings>
      </TargetSettings>
      <TrendIndicatorLocation ItemUrl="" />
    </GridHeaderItem>
    <GridHeaderItem Id="2" Guid="a6d178eb-68d9-430a-a3ba-0b4cbef77511"
DefinitionGuid="a6d178eb-68d9-430a-a3ba-0b4cbef77511" DisplayText="Target"
DimensionName="Scorecard Measures__" DimensionValue="Target" HeaderType="KpiTarget"
GroupId="-3" Depth="1" LevelDepth="-1" DescendantSpan="0" LeafSpan="1" IsCollapsed="false"

```

```

IsDynamicCellExpansionEnabled="false" IsDrillEnabled="false" IsDrillDownDisabled="false"
IsDrillUpDisabled="false" IsDynamicallyExpandedHeader="false"
MaintainMemberLevelDepth="false" IsCellHidden="false" IsPathHidden="false"
IsHiddenBasedOnFilterStatus="false" IsNamedSetInError="false" IsNamedSetEmpty="false"
NamedSetType="None" UseLinkedElementDisplayText="true" ShowHyperlinkInNewWindow="false"
IsHierarchyHeader="false" IsColumnHeader="true" AppendFilterInfoToHyperlink="false"
Weight="1" KpiTargetName="Target" AggregationType="None">
  <Children />
  <OverrideIndicatorLocation ItemUrl="" />
  <LinkedKpiLocation ItemUrl="" />
  <BpmProperties />
  <TargetSettings ShowValue="true" ShowActualAsTarget="false" IgnoreScoreFilter="false">
    <VarianceSettings NumDecimalPlaces="0" VarianceType="VarianceToTarget"
DisplayType="ShowPercent" ShowValue="false" Position="Right" />
    <FilterEmptyRows>false</FilterEmptyRows>
    <Position>Left</Position>
    <PositionActual>NotDisplayed</PositionActual>
    <ScoreSettings ShowValue="false" ScoreType="Normalized" RollupType="AverageWeighted"
Position="NotDisplayed" />
    <IndicatorSettings ShowImage="true" ShowText="false" ShowForeColor="false"
ShowBackColor="false">
      <Position>Center</Position>
    </IndicatorSettings>
  </TargetSettings>
  <TrendIndicatorLocation ItemUrl="" />
</GridHeaderItem>
</Children>
<OverrideIndicatorLocation ItemUrl="" />
<LinkedKpiLocation ItemUrl="" />
<BpmProperties />
<TrendIndicatorLocation ItemUrl="" />
</RootColumnHeader>
<ScorecardLocation ItemUrl="/PerformancePoint/Lists/Dashboard Content/8_.000"
ItemType="Scorecard" ItemGuid="cb692449-f20e-4809-9ee3-e012c78f026e"
SpSiteCollectionGuid="7d7875a5-583b-419c-ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-
9a4c-69695440dca4" SpListGuid="c2f6f377-a268-4cf1-a9fc-76d4b2ddabe0" />
  <DefaultRollupIndicatorLocation ItemUrl="" />
  <PreQueryTransforms>
    <GridViewTransformReference Id="ExpandNamedSets">
      <Parameters>
        <Keys />
        <Values />
      </Parameters>
    </GridViewTransformReference>
    <GridViewTransformReference Id="MemberTransforms">
      <Parameters>
        <Keys />
        <Values />
      </Parameters>
    </GridViewTransformReference>
    <GridViewTransformReference Id="UpdateDisplayText">
      <Parameters>
        <Keys />
        <Values />
      </Parameters>
    </GridViewTransformReference>
  </PreQueryTransforms>
  <PostQueryTransforms>
    <GridViewTransformReference Id="AnnotationTransform">
      <Parameters>
        <Keys />

```

```

        <Values />
      </Parameters>
    </GridViewTransformReference>
  </PostQueryTransforms>
  <PreRenderTransforms>
    <GridViewTransformReference Id="ComputeAggregations">
      <Parameters>
        <Keys />
        <Values />
      </Parameters>
    </GridViewTransformReference>
    <GridViewTransformReference Id="ComputeRollups">
      <Parameters>
        <Keys />
        <Values />
      </Parameters>
    </GridViewTransformReference>
    <GridViewTransformReference Id="FilterEmptyRows">
      <Parameters>
        <Keys />
        <Values />
      </Parameters>
    </GridViewTransformReference>
  </PreRenderTransforms>
  <PerUserTransforms />
  <PageFilters />
</GenerateViewResult>
</GenerateViewResponse>
</soap:Body>
</soap:Envelope>

```

#### 4.1.5 DeleteScorecard

The protocol client then calls **DeleteScorecard** to delete the scorecard.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <DeleteScorecard xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <location ItemUrl="/PerformancePoint/Lists/Dashboard Content/2_000" ItemType="Scorecard"
        ItemGuid="22dd6dc3-247c-43b1-b246-6ab222e9001e" SpSiteCollectionGuid="7d7875a5-583b-419c-
        ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="c2f6f377-
        a268-4cf1-a9fc-76d4b2ddabe0" />
    </DeleteScorecard>
  </soap:Body>
</soap:Envelope>

```

The server (2) responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">

```

```

<soap:Body>
  <DeleteScorecardResponse xmlns="http://www.microsoft.com/performancepoint/scorecards" />
</soap:Body>
</soap:Envelope>

```

## 4.2 Create and Use a Datasource

This scenario involves the creation of a data source. The protocol client creates a data source, tests connectivity to that data source, and retrieves dimension data from the data source.

It is assumed that an analysis server (cubes3) exists with a database (Adventure Works DW) and a cube (Adventure Works).

### 4.2.1 CreateDatasource

The protocol client calls **CreateDatasource** to create a new data source.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateDataSource xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <listUrl>/PerformancePoint/Data Sources</listUrl>
      <dataSource Folder="" CreatedBy="" CreatedDate="2009-05-21T12:59:13"
        ContentType="PpsDataSource" LastModified="0001-01-01T00:00:00" ModifiedBy="" CheckedOutTo=""
        SourceName="ADOMD.NET" ServerName="cubes3" DatabaseName="Adventure Works DW"
        CubeName="Adventure Works" CubeDisplayName="Adventure Works" FormattingDimensionName=""
        FormattingDimensionDisplayName="" FormattingDimensionType="Other" ConnectionString=""
        Roles="" UseConnectionString="false" ConnectionContext="ConnectAsSharedUser"
        PassUserNameAsAdomdCustomData="false" ReadOnly="false" MinutesToCache="10"
        ServerMajorVersion="0" SubTypeId="ADOMD.NET">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
            Description="Name Description" Required="false" Visible="true" Text="New Data Source" />
          <BpmProperty xsi:type="BpmPropertyLongText"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
            Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
            Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="0" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Data Sources" />
        <Variables />
        <CustomTimeIntelligenceSettings>&lt;?xml version="1.0" encoding="utf-16"?&gt;
&lt;TimeIntelligenceMdxSettings xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"&gt;
  &lt;Enabled&gt;true&lt;/Enabled&gt;
  &lt;ReferenceLevel&gt;None&lt;/ReferenceLevel&gt;
  &lt;ReferenceDateTime&gt;0001-01-01T00:00:00&lt;/ReferenceDateTime&gt;
  &lt;LevelBindings /&gt;
&lt;/TimeIntelligenceMdxSettings&gt;</CustomTimeIntelligenceSettings>
        <DataTableMapping DateAggregationType="Year" CalendarStartMonth="0">

```

```

        <ColumnMappings />
      </DataTableMapping>
    </dataSource>
  </CreateDataSource>
</soap:Body>
</soap:Envelope>

```

The server (2) responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <CreateDataSourceResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <CreateDataSourceResult Folder="" CreatedBy="REDMOND\sbishel" CreatedDate="2009-05-
21T12:59:34" ContentType="PpsDataSource" LastModified="2009-05-21T12:59:42"
ModifiedBy="REDMOND\sbishel" CheckedOutTo="" SourceName="ADOMD.NET" ServerName=""
DatabaseName="" CubeName="" CubeDisplayName="" FormattingDimensionName=""
FormattingDimensionDisplayName="" FormattingDimensionType="Other" ConnectionString=""
Roles="" UseConnectionString="false" ConnectionContext="ConnectAsSharedUser"
PassUserNameAsAdomdCustomData="false" ReadOnly="false" MinutesToCache="10"
ServerMajorVersion="0" SubTypeId="ADOMD.NET">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
            Description="Name Description" Required="false" Visible="true" Text="New Data Source" />
          <BpmProperty xsi:type="BpmPropertyLongText"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
            Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
            UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
            Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="1" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Data Sources/1_.000" ItemType="DataSource"
          ItemGuid="37f08ea5-2f7c-4eda-9085-f1858f065447" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="d5f0d9e4-
7473-4845-820a-920dedeb0593" />
        <Variables />
        <CustomTimeIntelligenceSettings>&lt;?xml version="1.0" encoding="utf-16"?&gt;
&lt;TimeIntelligenceMdxSettings xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"&gt;
  &lt;Enabled&gt;true&lt;/Enabled&gt;
  &lt;ReferenceLevel&gt;None&lt;/ReferenceLevel&gt;
  &lt;ReferenceDateTime&gt;0001-01-01T00:00:00&lt;/ReferenceDateTime&gt;
  &lt;LevelBindings /&gt;
&lt;/TimeIntelligenceMdxSettings&gt;</CustomTimeIntelligenceSettings>
        <DataTableMapping DateAggregationType="Year" CalendarStartMonth="0">
          <ColumnMappings />
        </DataTableMapping>
      </CreateDataSourceResult>
    </CreateDataSourceResponse>
  </soap:Body>
</soap:Envelope>

```



## 4.2.2 TestDataSource

The protocol client calls **TestDataSource** to test connectivity to the data source.

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <TestConnection xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSource Folder="" CreatedBy="REDMOND\sbishel" CreatedDate="2009-05-21T12:59:13"
ContentTypes="PpsDataSource" LastModified="2009-05-21T13:12:09" ModifiedBy="REDMOND\sbishel"
CheckedOutTo="" SourceName="ADOMD.NET" ServerName="cubes3" DatabaseName="Adventure Works DW"
CubeName="Adventure Works" CubeDisplayName="Adventure Works" FormattingDimensionName=""
FormattingDimensionDisplayName="" FormattingDimensionType="Other" ConnectionString=""
Roles="" UseConnectionString="false" ConnectionContext="ConnectAsSharedUser"
PassUserNameAsAdomdCustomData="false" ReadOnly="false" MinutesToCache="10"
ServerMajorVersion="9" SubTypeId="ADOMD.NET">
        <Properties>
          <BpmProperty xsi:type="BpmPropertyText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Name" DisplayName="Name"
Description="Name Description" Required="false" Visible="true" Text="AdventureWorks" />
          <BpmProperty xsi:type="BpmPropertyLongText"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Description" DisplayName="Description"
Description="Description Description" Required="false" Visible="true" Text="" />
          <BpmProperty xsi:type="BpmPropertyUser"
UniqueName="8dd07d4d87794510afdb1f07664359bc_Element_Owner" DisplayName="Person Responsible"
Description="Person Responsible Description" Required="false" Visible="true" Login="" />
        </Properties>
        <Comments />
        <Version Major="3" Minor="0" />
        <Location ItemUrl="/PerformancePoint/Data Sources/1_000" ItemType="DataSource"
ItemGuid="571b7526-4246-4926-b05c-7c1a350ce3e2" SpSiteCollectionGuid="7d7875a5-583b-419c-
ab90-ca79a98a2083" SpSiteGuid="94d89bc7-7a1d-4602-9a4c-69695440dca4" SpListGuid="d5f0d9e4-
7473-4845-820a-920dedeb0593" />
        <Variables />
        <CustomTimeIntelligenceSettings>&lt;?xml version="1.0" encoding="utf-16"?&gt;
&lt;TimeIntelligenceMdxSettings xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"&gt;
          &lt;Enabled&gt;true&lt;/Enabled&gt;
          &lt;ReferenceLevel&gt;None&lt;/ReferenceLevel&gt;
          &lt;ReferenceDateTime&gt;0001-01-01T00:00:00&lt;/ReferenceDateTime&gt;
          &lt;LevelBindings /&gt;
&lt;/TimeIntelligenceMdxSettings&gt;</CustomTimeIntelligenceSettings>
          <DataTableMapping DateAggregationType="Year" CalendarStartMonth="0">
            <ColumnMappings />
          </DataTableMapping>
        </dataSource>
      </TestConnection>
    </soap:Body>
  </soap:Envelope>
```

The server (2) responds with the following (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
```

```

<soap:Body>
  <TestConnectionResponse xmlns="http://www.microsoft.com/performancepoint/scorecards">
    <TestConnectionResult>true</TestConnectionResult>
  </TestConnectionResponse>
</soap:Body>
</soap:Envelope>

```

### 4.2.3 GetDimensions

The protocol client now calls **GetDimensions** to retrieve the available dimensions from the data source.

The protocol client creates and sends the following message (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetDimensions xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_000" />
    </GetDimensions>
  </soap:Body>
</soap:Envelope>

```

The server (2) responds with the following (white space added for readability):

```

<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <GetDimensionsFromDataSourceResponse
xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <GetDimensionsFromDataSourceResult>
        <Dimension DisplayName="Account.Account" UniqueName="[Account].[Account]" Description=""
IsMeasureDimension="false" DefaultMemberName="[Account].[Account].[All Accounts]">
          <MeasureGroupNames />
          <Type>Unknown</Type>
          <Hierarchies />
          <Levels>
            <Level DisplayName="(All)" UniqueName="[Account].[Account].(All)" Description=""
DimensionUniqueName="[Account].[Account]" IsAllLevel="true" LevelNumber="0" />
            <Level DisplayName="Account" UniqueName="[Account].[Account].[Account]" Description=""
DimensionUniqueName="[Account].[Account]" IsAllLevel="false" LevelNumber="1" />
          </Levels>
        </Dimension>
        <Dimension DisplayName="Account.Account Number" UniqueName="[Account].[Account Number]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Account].[Account Number].[All
Accounts]">
          <MeasureGroupNames />
          <Type>Unknown</Type>
          <Hierarchies />
          <Levels>
            <Level DisplayName="(All)" UniqueName="[Account].[Account Number].(All)"
Description="" DimensionUniqueName="[Account].[Account Number]" IsAllLevel="true"
LevelNumber="0" />

```

```

        <Level DisplayName="Account Number" UniqueName="[Account].[Account Number].[Account
Number]" Description="" DimensionUniqueName="[Account].[Account Number]" IsAllLevel="false"
LevelNumber="1" />
    </Levels>
</Dimension>
    <Dimension DisplayName="Account.Account Type" UniqueName="[Account].[Account Type]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Account].[Account Type].[All
Accounts]">
        <MeasureGroupNames />
        <Type>Unknown</Type>
        <Hierarchies />
        <Levels>
            <Level DisplayName="(All)" UniqueName="[Account].[Account Type].[All]" Description=""
DimensionUniqueName="[Account].[Account Type]" IsAllLevel="true" LevelNumber="0" />
            <Level DisplayName="Account Type" UniqueName="[Account].[Account Type].[Account Type]"
Description="" DimensionUniqueName="[Account].[Account Type]" IsAllLevel="false"
LevelNumber="1" />
        </Levels>
    </Dimension>
    <Dimension DisplayName="Account.Accounts" UniqueName="[Account].[Accounts]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Account].[Accounts].&[47]">
        <MeasureGroupNames />
        <Type>Unknown</Type>
        <Hierarchies />
        <Levels>
            <Level DisplayName="Account Level 01" UniqueName="[Account].[Accounts].[Account Level
01]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="0" />
            <Level DisplayName="Account Level 02" UniqueName="[Account].[Accounts].[Account Level
02]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="1" />
            <Level DisplayName="Account Level 03" UniqueName="[Account].[Accounts].[Account Level
03]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="2" />
            <Level DisplayName="Account Level 04" UniqueName="[Account].[Accounts].[Account Level
04]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="3" />
            <Level DisplayName="Account Level 05" UniqueName="[Account].[Accounts].[Account Level
05]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="4" />
            <Level DisplayName="Account Level 06" UniqueName="[Account].[Accounts].[Account Level
06]" Description="" DimensionUniqueName="[Account].[Accounts]" IsAllLevel="false"
LevelNumber="5" />
        </Levels>
    </Dimension>
    <Dimension DisplayName="Geography.Country" UniqueName="[Geography].[Country]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[Country].[All
Geographies]">
        <MeasureGroupNames />
        <Type>Unknown</Type>
        <Hierarchies />
        <Levels>
            <Level DisplayName="(All)" UniqueName="[Geography].[Country].[All]" Description=""
DimensionUniqueName="[Geography].[Country]" IsAllLevel="true" LevelNumber="0" />
            <Level DisplayName="Country" UniqueName="[Geography].[Country].[Country]"
Description="" DimensionUniqueName="[Geography].[Country]" IsAllLevel="false" LevelNumber="1"
/>
        </Levels>
    </Dimension>

```

```

    <Dimension DisplayName="Geography.Geography" UniqueName="[Geography].[Geography]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[Geography].[All
Geographies]">
    <MeasureGroupNames />
    <Type>Unknown</Type>
    <Hierarchies />
    <Levels>
    <Level DisplayName="(All)" UniqueName="[Geography].[Geography].(All)" Description=""
DimensionUniqueName="[Geography].[Geography]" IsAllLevel="true" LevelNumber="0" />
    <Level DisplayName="Country" UniqueName="[Geography].[Geography].[Country]"
Description="" DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false"
LevelNumber="1" />
    <Level DisplayName="State-Province" UniqueName="[Geography].[Geography].[State-
Province]" Description="" DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false"
LevelNumber="2" />
    <Level DisplayName="City" UniqueName="[Geography].[Geography].[City]" Description=""
DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false" LevelNumber="3" />
    <Level DisplayName="Postal Code" UniqueName="[Geography].[Geography].[Postal Code]"
Description="" DimensionUniqueName="[Geography].[Geography]" IsAllLevel="false"
LevelNumber="4" />
    </Levels>
</Dimension>
    <Dimension DisplayName="Geography.Postal Code" UniqueName="[Geography].[Postal Code]"
Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[Postal Code].[All
Geographies]">
    <MeasureGroupNames />
    <Type>Unknown</Type>
    <Hierarchies />
    <Levels>
    <Level DisplayName="(All)" UniqueName="[Geography].[Postal Code].(All)"
Description="" DimensionUniqueName="[Geography].[Postal Code]" IsAllLevel="true"
LevelNumber="0" />
    <Level DisplayName="Postal Code" UniqueName="[Geography].[Postal Code].[Postal Code]"
Description="" DimensionUniqueName="[Geography].[Postal Code]" IsAllLevel="false"
LevelNumber="1" />
    </Levels>
</Dimension>
    <Dimension DisplayName="Geography.State-Province" UniqueName="[Geography].[State-
Province]" Description="" IsMeasureDimension="false" DefaultMemberName="[Geography].[State-
Province].[All Geographies]">
    <MeasureGroupNames />
    <Type>Unknown</Type>
    <Hierarchies />
    <Levels>
    <Level DisplayName="(All)" UniqueName="[Geography].[State-Province].(All)"
Description="" DimensionUniqueName="[Geography].[State-Province]" IsAllLevel="true"
LevelNumber="0" />
    <Level DisplayName="State-Province" UniqueName="[Geography].[State-Province].[State-
Province]" Description="" DimensionUniqueName="[Geography].[State-Province]"
IsAllLevel="false" LevelNumber="1" />
    </Levels>
</Dimension>
</GetDimensionsFromDataSourceResult>
</GetDimensionsFromDataSourceResponse>
</soap:Body>
</soap:Envelope>

```

#### 4.2.4 QueryDimensionRootMembersFromDataSource

The protocol client calls **QueryDimensionRootMembers** to retrieve the root members from the "Country" level of the "Geography" dimension.

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryDimensionRootMembers xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000" />
      <dimensionName>[Geography].[Country]</dimensionName>
    </QueryDimensionRootMembers>
  </soap:Body>
</soap:Envelope>
```

The server (2) responds with the following (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryDimensionRootMembersFromDataSourceResponse
      xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <QueryDimensionRootMembersFromDataSourceResult>
        <Member Caption="All Geographies" UniqueName="[Geography].[Country].[All Geographies]"
          LevelName="[Geography].[Country].[All]" DimensionName="Geography.Country" LevelDepth="0"
          ChildCount="6" IsChildCountReal="false" IsAllLevel="true"
          DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
      </QueryDimensionRootMembersFromDataSourceResult>
    </QueryDimensionRootMembersFromDataSourceResponse>
  </soap:Body>
</soap:Envelope>
```

#### 4.2.5 QueryChildMembersFromDataSource

The protocol client calls **QueryChildMembers** to retrieve the child members from the "All Geographies" member of the "Country" level of the "Geography" dimension.

The protocol client creates and sends the following message (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryChildMembers xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <dataSourceLocation ItemUrl="/PerformancePoint/Data Sources/1_.000" />
      <memberUniqueName>[Geography].[Country].[All Geographies]</memberUniqueName>
    </QueryChildMembers>
  </soap:Body>
</soap:Envelope>
```

The server (2) responds with the following (white space added for readability):

```
<?xml version="1.0" encoding="utf-8"?>
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <soap:Body>
    <QueryChildMembersFromDataSourceResponse
      xmlns="http://www.microsoft.com/performancepoint/scorecards">
      <QueryChildMembersFromDataSourceResult>
        <Member Caption="Australia" UniqueName="[Geography].[Country].&[Australia]"
          LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
          ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
          DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="Canada" UniqueName="[Geography].[Country].&[Canada]"
          LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
          ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
          DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="France" UniqueName="[Geography].[Country].&[France]"
          LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
          ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
          DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="Germany" UniqueName="[Geography].[Country].&[Germany]"
          LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
          ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
          DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="United Kingdom" UniqueName="[Geography].[Country].&[United Kingdom]"
          LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
          ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
          DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
        <Member Caption="United States" UniqueName="[Geography].[Country].&[United States]"
          LevelName="[Geography].[Country].[Country]" DimensionName="Geography.Country" LevelDepth="1"
          ChildCount="0" IsChildCountReal="false" IsAllLevel="false"
          DimensionUniqueName="[Geography].[Country]" MemberType="Regular" />
      </QueryChildMembersFromDataSourceResult>
    </QueryChildMembersFromDataSourceResponse>
  </soap:Body>
</soap:Envelope>
```

## 5 Security

### 5.1 Security Considerations for Implementers

Secure Socket 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 below:

```
<?xml version="1.0" encoding="utf-8"?>
<wsdl:definitions xmlns:s="http://www.w3.org/2001/XMLSchema"
xmlns:soap12="http://schemas.xmlsoap.org/wsdl/soap12/"
xmlns:tns="http://www.microsoft.com/performancepoint/scorecards"
xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
xmlns:http="http://schemas.xmlsoap.org/wsdl/http/"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema attributeFormDefault="unqualified" elementFormDefault="qualified"
targetNamespace="http://www.microsoft.com/performancepoint/scorecards"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
      <xs:import namespace="http://microsoft.com/wsdl/types/" />
      <xs:import namespace="http://www.w3.org/2001/XMLSchema" />
      <xs:element name="CreateDataSource">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string" />
            <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:complexType name="DataSource">
        <xs:complexContent mixed="false">
          <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
              <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string" />
              <xs:element minOccurs="0" maxOccurs="1" name="CustomTimeIntelligenceSettings"
type="xs:string" />
              <xs:element minOccurs="0" maxOccurs="1" name="DataTableMapping"
type="tns:DataTableMapping" />
            </xs:sequence>
            <xs:attribute name="SourceName" type="xs:string" />
            <xs:attribute name="ServerName" type="xs:string" />
            <xs:attribute name="DatabaseName" type="xs:string" />
            <xs:attribute name="CubeName" type="xs:string" />
            <xs:attribute name="CubeDisplayName" type="xs:string" />
            <xs:attribute name="FormattingDimensionName" type="xs:string" />
            <xs:attribute name="FormattingDimensionDisplayName" type="xs:string" />
            <xs:attribute name="FormattingDimensionType" type="tns:DimensionTypeEnum"
use="required" />
            <xs:attribute name="ConnectionString" type="xs:string" />
            <xs:attribute name="Roles" type="xs:string" />
            <xs:attribute name="UseConnectionString" type="xs:boolean" use="required" />
            <xs:attribute name="ConnectionContext" type="tns:ConnectionContext"
use="required" />
            <xs:attribute name="PassUserNameAsAdomdCustomData" type="xs:boolean"
use="required" />
            <xs:attribute name="ReadOnly" type="xs:boolean" use="required" />
            <xs:attribute name="MinutesToCache" type="xs:int" use="required" />
            <xs:attribute name="ServerMajorVersion" type="xs:int" use="required" />
            <xs:attribute name="SubTypeId" type="xs:string" />
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
    </xs:schema>
  </wsdl:types>

```



```

<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="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="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="BpmPropertyUser">
        <xs:complexContent mixed="false">
            <xs:extension base="tns:BpmProperty">
                <xs:attribute name="Login" type="xs:string" />
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="BpmPropertyLinkBase">
        <xs:complexContent mixed="false">
            <xs:extension base="tns:BpmProperty">
                <xs:attribute name="Hyperlink" type="xs:string" />
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="BpmPropertyHyperlink2">
        <xs:complexContent mixed="false">
            <xs:extension base="tns:BpmPropertyLinkBase" />
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="BpmPropertyHyperlink">
        <xs:complexContent mixed="false">
            <xs:extension base="tns:BpmPropertyLinkBase" />
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="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:complexContent>
    </xs:complexType>
    <xs:complexType name="ArrayOfComment">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="Comment" nillable="true"
type="tns:Comment" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="Comment">
        <xs:attribute xmlns:q1="http://microsoft.com/wsdl/types/" name="Guid" type="q1:guid"
use="required" />
        <xs:attribute name="CreatedBy" type="xs:string" />
        <xs:attribute name="CreatedDate" type="xs:dateTime" use="required" />
        <xs:attribute name="Message" type="xs:string" />
    </xs:complexType>
    <xs:complexType name="ElementVersion">
        <xs:attribute name="Major" type="xs:int" use="required" />
        <xs:attribute name="Minor" type="xs:int" use="required" />
    </xs:complexType>
    <xs:simpleType name="FCOContentType">
        <xs:list>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="None" />
                    <xs:enumeration value="PpsDashboard" />
                    <xs:enumeration value="PpsScorecard" />
                    <xs:enumeration value="PpsKpi" />
                    <xs:enumeration value="PpsReportView" />
                    <xs:enumeration value="PpsIndicator" />
                    <xs:enumeration value="PpsDataSource" />
                    <xs:enumeration value="PpsFilter" />
                </xs:restriction>
            </xs:simpleType>
        </xs:list>
    </xs:simpleType>
    <xs:complexType name="DataTableMapping">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="ColumnMappings"
type="tns:ArrayOfDataColumnMapping" />
            <xs:element minOccurs="0" maxOccurs="1" name="MasterTimeColumn"
type="tns:DataColumnMapping" />
        </xs:sequence>
        <xs:attribute name="DateAggregationType" type="tns:DateAggregationTypes"
use="required" />
        <xs:attribute name="CalendarStartMonth" type="xs:int" use="required" />
    </xs:complexType>
    <xs:complexType name="ArrayOfDataColumnMapping">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="DataColumnMapping"
nillable="true" type="tns:DataColumnMapping" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="DataColumnMapping">
        <xs:attribute name="UniqueName" type="xs:string" />
        <xs:attribute name="KeyColumnName" type="xs:string" />
        <xs:attribute name="SourceColumnName" type="xs:string" />
        <xs:attribute name="FriendlyColumnName" type="xs:string" />
        <xs:attribute name="ColumnType" type="tns:MappedColumnTypes" use="required" />
        <xs:attribute name="FactAggregation" type="tns:FactAggregations" use="required" />

```

```

        <xs:attribute name="ColumnDataType" type="tns:MappedColumnDataTypes" use="required"
/>
</xs:complexType>
<xs:simpleType name="MappedColumnTypes">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Ignore" />
    <xs:enumeration value="Fact" />
    <xs:enumeration value="Dimension" />
    <xs:enumeration value="TimeDimension" />
    <xs:enumeration value="Key" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="FactAggregations">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Average" />
    <xs:enumeration value="Count" />
    <xs:enumeration value="Max" />
    <xs:enumeration value="Min" />
    <xs:enumeration value="None" />
    <xs:enumeration value="StDev" />
    <xs:enumeration value="Sum" />
    <xs:enumeration value="Variance" />
    <xs:enumeration value="FirstOccurance" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="MappedColumnDataTypes">
  <xs:restriction base="xs:string">
    <xs:enumeration value="NotSupported" />
    <xs:enumeration value="Number" />
    <xs:enumeration value="String" />
    <xs:enumeration value="DateTime" />
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="DateAggregationTypes">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None" />
        <xs:enumeration value="Second" />
        <xs:enumeration value="Minute" />
        <xs:enumeration value="Hour" />
        <xs:enumeration value="Day" />
        <xs:enumeration value="Week" />
        <xs:enumeration value="Month" />
        <xs:enumeration value="Quarter" />
        <xs:enumeration value="Year" />
        <xs:enumeration value="Semester" />
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:simpleType name="DimensionTypeEnum">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Accounts" />
    <xs:enumeration value="BillOfMaterials" />
    <xs:enumeration value="Channel" />
    <xs:enumeration value="Currency" />
    <xs:enumeration value="Customers" />
    <xs:enumeration value="Geography" />
  </xs:restriction>
</xs:simpleType>

```

```

        <xs:enumeration value="Measure" />
        <xs:enumeration value="Organization" />
        <xs:enumeration value="Other" />
        <xs:enumeration value="Products" />
        <xs:enumeration value="Promotion" />
        <xs:enumeration value="Quantitative" />
        <xs:enumeration value="Rates" />
        <xs:enumeration value="Scenario" />
        <xs:enumeration value="Time" />
        <xs:enumeration value="Unknown" />
        <xs:enumeration value="Utility" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ConnectionContext">
    <xs:restriction base="xs:string">
        <xs:enumeration value="ConnectAsUser" />
        <xs:enumeration value="ConnectAsSharedUser" />
    </xs: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:extension>
  </xs:complexContent>
</xs:complexType>

```

```

        <xs:attribute name="TimeFilterFormula" type="xs:string" />
        <xs:attribute name="ValueSource" type="tns:ValueSources" use="required" />
    </xs:extension>
</xs:complexContent>
</xs:complexType>
<xs:complexType name="SecondClassElement" abstract="true">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:Element">
            <xs:attribute xmlns:q2="http://microsoft.com/wsdl/types/" name="Guid"
type="q2: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:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        <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="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="MemberOperationChildren">
    <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="MemberOperationAllDescendants">
    <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: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:restriction>
  </xs:simpleType>

```

```

        <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 xmlns:q3="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="RelatedActualId" type="q3: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>
<xs:element name="UpdateKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateKpiResult" type="tns:Kpi" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetKpisFromScorecard">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetKpisFromScorecardResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpisFromScorecardResult"
type="tns:ArrayOfKpi" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="ArrayOfKpi">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Kpi" nillable="true"
type="tns:Kpi" />
  </xs:sequence>
</xs:complexType>
<xs:element name="GetKpi">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetKpiResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetKpiResult" type="tns:Kpi" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteKpi">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteKpiResponse">
  <xs:complexType />
</xs:element>
<xs:element name="CreateScorecard">
  <xs:complexType>
    <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard" />
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:complexType name="Scorecard">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="ConfiguredViews"
type="tns:ArrayOfConfiguredView" />
                <xs:element minOccurs="0" maxOccurs="1" name="EndPoints"
type="tns:ArrayOfEndPoint" />
                <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition" />
            </xs:sequence>
            <xs:attribute name="RendererClassName" type="xs:string" />
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfConfiguredView">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ConfiguredView"
nillable="true" type="tns:ConfiguredView" />
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ConfiguredView">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SecondClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="unbounded" name="StatusFilters"
type="tns:StatusFilter" />
                <xs:element minOccurs="0" maxOccurs="1" name="ToolbarOptions"
type="tns:ToolbarOptions" />
                <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation" />
                <xs:element minOccurs="0" maxOccurs="1" name="GridViewDefinition"
type="tns:GridViewDefinition" />
            </xs:sequence>
            <xs:attribute name="AllowStatusFilter" type="xs:boolean" use="required" />
            <xs:attribute name="AllowFilter" type="xs:boolean" use="required" />
            <xs:attribute name="AllowSort" type="xs:boolean" use="required" />
            <xs:attribute name="AllowAnnotations" type="xs:boolean" use="required" />
            <xs:attribute name="EmptyRowsFilterMode" type="tns:ScorecardEmptyRowsFilterMode"
use="required" />
            <xs:attribute name="AllowShowDetails" type="xs:boolean" use="required" />
            <xs:attribute name="EnableTextwrap" type="xs:boolean" use="required" />
            <xs:attribute name="AllowDynamicRowMemberExpansion" type="xs:boolean"
use="required" />
            <xs:attribute name="AllowDynamicColumnMemberExpansion" type="xs:boolean"
use="required" />
            <xs:attribute name="AllowRowDrill" type="xs:boolean" use="required" />
            <xs:attribute name="AllowColumnDrill" type="xs:boolean" use="required" />
            <xs:attribute name="AlwaysShowAnnotationCellFlags" type="xs:boolean"
use="required" />
            <xs:attribute name="ExpandToFitWidth" type="xs:boolean" use="required" />
            <xs:attribute name="HideScorecard" type="xs:boolean" use="required" />
            <xs:attribute name="ShowStatusFiltersByDefault" type="xs:boolean" use="required"
/>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>

```

```

        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="StatusFilter">
        <xs:attribute xmlns:q4="http://microsoft.com/wsdl/types/"
name="IndicatorLocationGuid" type="q4:guid" use="required" />
        <xs:attribute name="BandIndex" type="xs:int" use="required" />
    </xs:complexType>
    <xs:complexType name="ToolbarOptions">
        <xs:attribute name="ShowInlineText" type="xs:boolean" use="required" />
        <xs:attribute name="ShowToolbar" type="xs:boolean" use="required" />
        <xs:attribute name="ShowStatusFilter" type="xs:boolean" use="required" />
        <xs:attribute name="ShowToolTips" type="xs:boolean" use="required" />
        <xs:attribute name="ShowCollapse" type="xs:boolean" use="required" />
        <xs:attribute name="ShowMode" type="xs:boolean" use="required" />
        <xs:attribute name="ShowExpand" type="xs:boolean" use="required" />
        <xs:attribute name="ShowToolbarItemsLabel" type="xs:boolean" use="required" />
        <xs:attribute name="ShowDefaultRollup" type="xs:boolean" use="required" />
        <xs:attribute name="ShowWorstChildRollup" type="xs:boolean" use="required" />
        <xs:attribute name="ShowIndicatorCount" type="xs:boolean" use="required" />
    </xs:complexType>
    <xs:complexType name="GridViewDefinition">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CornerCellFormatInfo"
type="tns:GridFormatInfo" />
            <xs:element minOccurs="0" maxOccurs="1" name="DefaultCellFormatInfo"
type="tns:GridFormatInfo" />
            <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
type="tns:GridFormatInfo" />
            <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
type="tns:GridFormatInfo" />
            <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader"
type="tns:GridHeaderItem" />
            <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem" />
            <xs:element xmlns:q5="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
name="DefaultRollupIndicatorId" type="q5:guid" />
            <xs:element minOccurs="0" maxOccurs="1" name="DefaultRollupIndicatorLocation"
type="tns:RepositoryLocation" />
            <xs:element minOccurs="0" maxOccurs="unbounded" name="PreQueryTransforms"
type="tns:GridViewTransformReference" />
            <xs:element minOccurs="0" maxOccurs="unbounded" name="PostQueryTransforms"
type="tns:GridViewTransformReference" />
            <xs:element minOccurs="0" maxOccurs="unbounded" name="PreRenderTransforms"
type="tns:GridViewTransformReference" />
            <xs:element minOccurs="0" maxOccurs="unbounded" name="PerUserTransforms"
type="tns:GridViewTransformReference" />
            <xs:element minOccurs="0" maxOccurs="1" name="CellBorderColor" type="tns:GridColor"
/>
            <xs:element minOccurs="0" maxOccurs="1" name="DefaultCellBorderColor"
type="tns:GridColor" />
        </xs:sequence>
        <xs:attribute name="EmptyCell" type="xs:string" />
        <xs:attribute name="InvalidCell" type="xs:string" />
        <xs:attribute name="ShowGridLines" type="xs:boolean" use="required" />
        <xs:attribute name="ShowHiddenHeaders" type="xs:boolean" use="required" />
        <xs:attribute name="ShowMetricHeaders" type="xs:boolean" use="required" />
        <xs:attribute name="ShowPlusMinus" type="xs:boolean" use="required" />
    </xs:complexType>
    <xs:complexType name="GridFormatInfo">
        <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="FontInfo" type="tns:GridFontInfo" />
        <xs:element minOccurs="0" maxOccurs="1" name="ForeColor" type="tns:GridColor" />
        <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="tns:GridColor" />
    </xs:sequence>
    <xs:attribute name="TextWrap" type="tns:Trinary" use="required" />
    <xs:attribute name="VerticalAlignment" type="tns:VerticalAlignments" use="required"
/>
    <xs:attribute name="HorizontalAlignment" type="tns:HorizontalAlignments"
use="required" />
</xs:complexType>
<xs:complexType name="GridFontInfo">
    <xs:attribute name="FamilyName" type="xs:string" />
    <xs:attribute name="SizeInPoints" type="xs:float" use="required" />
    <xs:attribute name="Bold" type="tns:Trinary" use="required" />
    <xs:attribute name="Italic" type="tns:Trinary" use="required" />
    <xs:attribute name="Underline" type="tns:Trinary" use="required" />
    <xs:attribute name="Strikeout" type="tns:Trinary" use="required" />
</xs:complexType>
<xs:simpleType name="Trinary">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Undefined" />
        <xs:enumeration value="False" />
        <xs:enumeration value="True" />
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="GridColor">
    <xs:attribute name="A" type="xs:unsignedByte" use="required" />
    <xs:attribute name="R" type="xs:unsignedByte" use="required" />
    <xs:attribute name="G" type="xs:unsignedByte" use="required" />
    <xs:attribute name="B" type="xs:unsignedByte" use="required" />
</xs:complexType>
<xs:simpleType name="VerticalAlignments">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Undefined" />
        <xs:enumeration value="Top" />
        <xs:enumeration value="Middle" />
        <xs:enumeration value="Bottom" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="HorizontalAlignments">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Undefined" />
        <xs:enumeration value="Left" />
        <xs:enumeration value="Center" />
        <xs:enumeration value="Right" />
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="GridHeaderItem">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="HeaderFormatInfo"
type="tns:GridFormatInfo" />
        <xs:element minOccurs="0" maxOccurs="1" name="CellFormatInfo"
type="tns:GridFormatInfo" />
        <xs:element minOccurs="0" maxOccurs="1" name="Children"
type="tns:ArrayOfGridHeaderItem" />
        <xs:element minOccurs="0" maxOccurs="1" name="SerializeTag" />
        <xs:element minOccurs="0" maxOccurs="1" name="DimensionMember" type="tns:Member" />
        <xs:element minOccurs="0" maxOccurs="1" name="OverrideIndicatorLocation"
type="tns:RepositoryLocation" />
    </xs:sequence>
</xs:complexType>

```

```

        <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 xmlns:q6="http://microsoft.com/wsdl/types/" name="Guid" type="q6:guid"
use="required" />
    <xs:attribute xmlns:q7="http://microsoft.com/wsdl/types/" name="DefinitionGuid"
type="q7:guid" use="required" />
    <xs:attribute name="DisplayText" type="xs:string" />
    <xs:attribute name="DimensionName" type="xs:string" />
    <xs:attribute name="DimensionValue" type="xs:string" />
    <xs:attribute name="HeaderType" type="tns:ScorecardNodeTypes" use="required" />
    <xs:attribute name="GroupId" type="xs:int" use="required" />
    <xs:attribute name="Depth" type="xs:int" use="required" />
    <xs:attribute name="DescendantSpan" type="xs:int" use="required" />
    <xs:attribute name="LeafSpan" type="xs:int" use="required" />
    <xs:attribute name="IsCollapsed" type="xs:boolean" use="required" />
    <xs:attribute name="IsDynamicCellExpansionEnabled" type="xs:boolean" use="required"
/>

    <xs:attribute name="IsDrillEnabled" type="xs:boolean" use="required" />
    <xs:attribute name="IsDrillDownDisabled" type="xs:boolean" use="required" />
    <xs:attribute name="IsDrillUpDisabled" type="xs:boolean" use="required" />
    <xs:attribute name="IsDynamicallyExpandedHeader" type="xs:boolean" use="required" />
    <xs:attribute name="IsCellHidden" type="xs:boolean" use="required" />
    <xs:attribute name="IsPathHidden" type="xs:boolean" use="required" />
    <xs:attribute name="IsHiddenBasedOnFilterStatus" type="xs:boolean" use="required" />
    <xs:attribute name="NamedSetExpression" type="xs:string" />
    <xs:attribute name="CustomSetFormula" type="xs:string" />
    <xs:attribute name="IsNamedSetInError" type="xs:boolean" use="required" />
    <xs:attribute name="IsNamedSetEmpty" type="xs:boolean" use="required" />
    <xs:attribute name="NamedSetType" type="tns:ScorecardNamedSetType" use="required" />
    <xs:attribute name="UseLinkedElementDisplayText" type="xs:boolean" use="required" />
    <xs:attribute name="Hyperlink" type="xs:string" />
    <xs:attribute name="ShowHyperlinkInNewWindow" type="xs:boolean" use="required" />
    <xs:attribute name="IsHierarchyHeader" type="xs:boolean" use="required" />
    <xs:attribute name="IsColumnHeader" type="xs:boolean" use="required" />
    <xs:attribute name="AppendFilterInfoToHyperlink" type="xs:boolean" use="required" />
    <xs:attribute name="Weight" type="xs:decimal" use="required" />
    <xs:attribute name="KpiTargetName" type="xs:string" />
    <xs:attribute name="AggregationType" type="tns:HeaderAggregationTypes" use="required"
/>

</xs:complexType>
<xs:complexType name="ArrayOfGridHeaderItem">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="GridHeaderItem"
nillable="true" type="tns:GridHeaderItem" />
    </xs:sequence>
</xs:complexType>
<xs:complexType name="GridTargetSettings">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="VarianceSettings"
type="tns:GridVarianceSettings" />
        <xs:element minOccurs="1" maxOccurs="1" name="FilterEmptyRows" type="xs:boolean" />
    </xs:sequence>
</xs:complexType>

```



```

        <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: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="decimal" type="xs:decimal" />
      <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMember" nillable="true"
type="tns:ArrayOfMember" />
      <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfMemberTransform"
nillable="true" type="tns:ArrayOfMemberTransform" />
      <xs:element minOccurs="1" maxOccurs="1" name="dateTime" type="xs:dateTime" />
      <xs:element minOccurs="1" maxOccurs="1" name="ArrayOfString" nillable="true"
type="tns:ArrayOfString" />
      <xs:element minOccurs="1" maxOccurs="1" name="string" nillable="true"
type="xs:string" />
      <xs:element minOccurs="1" maxOccurs="1" name="double" type="xs:double" />
      <xs:element xmlns:q8="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
name="guid" type="q8:guid" />
      <xs:element xmlns:q9="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
name="char" type="q9:char" />
      <xs:element minOccurs="1" maxOccurs="1" name="int" type="xs:int" />
    </xs:choice>
  </xs:complexType>
  <xs:complexType name="ArrayOfMember">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="Member" nillable="true"
type="tns:Member" />
    </xs:sequence>
  </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: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: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>
<xs:simpleType name="BeginPointEmitterType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="BothAConditionalVisibilityAndParameterEmitter" />
        <xs:enumeration value="ConditionalVisibilityEmitter" />
        <xs:enumeration value="ParameterEmitter" />
    </xs:restriction>
</xs:simpleType>
<xs:element name="CreateScorecardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CreateScorecardResult"
type="tns:Scorecard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateScorecard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="scorecard" type="tns:Scorecard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateScorecardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateScorecardResult"
type="tns:Scorecard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetScorecard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetScorecardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetScorecardResult"
type="tns:Scorecard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteScorecard">
    <xs:complexType>
        <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DeleteScorecardResponse">
    <xs:complexType />
</xs:element>
<xs:element name="CreateFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string" />
            <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="Filter">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition" />
                <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation" />
                <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string" />
                <xs:element minOccurs="0" maxOccurs="1" name="EndPoints"
type="tns:ArrayOfEndPoint" />
            </xs:sequence>
            <xs:attribute name="SubTypeId" type="xs:string" />
            <xs:attribute name="ReadOnly" type="xs:boolean" use="required" />
            <xs:attribute name="SelectionMode" type="tns:FilterSelectionMode" use="required"
/>

            <xs:attribute name="Visualization" type="xs:string" />
            <xs:attribute name="RendererClassName" type="xs:string" />
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:simpleType name="FilterSelectionMode">
    <xs:restriction base="xs:string">
        <xs:enumeration value="SingleSelect" />
        <xs:enumeration value="MultiSelect" />
    </xs:restriction>
</xs:simpleType>
<xs:element name="CreateFilterResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CreateFilterResult"
type="tns:Filter" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateFilter">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="filter" type="tns:Filter" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateFilterResponse">

```

```

        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateFilterResult"
type="tns:Filter" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="GetFilter">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="GetFilterResponse">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetFilterResult" type="tns:Filter"
/>
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="DeleteFilter">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="DeleteFilterResponse">
        <xs:complexType />
      </xs:element>
      <xs:element name="CreateIndicator">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string" />
            <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:complexType name="Indicator">
        <xs:complexContent mixed="false">
          <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
              <xs:element minOccurs="0" maxOccurs="1" name="NoDataIndicatorBand"
type="tns:IndicatorBand" />
              <xs:element minOccurs="0" maxOccurs="1" name="IndicatorBands"
type="tns:ArrayOfIndicatorBand" />
            </xs:sequence>
            <xs:attribute name="IndicatorType" type="tns:IndicatorType" use="required" />
            <xs:attribute name="IsBuiltIn" type="xs:boolean" use="required" />
          </xs:extension>
        </xs:complexContent>
      </xs:complexType>
      <xs:complexType name="IndicatorBand">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="ImageData" type="xs:string" />

```

```

        </xs:sequence>
        <xs:attribute name="Color" type="xs:string" />
        <xs:attribute name="BackColor" type="xs:string" />
        <xs:attribute name="ToolTip" type="xs:string" />
    </xs:complexType>
    <xs:complexType name="ArrayOfIndicatorBand">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="IndicatorBand"
nillable="true" type="tns:IndicatorBand" />
        </xs:sequence>
    </xs:complexType>
    <xs:simpleType name="IndicatorType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Standard" />
            <xs:enumeration value="Centered" />
        </xs:restriction>
    </xs:simpleType>
    <xs:element name="CreateIndicatorResponse">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="CreateIndicatorResult"
type="tns:Indicator" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="UpdateIndicator">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="indicator" type="tns:Indicator" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="UpdateIndicatorResponse">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="UpdateIndicatorResult"
type="tns:Indicator" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetIndicator">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetIndicatorResponse">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="GetIndicatorResult"
type="tns:Indicator" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="DeleteIndicator">
        <xs:complexType>
            <xs:sequence>

```



```

        <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="DeleteIndicatorResponse">
    <xs:complexType />
</xs:element>
<xs:element name="CreateReportView">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="listUrl" type="xs:string" />
            <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"
/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="ReportView">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:FirstClassElement">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="ScorecardLocation"
type="tns:RepositoryLocation" />
                <xs:element minOccurs="0" maxOccurs="1" name="CustomData" type="xs:string" />
                <xs:element minOccurs="0" maxOccurs="1" name="EndPoints"
type="tns:ArrayOfEndPoint" />
                <xs:element minOccurs="0" maxOccurs="1" name="BeginPoints"
type="tns:ArrayOfParameterDefinition" />
            </xs:sequence>
            <xs:attribute name="TypeName" type="xs:string" />
            <xs:attribute name="RenderClientSide" type="xs:boolean" use="required" />
            <xs:attribute xmlns:q10="http://microsoft.com/wsdl/types/"
name="ConfiguredViewId" type="q10:guid" use="required" />
            <xs:attribute name="SubTypeId" type="xs:string" />
            <xs:attribute name="RendererClassName" type="xs:string" />
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="CreateReportViewResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CreateReportViewResult"
type="tns:ReportView" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateReportView">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"
/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateReportViewResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateReportViewResult"
type="tns:ReportView" />
        </xs:sequence>
    </xs:complexType>
</xs:element>

```

```

        </xs:complexType>
      </xs:element>
      <xs:element name="GetReportView">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="GetReportViewResponse">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetReportViewResult"
type="tns:ReportView" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="DeleteReportView">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="DeleteReportViewResponse">
        <xs:complexType />
      </xs:element>
      <xs:element name="GetAnalyticReportView">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="GetAnalyticReportViewResponse">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetAnalyticReportViewResult"
type="tns:ReportView" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="GetLatestAnalyticReportVersion">
        <xs:complexType>
          <xs:sequence>
            <xs:element xmlns:q11="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="analyticReportViewId" type="q11:guid" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="GetLatestAnalyticReportVersionResponse">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="1" maxOccurs="1"
name="GetLatestAnalyticReportVersionResult" type="xs:int" />
          </xs:sequence>
        </xs:complexType>
      </xs:element>

```

```

        </xs:complexType>
    </xs:element>
    <xs:element name="SaveTemporaryAnalyticReport">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="reportView" type="tns:ReportView"
/>
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="SaveTemporaryAnalyticReportResponse">
        <xs:complexType>
            <xs:sequence>
                <xs:element xmlns:q12="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="SaveTemporaryAnalyticReportResult" type="q12:guid" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetQueryResultMembers">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation" />
                <xs:element minOccurs="0" maxOccurs="1" name="formattingDimensionName"
type="xs:string" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetQueryResultMembersResponse">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="GetQueryResultMembersResult"
type="tns:ArrayOfMember" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetAnnotation">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation" />
                <xs:element minOccurs="0" maxOccurs="1" name="tupleCollection"
type="tns:ArrayOfTuple" />
                <xs:element minOccurs="0" maxOccurs="1" name="cellPath" type="xs:string" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:complexType name="ArrayOfTuple">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="Tuple" nillable="true"
type="tns:Tuple" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="Tuple">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="DimensionMembers"
type="tns:ArrayOfMember" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="Annotation">

```

```

        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="Comments"
type="tns:ArrayOfAnnotationComment" />
            <xs:element minOccurs="0" maxOccurs="1" name="Properties"
type="tns:ArrayOfBpmProperty" />
            <xs:element minOccurs="0" maxOccurs="1" name="Owner" type="xs:string" />
            <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 xmlns:q13="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="ConfiguredViewID" type="q13:guid" />
            <xs:element xmlns:q14="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="Guid" type="q14: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>
    <xs:complexType name="ArrayOfAnnotationComment">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="unbounded" name="AnnotationComment"
nillable="true" type="tns:AnnotationComment" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="AnnotationComment">
        <xs:complexContent mixed="false">
            <xs:extension base="tns:Comment">
                <xs:attribute name="Title" type="xs:string" />
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:simpleType name="AnnotationVersions">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Office14Beta2" />
            <xs:enumeration value="Office14Beta1" />
            <xs:enumeration value="Pps2007" />
        </xs:restriction>
    </xs:simpleType>
    <xs:element name="GetAnnotationResponse">
        <xs:complexType>
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationResult"
type="tns:Annotation" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetAnnotationByID">
        <xs:complexType>
            <xs:sequence>
                <xs:element xmlns:q15="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="annotationID" type="q15:guid" />
            </xs:sequence>
        </xs:complexType>
    </xs:element>
    <xs:element name="GetAnnotationByIDResponse">
        <xs:complexType>

```

```

        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="GetAnnotationByIDResult"
type="tns:Annotation" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="GetAllAnnotationsByScorecardLocation">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:complexType name="ArrayOfAnnotation">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Annotation" nillable="true"
type="tns:Annotation" />
      </xs:sequence>
    </xs:complexType>
    <xs:element name="GetAllAnnotationsByScorecardLocationResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1"
name="GetAllAnnotationsByScorecardLocationResult" type="tns:ArrayOfAnnotation" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="CreateAnnotation">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="annotation" type="tns:Annotation"
/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="CreateAnnotationResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="CreateAnnotationResult"
type="tns:Annotation" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="UpdateAnnotation">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="annotation" type="tns:Annotation"
/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="UpdateAnnotationResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="UpdateAnnotationResult"
type="tns:Annotation" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>

```

```

<xs:element name="DeleteAnnotation">
  <xs:complexType>
    <xs:sequence>
      <xs:element xmlns:q16="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="annotationID" type="q16:guid" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="DeleteAnnotationResponse">
  <xs:complexType />
</xs:element>
<xs:element name="TrimAnnotationByScorecardLocation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="scorecardLocation"
type="tns:RepositoryLocation" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="TrimAnnotationByScorecardLocationResponse">
  <xs:complexType />
</xs:element>
<xs:element name="TrimAnnotationByOwner">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Owner" type="xs:string" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="TrimAnnotationByOwnerResponse">
  <xs:complexType />
</xs:element>
<xs:element name="TrimAnnotationUntouchedSince">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="untouchedSince" type="xs:dateTime"
/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="TrimAnnotationUntouchedSinceResponse">
  <xs:complexType />
</xs:element>
<xs:element name="GetDatabaseNamesFromDataSource">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetDatabaseNamesFromDataSourceResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1"
name="GetDatabaseNamesFromDataSourceResult" type="tns:ArrayOfString" />
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

    <xs:element name="GetMdx">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="analyticReportViewLocation"
type="tns:RepositoryLocation" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="GetMdxResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="GetMdxResult" type="xs:string" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="GetCubeNameInfos">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:complexType name="ArrayOfNameInfo">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="NameInfo" nillable="true"
type="tns:NameInfo" />
      </xs:sequence>
    </xs:complexType>
    <xs:element name="GetCubeNameInfosResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="GetCubeNameInfosResult"
type="tns:ArrayOfNameInfo" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="GetPreviewDataSet">
      <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:element name="GetPreviewDataSetResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="GetPreviewDataSetResult">
            <xs:complexType>
              <xs:sequence>
                <xs:element ref="xs:schema" />
                <xs:any />
              </xs:sequence>
            </xs:complexType>
          </xs:element>
        </xs:sequence>
      </xs:complexType>
    </xs:element>

```

```

</xs:element>
<xs:element name="TestConnection">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="TestConnectionResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="TestConnectionResult"
type="xs:boolean" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetCubeMetaData">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="NamedSet">
  <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>
<xs:complexType name="ArrayOfDimension">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Dimension" nillable="true"
type="tns:Dimension" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfMeasure">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Measure" nillable="true"
type="tns:Measure" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Measure">
  <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>
<xs:complexType name="ArrayOfNamedSet">
  <xs:sequence>

```



```

        <xs:element minOccurs="0" maxOccurs="unbounded" name="NamedSet" nillable="true"
type="tns:NamedSet" />
    </xs:sequence>
</xs:complexType>
<xs:element name="GetCubeMetaDataRow">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetCubeMetaDataRowResult"
type="tns:Cube" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="Cube">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:NameInfo">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="Dimensions"
type="tns:ArrayOfDimension" />
                <xs:element minOccurs="0" maxOccurs="1" name="MeasureGroups"
type="tns:ArrayOfNameInfo" />
                <xs:element minOccurs="0" maxOccurs="1" name="Measures"
type="tns:ArrayOfMeasure" />
                <xs:element minOccurs="0" maxOccurs="1" name="NamedSets"
type="tns:ArrayOfNamedSet" />
            </xs:sequence>
            <xs:attribute name="Version" type="xs:int" use="required" />
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="GetCubeMetaDataRowForDataSource">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetCubeMetaDataRowForDataSourceResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetCubeMetaDataRowForDataSourceResult"
type="tns:Cube" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetDimensions">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetDimensionsResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsResult"
type="tns:ArrayOfDimension" />
        </xs:sequence>
    </xs:complexType>

```

```

        </xs:element>
        <xs:element name="GetDimensionsFromDataSource">
            <xs:complexType>
                <xs:sequence>
                    <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="GetDimensionsFromDataSourceResponse">
            <xs:complexType>
                <xs:sequence>
                    <xs:element minOccurs="0" maxOccurs="1" name="GetDimensionsFromDataSourceResult"
type="tns:ArrayOfDimension" />
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="GetCube">
            <xs:complexType>
                <xs:sequence>
                    <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation" />
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="GetCubeResponse">
            <xs:complexType>
                <xs:sequence>
                    <xs:element minOccurs="0" maxOccurs="1" name="GetCubeResult" type="tns:Cube" />
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="GetCubeFromDataSource">
            <xs:complexType>
                <xs:sequence>
                    <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="GetCubeFromDataSourceResponse">
            <xs:complexType>
                <xs:sequence>
                    <xs:element minOccurs="0" maxOccurs="1" name="GetCubeFromDataSourceResult"
type="tns:Cube" />
                </xs:sequence>
            </xs:complexType>
        </xs:element>
        <xs:element name="QueryDimensionRootMembers">
            <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>
        <xs:element name="QueryDimensionRootMembersResponse">
            <xs:complexType>

```

```

        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="QueryDimensionRootMembersResult"
type="tns:ArrayOfMember" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryDimensionRootMembersFromDataSource">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
          <xs:element minOccurs="0" maxOccurs="1" name="dimensionName" type="xs:string" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryDimensionRootMembersFromDataSourceResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1"
name="QueryDimensionRootMembersFromDataSourceResult" type="tns:ArrayOfMember" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryTransformMembers">
      <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>
    <xs:simpleType name="QueryTransformMembersType">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Hierarchize" />
        <xs:enumeration value="Parents" />
        <xs:enumeration value="Ancestors" />
      </xs:restriction>
    </xs:simpleType>
    <xs:element name="QueryTransformMembersResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="QueryTransformMembersResult"
type="tns:ArrayOfMember" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryChildMembers">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="dataSourceLocation"
type="tns:RepositoryLocation" />
          <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"
/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>

```

```

    <xs:element name="QueryChildMembersResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="QueryChildMembersResult"
type="tns:ArrayOfMember" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryChildMembersFromDataSource">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="dataSource" type="tns:DataSource"
/>
          <xs:element minOccurs="0" maxOccurs="1" name="memberUniqueName" type="xs:string"
/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryChildMembersFromDataSourceResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1"
name="QueryChildMembersFromDataSourceResult" type="tns:ArrayOfMember" />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="QueryChildMembersByRangeFromDataSource">
      <xs:complexType>
        <xs:sequence>
          <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: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: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: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="DefaultCellFormatInfo"
type="tns:GridFormatInfo" />
        <xs:element minOccurs="0" maxOccurs="1" name="DefaultRowHeaderFormatInfo"
type="tns:GridFormatInfo" />
        <xs:element minOccurs="0" maxOccurs="1" name="DefaultColumnHeaderFormatInfo"
type="tns:GridFormatInfo" />
        <xs:element minOccurs="0" maxOccurs="1" name="Cells" type="tns:GridCellSet" />
        <xs:element minOccurs="0" maxOccurs="1" name="RootRowHeader"
type="tns:GridHeaderItem" />
        <xs:element minOccurs="0" maxOccurs="1" name="RootColumnHeader"
type="tns:GridHeaderItem" />
        <xs: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 xmlns:q17="http://microsoft.com/wsdl/types/" name="ScorecardViewId"
type="q17:guid" use="required" />
    <xs:attribute name="Cached" type="xs:boolean" use="required" />
    <xs:attribute name="CacheExpiration" type="xs:dateTime" use="required" />
    <xs:attribute xmlns:q18="http://microsoft.com/wsdl/types/"
name="DefaultRollupIndicatorId" type="q18: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: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="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="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="GridDisplayElementAggregation">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:GridDisplayElementNumber" />
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="GridDisplayElementActual">
  <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="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="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="DashboardElementContainer">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:DashboardElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DashboardElements"
type="tns:ArrayOfDashboardElement" />
      </xs:sequence>
      <xs:attribute name="Orientation" type="tns:LayoutOrientation" use="required" />
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:simpleType name="LayoutOrientation">
  <xs:restriction base="xs:string">
    <xs:enumeration value="HorizontalLeftJustified" />
    <xs:enumeration value="HorizontalRightJustified" />
    <xs:enumeration value="VerticalBottomJustified" />
    <xs:enumeration value="VerticalTopJustified" />
    <xs:enumeration value="Stacked" />
    <xs:enumeration value="Hidden" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="DashboardItem">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:DashboardElement">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="InboundParameters"
type="tns:ArrayOfParameterMapping" />
        <xs:element minOccurs="0" maxOccurs="1" name="UnderlyingElementLocation"
type="tns:RepositoryLocation" />
      </xs:sequence>
      <xs:attribute name="UnderlyingElementTypeName" type="xs:string" />
      <xs:attribute name="AutoSizeWidth" type="xs:boolean" use="required" />
      <xs:attribute name="AutoSizeHeight" type="xs:boolean" use="required" />
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="ArrayOfParameterMapping">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ParameterMapping"
nillable="true" type="tns:ParameterMapping" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ParameterMapping">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ConditionalData">
      <xs:complexType>
        <xs:sequence>

```

```

        <xs:any minOccurs="0" maxOccurs="unbounded"
namespace="http://www.w3.org/2001/XMLSchema" processContents="lax" />
        <xs:any minOccurs="1" namespace="urn:schemas-microsoft-com:xml-diffgram-v1"
processContents="lax" />
    </xs:sequence>
</xs:complexType>
</xs:element>
</xs:sequence>
<xs:attribute name="EndPointUniqueName" type="xs:string" />
<xs:attribute xmlns:q19="http://microsoft.com/wsdl/types/" name="Id" type="q19:guid"
use="required" />
<xs:attribute name="SourceColumnName" type="xs:string" />
<xs:attribute xmlns:q20="http://microsoft.com/wsdl/types/" name="DashboardItemId"
type="q20:guid" use="required" />
<xs:attribute name="ParameterUniqueName" type="xs:string" />
<xs:attribute name="PostFormula" type="xs:string" />
<xs:attribute name="IsConditionalDataEnabled" type="xs:boolean" use="required" />
<xs:attribute name="IsDefaultVisibility" type="xs:boolean" use="required" />
</xs:complexType>
<xs:element name="CreateDashboardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="CreateDashboardResult"
type="tns:Dashboard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateDashboard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="dashboard" type="tns:Dashboard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="UpdateDashboardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="UpdateDashboardResult"
type="tns:Dashboard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetDashboard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetDashboardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetDashboardResult"
type="tns:Dashboard" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteDashboard">
    <xs:complexType>

```

```

        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="location"
type="tns:RepositoryLocation" />
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DeleteDashboardResponse">
    <xs:complexType />
</xs:element>
<xs:element name="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">
      <xs:complexType>
        <xs:sequence>
          <xs:element ref="xs:schema" />
          <xs:any />
        </xs:sequence>
      </xs:complexType>
    </xs:element>
  </xs:sequence>
</xs:complexType>

```

```

        <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:q21="http://microsoft.com/wsdl/types/" minOccurs="1"
maxOccurs="1" name="ListId" type="q21: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="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:AnalyticChartReportViewData" />
<xs:complexType name="AnalyticChartReportViewData">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:AnalyticBaseReportViewData">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="PlotAreaBackColor"
type="xs:string" />
                <xs:element minOccurs="0" maxOccurs="1" name="Title" type="tns:Title" />
                <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="0" maxOccurs="1" name="FormatType" type="tns:FormatType" />
        <xs:element minOccurs="0" maxOccurs="1" name="CurrencySymbol" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1" name="DecimalPlaces" type="xs:int" />
        <xs:element minOccurs="0" maxOccurs="1" name="NegativeSymbol"
type="tns:FormatNegativeSymbol" />
        <xs:element minOccurs="0" maxOccurs="1" name="ShowZeroAs" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1" name="UseThousandsSeparator"
type="xs:boolean" />
        <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextLeft" type="xs:string"
/>
    </xs:sequence>
</xs:complexType>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="AdditionalTextRight" type="xs:string"
/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="XmlFont">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="FontFamily" type="xs:string" />
        <xs:element minOccurs="1" maxOccurs="1" name="GraphicsUnit" type="tns:GraphicsUnit"
/>
        <xs:element minOccurs="1" maxOccurs="1" name="Size" type="xs:float" />
        <xs:element minOccurs="1" maxOccurs="1" name="Style" type="tns:FontStyle" />
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Title">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont" />
        <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string" />
    </xs:sequence>
    <xs:attribute default="" name="Text" type="xs:string" />
    <xs:attribute default="Center" name="Alignment" type="tns:AlignmentType" />
</xs:complexType>
<xs:simpleType name="AlignmentType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Left" />
        <xs:enumeration value="Right" />
        <xs:enumeration value="Center" />
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="AnalyticChartLegend">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="BackColor" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1" name="Font" type="tns:XmlFont" />
        <xs:element minOccurs="0" maxOccurs="1" name="FontColor" type="xs:string" />
    </xs:sequence>
    <xs:attribute default="true" name="Visible" type="xs:boolean" />
    <xs:attribute default="false" name="BorderVisible" type="xs:boolean" />
    <xs:attribute default="Right" name="Location" type="tns:AnalyticLegendLocation" />
</xs:complexType>
<xs:simpleType name="AnalyticLegendLocation">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None" />
        <xs:enumeration value="Right" />
        <xs:enumeration value="Top" />
        <xs:enumeration value="Bottom" />
        <xs:enumeration value="Left" />
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AnalyticChartType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None" />
        <xs:enumeration value="Column" />
        <xs:enumeration value="ColumnStacked" />
        <xs:enumeration value="ColumnStacked100" />
        <xs:enumeration value="Line" />
        <xs:enumeration value="Pie" />
        <xs:enumeration value="Bar" />
        <xs:enumeration value="BarStacked" />
        <xs:enumeration value="BarStacked100" />
    </xs:restriction>

```

```

</xs:simpleType>
<xs:simpleType name="AnalyticMarkerStyle">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" />
    <xs:enumeration value="Square" />
    <xs:enumeration value="Circle" />
    <xs:enumeration value="Diamond" />
    <xs:enumeration value="Triangle" />
    <xs:enumeration value="Cross" />
    <xs:enumeration value="Star4" />
    <xs:enumeration value="Star5" />
    <xs:enumeration value="Star6" />
    <xs:enumeration value="Star10" />
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfTimeIntelligenceDataSource">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeIntelligenceDataSource"
nillable="true" type="tns:TimeIntelligenceDataSource" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfTimeIntelligenceFormula">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeIntelligenceFormula"
nillable="true" type="tns:TimeIntelligenceFormula" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Axis">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:AxisType" />
    <xs:element minOccurs="1" maxOccurs="1" name="FilterEmpty" type="xs:boolean" />
    <xs:element minOccurs="1" maxOccurs="1" name="PropertyList"
type="tns:StringCollection" />
    <xs:element minOccurs="1" maxOccurs="1" name="MemberSets"
type="tns:SerializableDictionary" />
    <xs:element minOccurs="1" maxOccurs="1" name="SortMode" type="tns:SortType" />
    <xs:element minOccurs="1" maxOccurs="1" name="SortIndex" type="xs:int" />
    <xs:element minOccurs="0" maxOccurs="1" name="SortTuple" type="tns:Tuple" />
    <xs:element minOccurs="1" maxOccurs="1" name="SortDescending" type="xs:boolean" />
    <xs:element minOccurs="1" maxOccurs="1" name="SortPreserverPeerGroups"
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="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="OLAPReportViewData">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryData" type="tns:OLAPQueryData"
/>
    <xs:element minOccurs="0" maxOccurs="1" name="QueryState" type="tns:QueryState" />
    <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:sequence>
  <xs:attribute name="MeasureGroupName" type="xs:string" />
  <xs:attribute name="Caption" type="xs:string" />
  <xs:attribute name="Description" type="xs:string" />
  <xs:attribute name="FormatDimensionUniqueName" type="xs:string" />
</xs:complexType>
<xs:complexType name="OLAPQueryData">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters"
type="tns:ArrayOfParameter" />
    <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation" />
    <xs:element minOccurs="0" maxOccurs="1" name="MDX" type="xs:string" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfParameter">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="Parameter" nillable="true"
type="tns:Parameter" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="Parameter">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultValue" type="xs:string" />
  </xs:sequence>
  <xs:attribute name="Name" type="xs:string" />
</xs:complexType>
<xs:complexType name="QueryState">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Axes" type="tns:ArrayOfAxis" />
    <xs:element minOccurs="1" maxOccurs="1" name="IsEnabled" type="xs:boolean" />
    <xs:element minOccurs="1" maxOccurs="1" name="UnknownFilterParameter"
type="xs:boolean" />
    <xs:element minOccurs="1" maxOccurs="1" name="ShowDatasourceFormatting"
type="xs:boolean" />
  </xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation" />
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfAxis">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Axis" type="tns:Axis" />
    </xs:sequence>
</xs:complexType>
<xs:element name="AnalyticGridReportView" nillable="true"
type="tns:AnalyticGridReportViewData" />
<xs:complexType name="AnalyticGridReportViewData">
    <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:complexType name="ExcelDataSet">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CompressedDataTable" type="xs:string"
/>
        <xs:element minOccurs="0" maxOccurs="1" name="ExcelFileBlob" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1" name="TableMapping"
type="tns:DataTableMapping" />
    </xs:sequence>
    <xs:attribute name="UseFirstRowHeaders" type="xs:boolean" use="required" />
</xs:complexType>
<xs:complexType name="ExcelServicesData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="WorkbookParameters"
type="tns:PropertyBag" />
    </xs:sequence>
    <xs:attribute name="SharePointSite" type="xs:string" />
    <xs:attribute name="DocumentLibrary" type="xs:string" />
    <xs:attribute name="DocumentLibraryRootFolder" type="xs:string" />
    <xs:attribute name="DocumentLibraryDisplay" type="xs:string" />
    <xs:attribute name="FolderFileName" type="xs:string" />
    <xs:attribute name="FileName" type="xs:string" />
    <xs:attribute name="ItemName" type="xs:string" />
    <xs:attribute name="ViewOptions" type="tns:ExcelServicesViewOptions" use="required"
/>
</xs:complexType>

```

```

        <xs:attribute name="ToolbarType" type="tns:ExcelServicesToolbarType" use="required"
/>
        <xs:attribute name="ToolbarOptions" type="tns:ExcelServicesToolbarOptions"
use="required" />
    </xs:complexType>
    <xs:simpleType name="ExcelServicesViewOptions">
        <xs:list>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="AllowInteractivity" />
                    <xs:enumeration value="AllowParameterModification" />
                    <xs:enumeration value="ShowWorkbookParameters" />
                    <xs:enumeration value="AllowSorting" />
                    <xs:enumeration value="AllowFiltering" />
                    <xs:enumeration value="AllowHyperlinks" />
                    <xs:enumeration value="AllowPivotSpecificOperations" />
                    <xs:enumeration value="AllowPeriodicRefresh" />
                    <xs:enumeration value="CloseWorkbookSessions" />
                </xs:restriction>
            </xs:simpleType>
        </xs:list>
    </xs:simpleType>
    <xs:simpleType name="ExcelServicesToolbarType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="None" />
            <xs:enumeration value="FullToolbar" />
            <xs:enumeration value="SummaryToolbar" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="ExcelServicesToolbarOptions">
        <xs:list>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="AllowInExcelOperations" />
                    <xs:enumeration value="AllowRefreshConnections" />
                    <xs:enumeration value="AllowRecalculation" />
                    <xs:enumeration value="ShowVisibleItemButton" />
                </xs:restriction>
            </xs:simpleType>
        </xs:list>
    </xs:simpleType>
    <xs:element name="ListLocation" nillable="true" type="tns:ListLocation" />
    <xs:complexType name="ListLocation">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="SiteUrl" type="xs:string" />
            <xs:element minOccurs="0" maxOccurs="1" name="ListUrl" type="xs:string" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="MDXParameterDefinition">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="Expression" type="xs:string" />
        </xs:sequence>
    </xs:complexType>
    <xs:complexType name="MemberParameterDefinition">
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="Dimension" type="tns:Dimension" />
            <xs:element minOccurs="0" maxOccurs="1" name="Members" type="tns:ArrayOfMember" />
            <xs:element minOccurs="0" maxOccurs="1" name="DefaultMembers"
type="tns:ArrayOfMember" />

```



```

    </xs:sequence>
</xs:complexType>
<xs:complexType name="NamedSetParameterDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="Expression" type="xs:string" />
  </xs:sequence>
</xs:complexType>
<xs:element name="SetOperation" nillable="true" type="tns:SetOperation" />
<xs:complexType name="SetOperation" abstract="true">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="Operation" 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="LogicalExpr" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="TupleSet" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="TupleCaption" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="FilterHierarchy" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="FilterMeasure" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="DefaultMeasure" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="Level" type="xs:string" />
    <xs:element minOccurs="0" maxOccurs="1" name="LevelDepth" type="xs:string" />
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="xs:int" />
    <xs:element minOccurs="0" maxOccurs="1" name="MemberDefinition" type="xs:string" />
  </xs:sequence>
</xs:complexType>
<xs:complexType name="EliminateMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation" />
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="EliminateDescendantsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation" />
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddAllMembersSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation" />
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddParentSiblingsSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation" />
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddNamedSetSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation" />
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddCalcMemberSetOp">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SetOperation" />
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDescendantsSubtreeSetOp">
  <xs:complexContent mixed="false">

```

```

        <xs:extension base="tns:SetOperation" />
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDescendantsSetOp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SetOperation">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="LevelName" type="xs:string" />
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDescendantsLeavesSetOp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SetOperation" />
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddDefaultMemberSetOp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SetOperation" />
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddFilterSetOp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SetOperation" />
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddMemberSetOp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SetOperation" />
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddChildrenSetOp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SetOperation" />
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="AddFilterTopBottomSetOp">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:SetOperation" />
    </xs:complexContent>
</xs:complexType>
<xs:element name="MemberSet" nillable="true" type="tns:MemberSet" />
<xs:complexType name="MemberSet" abstract="true">
    <xs:attribute name="FilterEmpty" type="xs:boolean" use="required" />
    <xs:attribute name="HierarchyType" type="tns:HierarchyType" use="required" />
    <xs:attribute name="Hierarchize" type="xs:boolean" use="required" />
    <xs:attribute name="Distinct" type="xs:boolean" use="required" />
    <xs:attribute name="HierarchyName" type="xs:string" />
</xs:complexType>
<xs:simpleType name="HierarchyType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Standard" />
        <xs:enumeration value="Measure" />
        <xs:enumeration value="Time" />
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfSetOperation">
    <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="unbounded" name="SetOperation" nillable="true"
type="tns:SetOperation" />
    </xs:sequence>
</xs:complexType>
<xs:complexType name="SerializableDictionary">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="Item" type="tns:Item"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="Item">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Key" type="xs:string" />
        <xs:element minOccurs="1" maxOccurs="1" name="Value" type="xs:string" />
    </xs:sequence>
</xs:complexType>
<xs:element name="MemberList" nillable="true" type="tns:MemberList" />
<xs:complexType name="MemberList">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberSet">
            <xs:sequence>
                <xs:element minOccurs="1" maxOccurs="1" name="memberList"
type="tns:ArrayOfString" />
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="MemberSetFormula">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:MemberSet">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="Operations"
type="tns:ArrayOfSetOperation" />
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:element name="StrategyMapViewData" nillable="true" type="tns:StrategyMapViewData"
/>
<xs:complexType name="StrategyMapViewData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" default="None" name="ToolbarOptions"
type="tns:StrategyMapToolbarOptions" />
        <xs:element minOccurs="0" maxOccurs="1" name="VDX" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1" name="Version" type="xs:string" />
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="StrategyMapToolbarOptions">
    <xs:list>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="None" />
                <xs:enumeration value="ShowToolbar" />
                <xs:enumeration value="ShowPage" />
                <xs:enumeration value="ShowScrollbars" />
                <xs:enumeration value="ShowPageTabs" />
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
</xs:simpleType>

```

```

    <xs:complexType name="TimeIntelligenceDataSource">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DataSourceLocation"
type="tns:RepositoryLocation" />
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string" />
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="TimeIntelligenceDefinition">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Formulas"
type="tns:ArrayOfTimeIntelligenceFormula" />
        <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource"
type="tns:TimeIntelligenceDataSource" />
        <xs:element minOccurs="0" maxOccurs="1" name="DataSources"
type="tns:ArrayOfTimeIntelligenceDataSource" />
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="TimeIntelligenceFormula">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string" />
        <xs:element minOccurs="0" maxOccurs="1" name="Formula" type="xs:string" />
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="TimeIntelligenceMdxSettings">
      <xs:complexContent mixed="false">
        <xs:extension base="tns:TimeIntelligenceSettings">
          <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="ReferenceDimension"
type="tns:Dimension" />
            <xs:element minOccurs="1" maxOccurs="1" name="ReferenceLevel"
type="tns:DateAggregationTypes" />
            <xs:element minOccurs="0" maxOccurs="1" name="ReferenceMember"
type="tns:Member" />
            <xs:element minOccurs="1" maxOccurs="1" name="ReferenceDateTime"
type="xs:dateTime" />
            <xs:element minOccurs="0" maxOccurs="1" name="LevelBindings"
type="tns:ArrayOfTimeIntelligenceLevelBinding" />
          </xs:sequence>
        </xs:extension>
      </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="TimeIntelligenceSettings" abstract="true">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Enabled" type="xs:boolean" />
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="ArrayOfTimeIntelligenceLevelBinding">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeIntelligenceLevelBinding"
nillable="true" type="tns:TimeIntelligenceLevelBinding" />
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="TimeIntelligenceLevelBinding">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="Level"
type="tns:DateAggregationTypes" />
        <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string" />
      </xs:sequence>
    </xs:complexType>
    <xs:complexType name="TimeIntelligencePostFormulaDefinition">

```

```

        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="MasterDataSource"
type="tns:DataSource" />
            <xs:element minOccurs="0" maxOccurs="1" name="DataSources"
type="tns:ArrayOfDataSource" />
        </xs:sequence>
    </xs:complexType>
    <xs:simpleType name="GraphicsUnit">
        <xs:restriction base="xs:string">
            <xs:enumeration value="World" />
            <xs:enumeration value="Display" />
            <xs:enumeration value="Pixel" />
            <xs:enumeration value="Point" />
            <xs:enumeration value="Inch" />
            <xs:enumeration value="Document" />
            <xs:enumeration value="Millimeter" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="FontStyle">
        <xs:list>
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="Regular" />
                    <xs:enumeration value="Bold" />
                    <xs:enumeration value="Italic" />
                    <xs:enumeration value="Underline" />
                    <xs:enumeration value="Strikeout" />
                </xs:restriction>
            </xs:simpleType>
        </xs:list>
    </xs:simpleType>
</xs:schema>
<xs:schema xmlns:tns="http://microsoft.com/wsdl/types/" elementFormDefault="qualified"
targetNamespace="http://microsoft.com/wsdl/types/"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:simpleType name="guid">
        <xs:restriction base="xs:string">
            <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-
9a-fA-F]{12}" />
        </xs:restriction>
    </xs:simpleType>
    <xs:simpleType name="char">
        <xs:restriction base="xs:unsignedShort" />
    </xs:simpleType>
</xs:schema>
</wsdl:types>
<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="UpdateDataSourceSoapIn">
    <wsdl:part name="parameters" element="tns:UpdateDataSource" />
</wsdl:message>
<wsdl:message name="UpdateDataSourceSoapOut">
    <wsdl:part name="parameters" element="tns:UpdateDataSourceResponse" />
</wsdl:message>
<wsdl:message name="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="DeleteDataSourceSoapIn">
    <wsdl:part name="parameters" element="tns>DeleteDataSource" />
</wsdl:message>
<wsdl:message name="DeleteDataSourceSoapOut">
    <wsdl:part name="parameters" element="tns>DeleteDataSourceResponse" />
</wsdl:message>
<wsdl:message name="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="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="GetKpisFromScorecardSoapIn">
    <wsdl:part name="parameters" element="tns:GetKpisFromScorecard" />
</wsdl:message>
<wsdl:message name="GetKpisFromScorecardSoapOut">
    <wsdl:part name="parameters" element="tns:GetKpisFromScorecardResponse" />
</wsdl:message>
<wsdl:message name="GetKpiSoapIn">
    <wsdl:part name="parameters" element="tns:GetKpi" />
</wsdl:message>
<wsdl:message name="GetKpiSoapOut">
    <wsdl:part name="parameters" element="tns:GetKpiResponse" />
</wsdl:message>
<wsdl:message name="DeleteKpiSoapIn">
    <wsdl:part name="parameters" element="tns>DeleteKpi" />
</wsdl:message>
<wsdl:message name="DeleteKpiSoapOut">
    <wsdl:part name="parameters" element="tns>DeleteKpiResponse" />
</wsdl:message>
<wsdl:message name="CreateScorecardSoapIn">
    <wsdl:part name="parameters" element="tns>CreateScorecard" />
</wsdl:message>
<wsdl:message name="CreateScorecardSoapOut">
    <wsdl:part name="parameters" element="tns>CreateScorecardResponse" />
</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="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="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="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="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="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="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="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="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="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="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="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="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="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="DeleteReportViewSoapIn">
  <wsdl:part name="parameters" element="tns>DeleteReportView" />
</wsdl:message>
<wsdl:message name="DeleteReportViewSoapOut">
  <wsdl:part name="parameters" element="tns>DeleteReportViewResponse" />
</wsdl:message>
<wsdl:message name="GetAnalyticReportViewSoapIn">
  <wsdl:part name="parameters" element="tns:GetAnalyticReportView" />
</wsdl:message>
<wsdl:message name="GetAnalyticReportViewSoapOut">
  <wsdl:part name="parameters" element="tns:GetAnalyticReportViewResponse" />
</wsdl:message>
<wsdl:message name="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="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="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="GetAnnotationSoapIn">
  <wsdl:part name="parameters" element="tns:GetAnnotation" />
</wsdl:message>
<wsdl:message name="GetAnnotationSoapOut">
  <wsdl:part name="parameters" element="tns:GetAnnotationResponse" />
</wsdl:message>
<wsdl:message name="GetAnnotationByIDSoapIn">
  <wsdl:part name="parameters" element="tns:GetAnnotationByID" />
</wsdl:message>
<wsdl:message name="GetAnnotationByIDSoapOut">
  <wsdl:part name="parameters" element="tns:GetAnnotationByIDResponse" />
</wsdl:message>
<wsdl:message name="GetAllAnnotationsByScorecardLocationSoapIn">
  <wsdl:part name="parameters" element="tns:GetAllAnnotationsByScorecardLocation" />
</wsdl:message>
<wsdl:message name="GetAllAnnotationsByScorecardLocationSoapOut">

```



```

        <wsdl:part name="parameters" element="tns:GetAllAnnotationsByScorecardLocationResponse"
/>
</wsdl:message>
<wsdl:message name="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="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="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="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="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="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="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="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="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="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="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="GetCubeMetaDataSetSoapIn">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataSet" />
</wsdl:message>
<wsdl:message name="GetCubeMetaDataSetSoapOut">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataSetResponse" />
</wsdl:message>
<wsdl:message name="GetCubeMetaDataSetForDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataSetForDataSource" />
</wsdl:message>
<wsdl:message name="GetCubeMetaDataSetForDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:GetCubeMetaDataSetForDataSourceResponse" />
</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="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="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="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="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="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="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="QueryChildMembersSoapIn">
  <wsdl:part name="parameters" element="tns:QueryChildMembers" />
</wsdl:message>
<wsdl:message name="QueryChildMembersSoapOut">
  <wsdl:part name="parameters" element="tns:QueryChildMembersResponse" />
</wsdl:message>
<wsdl:message name="QueryChildMembersFromDataSourceSoapIn">
  <wsdl:part name="parameters" element="tns:QueryChildMembersFromDataSource" />
</wsdl:message>
<wsdl:message name="QueryChildMembersFromDataSourceSoapOut">
  <wsdl:part name="parameters" element="tns:QueryChildMembersFromDataSourceResponse" />
</wsdl:message>
<wsdl:message name="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="QueryRelatedMemberSoapIn">
  <wsdl:part name="parameters" element="tns:QueryRelatedMember" />
</wsdl:message>
<wsdl:message name="QueryRelatedMemberSoapOut">
  <wsdl:part name="parameters" element="tns:QueryRelatedMemberResponse" />
</wsdl:message>
<wsdl:message name="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="QueryNamedSetsSoapIn">
  <wsdl:part name="parameters" element="tns:QueryNamedSets" />
</wsdl:message>
<wsdl:message name="QueryNamedSetsSoapOut">
  <wsdl:part name="parameters" element="tns:QueryNamedSetsResponse" />
</wsdl:message>
<wsdl:message name="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="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="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: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="GenerateViewSoapIn">
    <wsdl:part name="parameters" element="tns:GenerateView" />
</wsdl:message>
<wsdl:message name="GenerateViewSoapOut">
    <wsdl:part name="parameters" element="tns:GenerateViewResponse" />
</wsdl:message>
<wsdl:message name="GenerateViewDirectSoapIn">
    <wsdl:part name="parameters" element="tns:GenerateViewDirect" />
</wsdl:message>
<wsdl:message name="GenerateViewDirectSoapOut">
    <wsdl:part name="parameters" element="tns:GenerateViewDirectResponse" />
</wsdl:message>
<wsdl:message name="GetAsKpisSoapIn">
    <wsdl:part name="parameters" element="tns:GetAsKpis" />
</wsdl:message>
<wsdl:message name="GetAsKpisSoapOut">
    <wsdl:part name="parameters" element="tns:GetAsKpisResponse" />
</wsdl:message>
<wsdl:message name="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="UpdateDashboardSoapIn">
    <wsdl:part name="parameters" element="tns:UpdateDashboard" />
</wsdl:message>
<wsdl:message name="UpdateDashboardSoapOut">
    <wsdl:part name="parameters" element="tns:UpdateDashboardResponse" />
</wsdl:message>
<wsdl:message name="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="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="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="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="QueryTimeIntelligenceDirectSoapIn">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceDirect" />
</wsdl:message>
<wsdl:message name="QueryTimeIntelligenceDirectSoapOut">
  <wsdl:part name="parameters" element="tns:QueryTimeIntelligenceDirectResponse" />
</wsdl:message>
<wsdl:message name="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="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="GetDependentElementsSoapIn">
  <wsdl:part name="parameters" element="tns:GetDependentElements" />
</wsdl:message>
<wsdl:message name="GetDependentElementsSoapOut">
  <wsdl:part name="parameters" element="tns:GetDependentElementsResponse" />
</wsdl:message>
<wsdl:portType name="PPSAuthoringServiceSoap">
  <wsdl:operation name="CreateDataSource">
    <wsdl:input message="tns:CreateDataSourceSoapIn" />
    <wsdl:output message="tns:CreateDataSourceSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="UpdateDataSource">
    <wsdl:input message="tns:UpdateDataSourceSoapIn" />
    <wsdl:output message="tns:UpdateDataSourceSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="GetDataSource">
    <wsdl:input message="tns:GetDataSourceSoapIn" />
    <wsdl:output message="tns:GetDataSourceSoapOut" />
  </wsdl:operation>
  <wsdl:operation name="DeleteDataSource">

```

```

        <wsdl:input message="tns:DeleteDataSourceSoapIn" />
        <wsdl:output message="tns:DeleteDataSourceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="CreateKpi">
        <wsdl:input message="tns:CreateKpiSoapIn" />
        <wsdl:output message="tns:CreateKpiSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="UpdateKpi">
        <wsdl:input message="tns:UpdateKpiSoapIn" />
        <wsdl:output message="tns:UpdateKpiSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetKpisFromScorecard">
        <wsdl:input message="tns:GetKpisFromScorecardSoapIn" />
        <wsdl:output message="tns:GetKpisFromScorecardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetKpi">
        <wsdl:input message="tns:GetKpiSoapIn" />
        <wsdl:output message="tns:GetKpiSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="DeleteKpi">
        <wsdl:input message="tns:DeleteKpiSoapIn" />
        <wsdl:output message="tns:DeleteKpiSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="CreateScorecard">
        <wsdl:input message="tns:CreateScorecardSoapIn" />
        <wsdl:output message="tns:CreateScorecardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="UpdateScorecard">
        <wsdl:input message="tns:UpdateScorecardSoapIn" />
        <wsdl:output message="tns:UpdateScorecardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetScorecard">
        <wsdl:input message="tns:GetScorecardSoapIn" />
        <wsdl:output message="tns:GetScorecardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="DeleteScorecard">
        <wsdl:input message="tns:DeleteScorecardSoapIn" />
        <wsdl:output message="tns:DeleteScorecardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="CreateFilter">
        <wsdl:input message="tns:CreateFilterSoapIn" />
        <wsdl:output message="tns:CreateFilterSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="UpdateFilter">
        <wsdl:input message="tns:UpdateFilterSoapIn" />
        <wsdl:output message="tns:UpdateFilterSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetFilter">
        <wsdl:input message="tns:GetFilterSoapIn" />
        <wsdl:output message="tns:GetFilterSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="DeleteFilter">
        <wsdl:input message="tns:DeleteFilterSoapIn" />
        <wsdl:output message="tns:DeleteFilterSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="CreateIndicator">
        <wsdl:input message="tns:CreateIndicatorSoapIn" />
        <wsdl:output message="tns:CreateIndicatorSoapOut" />
    </wsdl:operation>

```

```

<wsdl:operation name="UpdateIndicator">
  <wsdl:input message="tns:UpdateIndicatorSoapIn" />
  <wsdl:output message="tns:UpdateIndicatorSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetIndicator">
  <wsdl:input message="tns:GetIndicatorSoapIn" />
  <wsdl:output message="tns:GetIndicatorSoapOut" />
</wsdl:operation>
<wsdl:operation name="DeleteIndicator">
  <wsdl:input message="tns:DeleteIndicatorSoapIn" />
  <wsdl:output message="tns:DeleteIndicatorSoapOut" />
</wsdl:operation>
<wsdl:operation name="CreateReportView">
  <wsdl:input message="tns:CreateReportViewSoapIn" />
  <wsdl:output message="tns:CreateReportViewSoapOut" />
</wsdl:operation>
<wsdl:operation name="UpdateReportView">
  <wsdl:input message="tns:UpdateReportViewSoapIn" />
  <wsdl:output message="tns:UpdateReportViewSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetReportView">
  <wsdl:input message="tns:GetReportViewSoapIn" />
  <wsdl:output message="tns:GetReportViewSoapOut" />
</wsdl:operation>
<wsdl:operation name="DeleteReportView">
  <wsdl:input message="tns:DeleteReportViewSoapIn" />
  <wsdl:output message="tns:DeleteReportViewSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetAnalyticReportView">
  <wsdl:input message="tns:GetAnalyticReportViewSoapIn" />
  <wsdl:output message="tns:GetAnalyticReportViewSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetLatestAnalyticReportVersion">
  <wsdl:input message="tns:GetLatestAnalyticReportVersionSoapIn" />
  <wsdl:output message="tns:GetLatestAnalyticReportVersionSoapOut" />
</wsdl:operation>
<wsdl:operation name="SaveTemporaryAnalyticReport">
  <wsdl:input message="tns:SaveTemporaryAnalyticReportSoapIn" />
  <wsdl:output message="tns:SaveTemporaryAnalyticReportSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetQueryResultMembers">
  <wsdl:input message="tns:GetQueryResultMembersSoapIn" />
  <wsdl:output message="tns:GetQueryResultMembersSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetAnnotation">
  <wsdl:input message="tns:GetAnnotationSoapIn" />
  <wsdl:output message="tns:GetAnnotationSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetAnnotationByID">
  <wsdl:input message="tns:GetAnnotationByIDSoapIn" />
  <wsdl:output message="tns:GetAnnotationByIDSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetAllAnnotationsByScorecardLocation">
  <wsdl:input message="tns:GetAllAnnotationsByScorecardLocationSoapIn" />
  <wsdl:output message="tns:GetAllAnnotationsByScorecardLocationSoapOut" />
</wsdl:operation>
<wsdl:operation name="CreateAnnotation">
  <wsdl:input message="tns:CreateAnnotationSoapIn" />
  <wsdl:output message="tns:CreateAnnotationSoapOut" />

```

```

</wsdl:operation>
<wsdl:operation name="UpdateAnnotation">
  <wsdl:input message="tns:UpdateAnnotationSoapIn" />
  <wsdl:output message="tns:UpdateAnnotationSoapOut" />
</wsdl:operation>
<wsdl:operation name="DeleteAnnotation">
  <wsdl:input message="tns:DeleteAnnotationSoapIn" />
  <wsdl:output message="tns:DeleteAnnotationSoapOut" />
</wsdl:operation>
<wsdl:operation name="TrimAnnotationByScorecardLocation">
  <wsdl:input message="tns:TrimAnnotationByScorecardLocationSoapIn" />
  <wsdl:output message="tns:TrimAnnotationByScorecardLocationSoapOut" />
</wsdl:operation>
<wsdl:operation name="TrimAnnotationByOwner">
  <wsdl:input message="tns:TrimAnnotationByOwnerSoapIn" />
  <wsdl:output message="tns:TrimAnnotationByOwnerSoapOut" />
</wsdl:operation>
<wsdl:operation name="TrimAnnotationUntouchedSince">
  <wsdl:input message="tns:TrimAnnotationUntouchedSinceSoapIn" />
  <wsdl:output message="tns:TrimAnnotationUntouchedSinceSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetDatabaseNamesFromDataSource">
  <wsdl:input message="tns:GetDatabaseNamesFromDataSourceSoapIn" />
  <wsdl:output message="tns:GetDatabaseNamesFromDataSourceSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetMdx">
  <wsdl:input message="tns:GetMdxSoapIn" />
  <wsdl:output message="tns:GetMdxSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetCubeNameInfos">
  <wsdl:input message="tns:GetCubeNameInfosSoapIn" />
  <wsdl:output message="tns:GetCubeNameInfosSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetPreviewDataSet">
  <wsdl:input message="tns:GetPreviewDataSetSoapIn" />
  <wsdl:output message="tns:GetPreviewDataSetSoapOut" />
</wsdl:operation>
<wsdl:operation name="TestConnection">
  <wsdl:input message="tns:TestConnectionSoapIn" />
  <wsdl:output message="tns:TestConnectionSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetCubeMetaData">
  <wsdl:input message="tns:GetCubeMetaDataSoapIn" />
  <wsdl:output message="tns:GetCubeMetaDataSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetCubeMetaDataForDataSource">
  <wsdl:input message="tns:GetCubeMetaDataForDataSourceSoapIn" />
  <wsdl:output message="tns:GetCubeMetaDataForDataSourceSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetDimensions">
  <wsdl:input message="tns:GetDimensionsSoapIn" />
  <wsdl:output message="tns:GetDimensionsSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetDimensionsFromDataSource">
  <wsdl:input message="tns:GetDimensionsFromDataSourceSoapIn" />
  <wsdl:output message="tns:GetDimensionsFromDataSourceSoapOut" />
</wsdl:operation>
<wsdl:operation name="GetCube">
  <wsdl:input message="tns:GetCubeSoapIn" />

```



```

        <wsdl:output message="tns:GetCubeSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetCubeFromDataSource">
        <wsdl:input message="tns:GetCubeFromDataSourceSoapIn" />
        <wsdl:output message="tns:GetCubeFromDataSourceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryDimensionRootMembers">
        <wsdl:input message="tns:QueryDimensionRootMembersSoapIn" />
        <wsdl:output message="tns:QueryDimensionRootMembersSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryDimensionRootMembersFromDataSource">
        <wsdl:input message="tns:QueryDimensionRootMembersFromDataSourceSoapIn" />
        <wsdl:output message="tns:QueryDimensionRootMembersFromDataSourceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryTransformMembers">
        <wsdl:input message="tns:QueryTransformMembersSoapIn" />
        <wsdl:output message="tns:QueryTransformMembersSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryChildMembers">
        <wsdl:input message="tns:QueryChildMembersSoapIn" />
        <wsdl:output message="tns:QueryChildMembersSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryChildMembersFromDataSource">
        <wsdl:input message="tns:QueryChildMembersFromDataSourceSoapIn" />
        <wsdl:output message="tns:QueryChildMembersFromDataSourceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryChildMembersByRangeFromDataSource">
        <wsdl:input message="tns:QueryChildMembersByRangeFromDataSourceSoapIn" />
        <wsdl:output message="tns:QueryChildMembersByRangeFromDataSourceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryRelatedMember">
        <wsdl:input message="tns:QueryRelatedMemberSoapIn" />
        <wsdl:output message="tns:QueryRelatedMemberSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryRelatedMemberFromDataSource">
        <wsdl:input message="tns:QueryRelatedMemberFromDataSourceSoapIn" />
        <wsdl:output message="tns:QueryRelatedMemberFromDataSourceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryNamedSets">
        <wsdl:input message="tns:QueryNamedSetsSoapIn" />
        <wsdl:output message="tns:QueryNamedSetsSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryNamedSetsFromDataSource">
        <wsdl:input message="tns:QueryNamedSetsFromDataSourceSoapIn" />
        <wsdl:output message="tns:QueryNamedSetsFromDataSourceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetAnnotationSetting">
        <wsdl:input message="tns:GetAnnotationSettingSoapIn" />
        <wsdl:output message="tns:GetAnnotationSettingSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="ValidateKpi">
        <wsdl:input message="tns:ValidateKpiSoapIn" />
        <wsdl:output message="tns:ValidateKpiSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="ValidateScorecard">
        <wsdl:input message="tns:ValidateScorecardSoapIn" />
        <wsdl:output message="tns:ValidateScorecardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="ValidateSiteCollection">

```

```

        <wsdl:input message="tns:ValidateSiteCollectionSoapIn" />
        <wsdl:output message="tns:ValidateSiteCollectionSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetCurrentCultureLcid">
        <wsdl:input message="tns:GetCurrentCultureLcidSoapIn" />
        <wsdl:output message="tns:GetCurrentCultureLcidSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetCurrentUserInfo">
        <wsdl:input message="tns:GetCurrentUserInfoSoapIn" />
        <wsdl:output message="tns:GetCurrentUserInfoSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GenerateView">
        <wsdl:input message="tns:GenerateViewSoapIn" />
        <wsdl:output message="tns:GenerateViewSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GenerateViewDirect">
        <wsdl:input message="tns:GenerateViewDirectSoapIn" />
        <wsdl:output message="tns:GenerateViewDirectSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetAsKpis">
        <wsdl:input message="tns:GetAsKpisSoapIn" />
        <wsdl:output message="tns:GetAsKpisSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="CreateDashboard">
        <wsdl:input message="tns:CreateDashboardSoapIn" />
        <wsdl:output message="tns:CreateDashboardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="UpdateDashboard">
        <wsdl:input message="tns:UpdateDashboardSoapIn" />
        <wsdl:output message="tns:UpdateDashboardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetDashboard">
        <wsdl:input message="tns:GetDashboardSoapIn" />
        <wsdl:output message="tns:GetDashboardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="DeleteDashboard">
        <wsdl:input message="tns>DeleteDashboardSoapIn" />
        <wsdl:output message="tns>DeleteDashboardSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetParameterDisplayData">
        <wsdl:input message="tns:GetParameterDisplayDataSoapIn" />
        <wsdl:output message="tns:GetParameterDisplayDataSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryTimeIntelligence">
        <wsdl:input message="tns:QueryTimeIntelligenceSoapIn" />
        <wsdl:output message="tns:QueryTimeIntelligenceSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="QueryTimeIntelligenceDirect">
        <wsdl:input message="tns:QueryTimeIntelligenceDirectSoapIn" />
        <wsdl:output message="tns:QueryTimeIntelligenceDirectSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetRegisteredCustomFCOs">
        <wsdl:input message="tns:GetRegisteredCustomFCOsSoapIn" />
        <wsdl:output message="tns:GetRegisteredCustomFCOsSoapOut" />
    </wsdl:operation>
    <wsdl:operation name="GetListItems">
        <wsdl:input message="tns:GetListItemsSoapIn" />
        <wsdl:output message="tns:GetListItemsSoapOut" />
    </wsdl:operation>

```

```

        <wsdl:operation name="GetDependentElements">
            <wsdl:input message="tns:GetDependentElementsSoapIn" />
            <wsdl:output message="tns:GetDependentElementsSoapOut" />
        </wsdl:operation>
    </wsdl:portType>
    <wsdl:binding name="PPSAuthoringServiceSoap" type="tns:PPSAuthoringServiceSoap">
        <soap:binding transport="http://schemas.xmlsoap.org/soap/http" />
        <wsdl:operation name="CreateDataSource">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDataSource"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="UpdateDataSource">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="GetDataSource">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDataSource"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="DeleteDataSource">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDataSource"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="CreateKpi">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateKpi" style="document"
/>
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>

```

```

        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateKpi">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateKpi" style="document"
/>
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetKpisFromScorecard">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetKpisFromScorecard"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetKpi">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetKpi" style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteKpi">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteKpi" style="document"
/>
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateScorecard">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateScorecard"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateScorecard">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateScorecard"
style="document" />

```

```

        <wsdl:input>
            <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:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteFilter">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteFilter"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateIndicator">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateIndicator"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateIndicator">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateIndicator"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetIndicator">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetIndicator"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteIndicator">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteIndicator"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="CreateReportView">

```

```

        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateReportView"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateReportView">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateReportView"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetReportView">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetReportView"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteReportView">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteReportView"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAnalyticReportView">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetLatestAnalyticReportVersion">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/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" />
      </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/GetDatabaseNamesFromDataSou
ce" style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="GetMdx">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetMdx" style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="GetCubeNameInfos">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeNameInfos"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="GetPreviewDataSet">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetPreviewDataSet"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="TestConnection">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/TestConnection"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>

```

```

    <wsdl:operation name="GetCubeMetaData">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData"
style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeMetaDataForDataSource">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaDataForDataSource"
style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDimensions">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensions"
style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDimensionsFromDataSource">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource"
style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCube">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCube" style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeFromDataSource">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeFromDataSource"
style="document" />
      <wsdl:input>
        <soap:body use="literal" />

```

```

        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryDimensionRootMembers">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryDimensionRootMembersFromDataSource">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryTransformMembers">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryChildMembers">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryChildMembersFromDataSource">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSource"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>

```

```

    <wsdl:operation name="QueryChildMembersByRangeFromDataSource">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFrom
DataSource" style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryRelatedMember">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember"
style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryRelatedMemberFromDataSource">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSo
urce" style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryNamedSets">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets"
style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryNamedSetsFromDataSource">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSou
rce" style="document" />
      <wsdl:input>
        <soap:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAnnotationSetting">
      <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting"
style="document" />
      <wsdl:input>

```

```

        <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal" />
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ValidateKpi">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateKpi"
style="document" />
    <wsdl:input>
        <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal" />
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ValidateScorecard">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateScorecard"
style="document" />
    <wsdl:input>
        <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal" />
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="ValidateSiteCollection">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection"
style="document" />
    <wsdl:input>
        <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal" />
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetCurrentCultureLcid">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentCultureLcid"
style="document" />
    <wsdl:input>
        <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal" />
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="GetCurrentUserInfo">
    <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCurrentUserInfo"
style="document" />
    <wsdl:input>
        <soap:body use="literal" />
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal" />
    </wsdl:output>

```

```

        </wsdl:operation>
        <wsdl:operation name="GenerateView">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateView"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="GenerateViewDirect">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GenerateViewDirect"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="GetAsKpis">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAsKpis" style="document"
/>
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="CreateDashboard">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDashboard"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="UpdateDashboard">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDashboard"
style="document" />
            <wsdl:input>
                <soap:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="GetDashboard">
            <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDashboard"
style="document" />

```

```

        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="DeleteDashboard">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteDashboard"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetParameterDisplayData">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryTimeIntelligence">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryTimeIntelligenceDirect">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetRegisteredCustomFCOs">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>

```



```

        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetListItems">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetListItems"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDependentElements">
        <soap:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDependentElements"
style="document" />
        <wsdl:input>
            <soap:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
</wsdl:binding>
<wsdl:binding name="PPSAuthoringServiceSoap12" type="tns:PPSAuthoringServiceSoap">
    <soap12:binding transport="http://schemas.xmlsoap.org/soap/http" />
    <wsdl:operation name="CreateDataSource">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateDataSource"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="UpdateDataSource">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateDataSource"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDataSource">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDataSource"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <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">
            <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" />
        </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>
        <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>
        <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
        <soap12:body use="literal" />
    </wsdl:output>

```

```

    </wsdl:operation>
    <wsdl:operation name="GetAnalyticReportView">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnalyticReportView"
style="document" />
      <wsdl:input>
        <soap12:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetLatestAnalyticReportVersion">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetLatestAnalyticReportVersi
on" style="document" />
      <wsdl:input>
        <soap12:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="SaveTemporaryAnalyticReport">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/SaveTemporaryAnalyticReport"
style="document" />
      <wsdl:input>
        <soap12:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetQueryResultMembers">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetQueryResultMembers"
style="document" />
      <wsdl:input>
        <soap12:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAnnotation">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotation"
style="document" />
      <wsdl:input>
        <soap12:body use="literal" />
      </wsdl:input>
      <wsdl:output>
        <soap12:body use="literal" />
      </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAnnotationByID">
      <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationByID"
style="document" />

```

```

    <wsdl:input>
      <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="GetAllAnnotationsByScorecardLocation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAllAnnotationsByScorecard
      Location" style="document" />
    <wsdl:input>
      <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="CreateAnnotation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/CreateAnnotation"
      style="document" />
    <wsdl:input>
      <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="UpdateAnnotation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/UpdateAnnotation"
      style="document" />
    <wsdl:input>
      <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="DeleteAnnotation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/DeleteAnnotation"
      style="document" />
    <wsdl:input>
      <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>
  <wsdl:operation name="TrimAnnotationByScorecardLocation">
    <soap12:operation
      soapAction="http://www.microsoft.com/performancepoint/scorecards/TrimAnnotationByScorecardLoc
      ation" style="document" />
    <wsdl:input>
      <soap12:body use="literal" />
    </wsdl:input>
    <wsdl:output>
      <soap12:body use="literal" />
    </wsdl:output>
  </wsdl:operation>

```

```

        </wsdl: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>
    </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>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="TestConnection">
        <soap12:operation
            soapAction="http://www.microsoft.com/performancepoint/scorecards/TestConnection"
            style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeMetaData">
        <soap12:operation
            soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaData"
            style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeMetaDataForDataSource">
        <soap12:operation
            soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeMetaDataForDataSource"
            style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDimensions">
        <soap12:operation
            soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensions"
            style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetDimensionsFromDataSource">
        <soap12:operation
            soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDimensionsFromDataSource"
            style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>

```

```

        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCube">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCube" style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetCubeFromDataSource">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetCubeFromDataSource"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryDimensionRootMembers">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembers"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryDimensionRootMembersFromDataSource">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryDimensionRootMembersFromDataSource" style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryTransformMembers">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTransformMembers"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryChildMembers">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembers"
style="document" />

```

```

        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
    </wsdl:output>
        <soap12:body use="literal" />
    </wsdl:output>
</wsdl:operation>
<wsdl:operation name="QueryChildMembersFromDataSource">
    <soap12:operation
        soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersFromDataSou
        rce" style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="QueryChildMembersByRangeFromDataSource">
    <soap12:operation
        soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryChildMembersByRangeFrom
        DataSource" style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="QueryRelatedMember">
    <soap12:operation
        soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMember"
        style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="QueryRelatedMemberFromDataSource">
    <soap12:operation
        soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryRelatedMemberFromDataSo
        urce" style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
<wsdl:operation name="QueryNamedSets">
    <soap12:operation
        soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSets"
        style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>

```

```

        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryNamedSetsFromDataSource">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryNamedSetsFromDataSource"
" style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="GetAnnotationSetting">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetAnnotationSetting"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="ValidateKpi">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateKpi"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="ValidateScorecard">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateScorecard"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="ValidateSiteCollection">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/ValidateSiteCollection"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl: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="GetParameterDisplayData">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetParameterDisplayData"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>
    <wsdl:operation name="QueryTimeIntelligence">
        <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligence"
style="document" />
        <wsdl:input>
            <soap12:body use="literal" />
        </wsdl:input>
        <wsdl:output>
            <soap12:body use="literal" />
        </wsdl:output>
    </wsdl:operation>

```

```

        <wsdl:operation name="QueryTimeIntelligenceDirect">
            <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/QueryTimeIntelligenceDirect"
style="document" />
            <wsdl:input>
                <soap12:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap12:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="GetRegisteredCustomFCOs">
            <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetRegisteredCustomFCOs"
style="document" />
            <wsdl:input>
                <soap12:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap12:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="GetListItems">
            <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetListItems"
style="document" />
            <wsdl:input>
                <soap12:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap12:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
        <wsdl:operation name="GetDependentElements">
            <soap12:operation
soapAction="http://www.microsoft.com/performancepoint/scorecards/GetDependentElements"
style="document" />
            <wsdl:input>
                <soap12:body use="literal" />
            </wsdl:input>
            <wsdl:output>
                <soap12:body use="literal" />
            </wsdl:output>
        </wsdl:operation>
    </wsdl:binding>
</wsdl:definitions>

```

## 7 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft® SharePoint® Server 2010

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 2.2.4.83:](#) The values for **UnderlyingElementTypeName** for the built-in element types in PerformancePoint Services 2010 are:

Type	Value
Scorecard	Microsoft.PerformancePoint.Scorecards.Scorecard, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c
ReportView	Microsoft.PerformancePoint.Scorecards.ReportView, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c
Filter	Microsoft.PerformancePoint.Scorecards.Filter, Microsoft.PerformancePoint.Scorecards.Client, Version=14.0.0.0, Culture=neutral, PublicKeyToken=71e9bce111e9429c

[<2> Section 2.2.4.168:](#) In PerformancePoint Services 2010, the identifier is generated by obtaining the **UTF-8** formatted bytes of the indicator's relative URL, computing an MD5 hash of those bytes and formatting the 16 byte hash to a GUID value format.

[<3> Section 2.2.5.6:](#) Beta2 or RTM refers to PerformancePoint Services 2010 Beta2 or PerformancePoint Services 2010.

[<4> Section 2.2.5.6:](#) Beta1 refers to PerformancePoint Services 2010 Beta1.

[<5> Section 2.2.5.6:](#) Microsoft Office PerformancePoint Server 2007

[<6> Section 2.2.9.3:](#) The content store refers to a SharePoint Server 2010 list.

[<7> Section 2.2.9.3:](#) Data sources are stored in document libraries in SharePoint Server 2010.

[<8> Section 2.2.9.3:](#) The content store refers to a SharePoint Server 2010 list.

[<9> Section 2.2.9.3:](#) The content store refers to a SharePoint Server 2010 list.

[<10> Section 2.2.9.3:](#) The content store refers to a SharePoint Server 2010 list.

[<11> Section 2.2.9.3:](#) The content store refers to a SharePoint Server 2010 list.



<12> [Section 3.1.2:](#) In PerformancePoint Services 2010, the default query timeout is 300 seconds.

<13> [Section 3.1.4.32:](#) PerformancePoint Services 2010 returns an empty **GetDashboardResponse** (see section [3.1.4.32.2.2](#)) for failures unrelated to security restrictions.

<14> [Section 3.1.4.34:](#) PerformancePoint Services 2010 returns a **GetDataSourceResponse** (see section [3.1.4.32.2.2](#)) containing a null value instead of a data source (1) for failures unrelated to security restrictions.

<15> [Section 3.1.4.35:](#) PerformancePoint Services 2010 returns a **GetDependentElementResponse** (see section [3.1.4.32.2.2](#)) containing an **DependentElementInfo** that contains a **FirstClassElementCollection** (see section [2.2.4.35](#)) with null elements for failures unrelated to security restrictions.

<16> [Section 3.1.4.38:](#) PerformancePoint Services 2010 returns an empty **GetFilterResponse** (see section [3.1.4.38.2.2](#)) for failures unrelated to security restrictions.

<17> [Section 3.1.4.43:](#) PerformancePoint Services 2010 returns a **GetListItemsResponse** (see section [3.1.4.32.2.2](#)) containing an **ArrayOfFirstClassElements** (see section [2.2.4.35](#)) with null elements for failures unrelated to security restrictions.

<18> [Section 3.1.4.44:](#) PerformancePoint Services 2010 returns a **GetMdxResponse** with an empty **GetMdxResult** for failures unrelated to security restrictions.

<19> [Section 3.1.4.45:](#) In PerformancePoint Services 2010, **GetParameterDisplayData** receives the **GridViewData** (see section [2.2.4.121](#)) as an untyped object referenced by the customData parameter on the **GetParameterDisplayDataIn** message.

<20> [Section 3.1.4.46.2.1:](#) PerformancePoint Services 2010 supports preview data sets for the following data source types: **ExcelWorkbook**, **ExcelServicesWorkbook**, **SqlTabularDataSource**, and **SPListDataSource**.

<21> [Section 3.1.4.50:](#) PerformancePoint Services 2010 returns an empty **GetScorecardResponse** (see section [3.1.4.50.2.2](#)) for failures unrelated to security restrictions.

<22> [Section 3.1.4.56:](#) PerformancePoint Services 2010 returns a **GetDataSourceResponse** (see section [3.1.4.32.2.2](#)) containing a null value instead of a data source (1) for failures unrelated to security restrictions.

## 8 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

## 9 Index

### A

[Abstract data model](#)  
    [server](#) 190  
[AddAllMembersSetOp](#) [complex type](#) 42  
[AddCalcMemberSetOp](#) [complex type](#) 42  
[AddChildrenSetOp](#) [complex type](#) 42  
[AddDefaultMemberSetOp](#) [complex type](#) 43  
[AddDescendantsLeavesSetOp](#) [complex type](#) 43  
[AddDescendantsSetOp](#) [complex type](#) 43  
[AddDescendantsSubtreeSetOp](#) [complex type](#) 44  
[AddFilterSetOp](#) [complex type](#) 44  
[AddFilterTopBottomSetOp](#) [complex type](#) 44  
[AddMemberSetOp](#) [complex type](#) ([section 2.2.4](#) 30, [section 2.2.4.10](#) 44)  
[AddNamedSetSetOp](#) [complex type](#) 44  
[AddParentSiblingsSetOp](#) [complex type](#) 45  
[AggregateTypeEnum](#) [simple type](#) 153  
[AliasInfo](#) [complex type](#) 45  
[AlignmentType](#) [simple type](#) 154  
[AnalyticBaseReportViewData](#) [complex type](#) 45  
[AnalyticChartLegend](#) [complex type](#) 53  
[AnalyticChartReportViewData](#) [complex type](#) 54  
[AnalyticChartType](#) [simple type](#) 154  
[AnalyticGridReportViewData](#) [complex type](#) 55  
[AnalyticLegendLocation](#) [simple type](#) 155  
[AnalyticMarkerStyle](#) [simple type](#) 155  
[Annotation](#) [complex type](#) 56  
[AnnotationComment](#) [complex type](#) 58  
[AnnotationVersions](#) [simple type](#) 156  
[Applicability](#) 27  
[ArrayOfAliasInfo](#) [complex type](#) 58  
[ArrayOfAnnotationComment](#) [complex type](#) 59  
[ArrayOfAxis](#) [complex type](#) 59  
[ArrayOfBpmProperty](#) [complex type](#) 59  
[ArrayOfBpmPropertyListItem](#) [complex type](#) 60  
[ArrayOfChoice1](#) [complex type](#) 60  
[ArrayOfComment](#) [complex type](#) 61  
[ArrayOfConfiguredView](#) [complex type](#) 61  
[ArrayOfDashboardElement](#) [complex type](#) 61  
[ArrayOfDataColumnMapping](#) [complex type](#) 61  
[ArrayOfDataSource](#) [complex type](#) 62  
[ArrayOfDecimal](#) [complex type](#) 62  
[ArrayOfDefaultDimensionSetting](#) [complex type](#) 62  
[ArrayOfDimension](#) [complex type](#) 63  
[ArrayOfEndPoint](#) [complex type](#) 63  
[ArrayOfFirstClassElement](#) [complex type](#) 63  
[ArrayOfGridCell](#) [complex type](#) 63  
[ArrayOfGridDisplayElement](#) [complex type](#) 64  
[ArrayOfGridHeaderItem](#) [complex type](#) 64  
[ArrayOfGridViewTransformReference](#) [complex type](#) 64  
[ArrayOfHierarchy](#) [complex type](#) 64  
[ArrayOfIndicatorBand](#) [complex type](#) 65  
[ArrayOfKpi](#) [complex type](#) 65  
[ArrayOfKpiMeasure](#) [complex type](#) 65  
[ArrayOfLevel](#) [complex type](#) 66  
[ArrayOfMeasure](#) [complex type](#) 66  
[ArrayOfMember](#) [complex type](#) 66

[ArrayOfMemberTransform](#) [complex type](#) 66  
[ArrayOfNamedSet](#) [complex type](#) 67  
[ArrayOfNameInfo](#) [complex type](#) 67  
[ArrayOfParameter](#) [complex type](#) 67  
[ArrayOfParameterDefinition](#) [complex type](#) 67  
[ArrayOfParameterMapping](#) [complex type](#) 68  
[ArrayOfPropertyBag](#) [complex type](#) 68  
[ArrayOfSetOperation](#) [complex type](#) 68  
[ArrayOfString](#) [complex type](#) 69  
[ArrayOfTarget](#) [complex type](#) 69  
[ArrayOfTimeIntelligenceDataSource](#) [complex type](#) 69  
[ArrayOfTimeIntelligenceFormula](#) [complex type](#) 69  
[ArrayOfTimeIntelligenceLevelBinding](#) [complex type](#) 70  
[Attribute groups](#) 183  
[Attributes](#) 182  
[Axis](#) [complex type](#) 70  
[AxisType](#) [simple type](#) 157

### B

[Banding](#) [complex type](#) 71  
[BandType](#) [simple type](#) 157  
[BeginPointEmitterType](#) [simple type](#) 158  
[BpmException](#) [complex type](#) 71  
[BpmProperty](#) [complex type](#) 71  
[BpmPropertyBool](#) [complex type](#) 72  
[BpmPropertyDate](#) [complex type](#) 72  
[BpmPropertyDecimal](#) [complex type](#) 73  
[BpmPropertyHyperlink](#) [complex type](#) 73  
[BpmPropertyHyperlink2](#) [complex type](#) 73  
[BpmPropertyLinkBase](#) [complex type](#) 73  
[BpmPropertyList](#) [complex type](#) 74  
[BpmPropertyListItem](#) [complex type](#) 74  
[BpmPropertyLongText](#) [complex type](#) 74  
[BpmPropertyText](#) [complex type](#) 75  
[BpmPropertyUser](#) [complex type](#) 75

### C

[CalculatedFormulaInfo](#) [complex type](#) 75  
[Capability negotiation](#) 28  
[Change tracking](#) 502  
[Client](#)  
    [overview](#) 190  
[Comment](#) [complex type](#) 76  
[Common list of error codes](#) 187  
[Complex types](#) 30  
    [AddAllMembersSetOp](#) 42  
    [AddCalcMemberSetOp](#) 42  
    [AddChildrenSetOp](#) 42  
    [AddDefaultMemberSetOp](#) 43  
    [AddDescendantsLeavesSetOp](#) 43  
    [AddDescendantsSetOp](#) 43  
    [AddDescendantsSubtreeSetOp](#) 44  
    [AddFilterSetOp](#) 44  
    [AddFilterTopBottomSetOp](#) 44

[AddMemberSetOp](#) ([section 2.2.4](#) 30, [section 2.2.4.10](#) 44)  
[AddNamedSetSetOp](#) 44  
[AddParentSiblingsSetOp](#) 45  
[AliasInfo](#) 45  
[AnalyticBaseReportViewData](#) 45  
[AnalyticChartLegend](#) 53  
[AnalyticChartReportViewData](#) 54  
[AnalyticGridReportViewData](#) 55  
[Annotation](#) 56  
[AnnotationComment](#) 58  
[ArrayOfAliasInfo](#) 58  
[ArrayOfAnnotationComment](#) 59  
[ArrayOfAxis](#) 59  
[ArrayOfBpmProperty](#) 59  
[ArrayOfBpmPropertyListItem](#) 60  
[ArrayOfChoice1](#) 60  
[ArrayOfComment](#) 61  
[ArrayOfConfiguredView](#) 61  
[ArrayOfDashboardElement](#) 61  
[ArrayOfDataColumnMapping](#) 61  
[ArrayOfDataSource](#) 62  
[ArrayOfDecimal](#) 62  
[ArrayOfDefaultDimensionSetting](#) 62  
[ArrayOfDimension](#) 63  
[ArrayOfEndPoint](#) 63  
[ArrayOfFirstClassElement](#) 63  
[ArrayOfGridCell](#) 63  
[ArrayOfGridDisplayElement](#) 64  
[ArrayOfGridHeaderItem](#) 64  
[ArrayOfGridViewTransformReference](#) 64  
[ArrayOfHierarchy](#) 64  
[ArrayOfIndicatorBand](#) 65  
[ArrayOfKpi](#) 65  
[ArrayOfKpiMeasure](#) 65  
[ArrayOfLevel](#) 66  
[ArrayOfMeasure](#) 66  
[ArrayOfMember](#) 66  
[ArrayOfMemberTransform](#) 66  
[ArrayOfNamedSet](#) 67  
[ArrayOfNameInfo](#) 67  
[ArrayOfParameter](#) 67  
[ArrayOfParameterDefinition](#) 67  
[ArrayOfParameterMapping](#) 68  
[ArrayOfPropertyBag](#) 68  
[ArrayOfSetOperation](#) 68  
[ArrayOfString](#) 69  
[ArrayOfTarget](#) 69  
[ArrayOfTimeIntelligenceDataSource](#) 69  
[ArrayOfTimeIntelligenceFormula](#) 69  
[ArrayOfTimeIntelligenceLevelBinding](#) 70  
[Axis](#) 70  
[Banding](#) 71  
[BpmException](#) 71  
[BpmProperty](#) 71  
[BpmPropertyBool](#) 72  
[BpmPropertyDate](#) 72  
[BpmPropertyDecimal](#) 73  
[BpmPropertyHyperlink](#) 73  
[BpmPropertyHyperlink2](#) 73  
[BpmPropertyLinkBase](#) 73  
[BpmPropertyList](#) 74  
[BpmPropertyListItem](#) 74  
[BpmPropertyLongText](#) 74  
[BpmPropertyText](#) 75  
[BpmPropertyUser](#) 75  
[CalculatedFormulaInfo](#) 75  
[Comment](#) 76  
[ConfiguredView](#) 76  
[Cube](#) 78  
[Dashboard](#) 79  
[DashboardElement](#) 80  
[DashboardElementContainer](#) 81  
[DashboardElementSize](#) 81  
[DashboardItem](#) 81  
[DataColumnMapping](#) 82  
[DataSource](#) 83  
[DataTableMapping](#) 87  
[DefaultDimensionSetting](#) 88  
[DictionaryWrapperOfStringGridCell](#) 88  
[DictionaryWrapperOfStringPropertyBag](#) 89  
[Dimension](#) 89  
[Element](#) 90  
[ElementVersion](#) 90  
[EliminateDescendantsSetOp](#) 91  
[EliminateMemberSetOp](#) 91  
[EndPoint](#) 91  
[ExcelDataSet](#) 92  
[ExcelServicesData](#) 92  
[Filter](#) 93  
[FirstClassElement](#) 95  
[GridCell](#) 96  
[GridCellSet](#) 98  
[GridColor](#) 99  
[GridDisplayElement](#) 99  
[GridDisplayElementActual](#) 101  
[GridDisplayElementAggregation](#) 101  
[GridDisplayElementHyperLink](#) 101  
[GridDisplayElementIndicator](#) 101  
[GridDisplayElementIndicatorText](#) 102  
[GridDisplayElementNumber](#) 102  
[GridDisplayElementScore](#) 103  
[GridDisplayElementTarget](#) 103  
[GridDisplayElementText](#) 103  
[GridDisplayElementVariance](#) 103  
[GridFontInfo](#) 104  
[GridFormatInfo](#) 104  
[GridHeaderItem](#) 105  
[GridIndicatorSettings](#) 109  
[GridScoreSettings](#) 109  
[GridTargetSettings](#) 109  
[GridVarianceSettings](#) 110  
[GridViewData](#) 111  
[GridViewDefinition](#) 113  
[GridViewTransformReference](#) 116  
[Hierarchy](#) 116  
[Indicator](#) 116  
[IndicatorBand](#) 117  
[Item](#) 118  
[Kpi](#) 118  
[KpiMeasure](#) 119  
[KpiNumberFormatProperties](#) 120

- [Level](#) 121
- [ListLocation](#) 122
- [MDXParameterDefinition](#) 122
- [Measure](#) 122
- [Member](#) 123
- [MemberList](#) 124
- [MemberOperation](#) 124
- [MemberOperationAllDescendants](#) 124
- [MemberOperationChildren](#) 125
- [MemberOperationDescendants](#) 125
- [MemberOperationDrillUp](#) 125
- [MemberOperationHide](#) 125
- [MemberOperationLeafDescendants](#) 126
- [MemberParameterDefinition](#) 126
- [MemberSet](#) 126
- [MemberSetFormula](#) 127
- [MemberTransform](#) 127
- [NamedSet](#) 128
- [NamedSetParameterDefinition](#) 128
- [NameInfo](#) 128
- [NumericFormat](#) 129
- [NumericFormatsHashtable](#) 130
- [OLAPQueryData](#) 130
- [OLAPReportViewData](#) 130
- [Parameter](#) 131
- [ParameterDefinition](#) 132
- [ParameterMapping](#) 133
- [PasReportViewData](#) 134
- [PropertyBag](#) 135
- [QueryState](#) 135
- [ReportView](#) 136
- [RepositoryLocation](#) 139
- [Scorecard](#) 140
- [SecondClassElement](#) 140
- [SerializableDictionary](#) 141
- [SetOperation](#) 141
- [SqlReportViewData](#) 143
- [StatusFilter](#) 143
- [StrategyMapViewData](#) 144
- [StringCollection](#) 144
- [Target](#) 144
- [TimeIntelligenceDataSource](#) 145
- [TimeIntelligenceDefinition](#) 145
- [TimeIntelligenceFormula](#) 146
- [TimeIntelligenceLevelBinding](#) 146
- [TimeIntelligenceMdxSettings](#) 146
- [TimeIntelligencePostFormulaDefinition](#) 147
- [TimeIntelligenceSettings](#) 147
- [Title](#) 148
- [ToolBarOptions](#) 148
- [Tuple](#) 149
- [XmlFont](#) 150
- [ConfiguredView complex type](#) 76
- [ConnectionContext simple type](#) 158
- [Create and use a datasource example](#) 387
- [CreateDataSource example](#) 387
- [CreateKPI example](#) 357
- [Cube complex type](#) 78

## D

- [Dashboard complex type](#) 79

- [DashboardElement complex type](#) 80
- [DashboardElementContainer complex type](#) 81
- [DashboardElementSize complex type](#) 81
- [DashboardItem complex type](#) 81
- Data model - abstract
  - [server](#) 190
- [DataColumnMapping complex type](#) 82
- [DataSource complex type](#) 83
- [DataTableMapping complex type](#) 87
- [DataValuePosition simple type](#) 158
- [DateAggregationTypes simple type](#) 159
- [DefaultDimensionSetting complex type](#) 88
- [DeleteScorecard scorecard](#) 386
- [DictionaryWrapperOfStringGridCell complex type](#) 88
- [DictionaryWrapperOfStringPropertyBag complex type](#) 89
- [Dimension complex type](#) 89
- [DimensionTypeEnum simple type](#) 160

## E

- [Element complex type](#) 90
- [ElementVersion complex type](#) 90
- [EliminateDescendantsSetOp complex type](#) 91
- [EliminateMemberSetOp complex type](#) 91
- [EndPoint complex type](#) 91
- [EndPointCategory simple type](#) 161
- Events
  - [local - server](#) 356
  - [timer - server](#) 356
- Examples
  - [create and use a datasource](#) 387
  - [CreateDataSource](#) 387
  - [CreateKPI](#) 357
  - [DeleteScorecard](#) 386
  - [GenerateView](#) 381
  - [GetDimensions](#) 390
  - [GetScorecard](#) 361
  - [overview](#) 357
  - [QueryChildMembersFromDataSource](#) 393
  - [QueryDimensionRootMembersFromDataSource](#) 393
  - [scorecard update](#) 357
  - [TestDataSource](#) 389
  - [UpdateScorecard](#) 367
- [ExcelDataSet complex type](#) 92
- [ExcelServicesData complex type](#) 92
- [ExcelServicesToolBarOptions simple type](#) 161
- [ExcelServicesToolBarType simple type](#) 162
- [ExcelServicesViewOptions simple type](#) 162

## F

- [FactAggregations simple type](#) 163
- [Faults](#) 183
  - [common list of error codes](#) 187
  - [full list of possible error codes](#) 183
  - [SOAP fault detail element](#) 183
- [Fields - vendor-extensible](#) 28
- [Filter complex type](#) 93
- [FilterSelectionMode simple type](#) 164
- [FirstClassElement complex type](#) 95

[FirstClassObjectType simple type](#) 164  
[FontStyle simple type](#) 165  
[FormatNegativeSymbol simple type](#) 166  
[FormatType simple type](#) 166  
[Full list of possible error codes](#) 183  
[Full WSDL](#) 396

## G

[GenerateView example](#) 381  
[GetDimensions example](#) 390  
[GetScorecard example](#) 361  
[Glossary](#) 23  
[GraphicsUnit simple type](#) 167  
[GridCell complex type](#) 96  
[GridCellElementStatus simple type](#) 167  
[GridCellSet complex type](#) 98  
[GridColor complex type](#) 99  
[GridDisplayElement complex type](#) 99  
[GridDisplayElementActual complex type](#) 101  
[GridDisplayElementAggregation complex type](#) 101  
[GridDisplayElementHyperLink complex type](#) 101  
[GridDisplayElementIndicator complex type](#) 101  
[GridDisplayElementIndicatorText complex type](#) 102  
[GridDisplayElementNumber complex type](#) 102  
[GridDisplayElementScore complex type](#) 103  
[GridDisplayElementTarget complex type](#) 103  
[GridDisplayElementText complex type](#) 103  
[GridDisplayElementVariance complex type](#) 103  
[GridFontInfo complex type](#) 104  
[GridFormatInfo complex type](#) 104  
[GridHeaderItem complex type](#) 105  
[GridIndicatorSettings complex type](#) 109  
[GridScoreSettings complex type](#) 109  
[GridTargetSettings complex type](#) 109  
[GridVarianceSettings complex type](#) 110  
[GridViewData complex type](#) 111  
[GridViewDefinition complex type](#) 113  
[GridViewTransformReference complex type](#) 116  
[Groups](#) 182

## H

[HeaderAggregationTypes simple type](#) 168  
[Hierarchy complex type](#) 116  
[HierarchyOrigin simple type](#) 168  
[HierarchyType simple type](#) 169  
[HorizontalAlignments simple type](#) 169

## I

[Implementer - security considerations](#) 395  
[Index of security parameters](#) 395  
[Indicator complex type](#) 116  
[IndicatorBand complex type](#) 117  
[IndicatorPosition simple type](#) 170  
[IndicatorType simple type](#) 170  
[Informative references](#) 26  
 Initialization  
   [server](#) 193  
[Introduction](#) 23  
[Item complex type](#) 118

## K

[Kpi complex type](#) 118  
[KpiMeasure complex type](#) 119  
[KpiNumberFormatProperties complex type](#) 120  
[KpiPattern simple type](#) 171

## L

[LayoutOrientation simple type](#) 171  
[Level complex type](#) 121  
[ListLocation complex type](#) 122  
 Local events  
   [server](#) 356

## M

[MappedColumnDataTypes simple type](#) 172  
[MappedColumnTypes simple type](#) 172  
[MDXParameterDefinition complex type](#) 122  
[Measure complex type](#) 122  
[Member complex type](#) 123  
[MemberList complex type](#) 124  
[MemberOperation complex type](#) 124  
[MemberOperationAllDescendants complex type](#) 124  
[MemberOperationChildren complex type](#) 125  
[MemberOperationDescendants complex type](#) 125  
[MemberOperationDrillUp complex type](#) 125  
[MemberOperationHide complex type](#) 125  
[MemberOperationLeafDescendants complex type](#) 126  
[MemberParameterDefinition complex type](#) 126  
[MemberRelationship simple type](#) 173  
[MemberSet complex type](#) 126  
[MemberSetFormula complex type](#) 127  
[MemberTransform complex type](#) 127  
[MemberTransformOperation simple type](#) 174  
[MemberTransformType simple type](#) 174  
[MemberType simple type](#) 174  
 Message processing  
   [server](#) 193  
[Messages](#) 29  
   [AddAllMembersSetOp complex type](#) 42  
   [AddCalcMemberSetOp complex type](#) 42  
   [AddChildrenSetOp complex type](#) 42  
   [AddDefaultMemberSetOp complex type](#) 43  
   [AddDescendantsLeavesSetOp complex type](#) 43  
   [AddDescendantsSetOp complex type](#) 43  
   [AddDescendantsSubtreeSetOp complex type](#) 44  
   [AddFilterSetOp complex type](#) 44  
   [AddFilterTopBottomSetOp complex type](#) 44  
   AddMemberSetOp complex type ([section 2.2.4](#) 30, [section 2.2.4.10](#) 44)  
   [AddNamedSetSetOp complex type](#) 44  
   [AddParentSiblingsSetOp complex type](#) 45  
   [AggregateTypeEnum simple type](#) 153  
   [AliasInfo complex type](#) 45  
   [AlignmentType simple type](#) 154  
   [AnalyticBaseReportViewData complex type](#) 45  
   [AnalyticChartLegend complex type](#) 53  
   [AnalyticChartReportViewData complex type](#) 54

[AnalyticChartType simple type](#) 154  
[AnalyticGridReportViewData complex type](#) 55  
[AnalyticLegendLocation simple type](#) 155  
[AnalyticMarkerStyle simple type](#) 155  
[Annotation complex type](#) 56  
[AnnotationComment complex type](#) 58  
[AnnotationVersions simple type](#) 156  
[ArrayOfAliasInfo complex type](#) 58  
[ArrayOfAnnotationComment complex type](#) 59  
[ArrayOfAxis complex type](#) 59  
[ArrayOfBpmProperty complex type](#) 59  
[ArrayOfBpmPropertyListItem complex type](#) 60  
[ArrayOfChoice1 complex type](#) 60  
[ArrayOfComment complex type](#) 61  
[ArrayOfConfiguredView complex type](#) 61  
[ArrayOfDashboardElement complex type](#) 61  
[ArrayOfDataColumnMapping complex type](#) 61  
[ArrayOfDataSource complex type](#) 62  
[ArrayOfDecimal complex type](#) 62  
[ArrayOfDefaultDimensionSetting complex type](#) 62  
[ArrayOfDimension complex type](#) 63  
[ArrayOfEndPoint complex type](#) 63  
[ArrayOfFirstClassElement complex type](#) 63  
[ArrayOfGridCell complex type](#) 63  
[ArrayOfGridDisplayElement complex type](#) 64  
[ArrayOfGridHeaderItem complex type](#) 64  
[ArrayOfGridViewTransformReference complex type](#) 64  
[ArrayOfHierarchy complex type](#) 64  
[ArrayOfIndicatorBand complex type](#) 65  
[ArrayOfKpi complex type](#) 65  
[ArrayOfKpiMeasure complex type](#) 65  
[ArrayOfLevel complex type](#) 66  
[ArrayOfMeasure complex type](#) 66  
[ArrayOfMember complex type](#) 66  
[ArrayOfMemberTransform complex type](#) 66  
[ArrayOfNamedSet complex type](#) 67  
[ArrayOfNameInfo complex type](#) 67  
[ArrayOfParameter complex type](#) 67  
[ArrayOfParameterDefinition complex type](#) 67  
[ArrayOfParameterMapping complex type](#) 68  
[ArrayOfPropertyBag complex type](#) 68  
[ArrayOfSetOperation complex type](#) 68  
[ArrayOfString complex type](#) 69  
[ArrayOfTarget complex type](#) 69  
[ArrayOfTimeIntelligenceDataSource complex type](#) 69  
[ArrayOfTimeIntelligenceFormula complex type](#) 69  
[ArrayOfTimeIntelligenceLevelBinding complex type](#) 70  
[attribute groups](#) 183  
[attributes](#) 182  
[Axis complex type](#) 70  
[AxisType simple type](#) 157  
[Banding complex type](#) 71  
[BandType simple type](#) 157  
[BeginPointEmitterType simple type](#) 158  
[BpmException complex type](#) 71  
[BpmProperty complex type](#) 71  
[BpmPropertyBool complex type](#) 72  
[BpmPropertyDate complex type](#) 72  
[BpmPropertyDecimal complex type](#) 73  
[BpmPropertyHyperlink complex type](#) 73  
[BpmPropertyHyperlink2 complex type](#) 73  
[BpmPropertyLinkBase complex type](#) 73  
[BpmPropertyList complex type](#) 74  
[BpmPropertyListItem complex type](#) 74  
[BpmPropertyLongText complex type](#) 74  
[BpmPropertyText complex type](#) 75  
[BpmPropertyUser complex type](#) 75  
[CalculatedFormulaInfo complex type](#) 75  
[Comment complex type](#) 76  
[complex types](#) 30  
[ConfiguredView complex type](#) 76  
[ConnectionContext simple type](#) 158  
[Cube complex type](#) 78  
[Dashboard complex type](#) 79  
[DashboardElement complex type](#) 80  
[DashboardElementContainer complex type](#) 81  
[DashboardElementSize complex type](#) 81  
[DashboardItem complex type](#) 81  
[DataColumnMapping complex type](#) 82  
[DataSource complex type](#) 83  
[DataTableMapping complex type](#) 87  
[DataValuePosition simple type](#) 158  
[DateAggregationTypes simple type](#) 159  
[DefaultDimensionSetting complex type](#) 88  
[DictionaryWrapperOfStringGridCell complex type](#) 88  
[DictionaryWrapperOfStringPropertyBag complex type](#) 89  
[Dimension complex type](#) 89  
[DimensionTypeEnum simple type](#) 160  
[Element complex type](#) 90  
[elements](#) 30  
[ElementVersion complex type](#) 90  
[EliminateDescendantsSetOp complex type](#) 91  
[EliminateMemberSetOp complex type](#) 91  
[EndPoint complex type](#) 91  
[EndPointCategory simple type](#) 161  
[enumerated](#) 30  
[ExcelDataSet complex type](#) 92  
[ExcelServicesData complex type](#) 92  
[ExcelServicesToolBarOptions simple type](#) 161  
[ExcelServicesToolBarType simple type](#) 162  
[ExcelServicesViewOptions simple type](#) 162  
[FactAggregations simple type](#) 163  
[Filter complex type](#) 93  
[FilterSelectionMode simple type](#) 164  
[FirstClassElement complex type](#) 95  
[FirstClassObjectType simple type](#) 164  
[FontStyle simple type](#) 165  
[FormatNegativeSymbol simple type](#) 166  
[FormatType simple type](#) 166  
[GraphicsUnit simple type](#) 167  
[GridCell complex type](#) 96  
[GridCellElementStatus simple type](#) 167  
[GridCellSet complex type](#) 98  
[GridColor complex type](#) 99  
[GridDisplayElement complex type](#) 99  
[GridDisplayElementActual complex type](#) 101



[GridDisplayElementAggregation complex type](#) 101  
[GridDisplayElementHyperLink complex type](#) 101  
[GridDisplayElementIndicator complex type](#) 101  
[GridDisplayElementIndicatorText complex type](#) 102  
[GridDisplayElementNumber complex type](#) 102  
[GridDisplayElementScore complex type](#) 103  
[GridDisplayElementTarget complex type](#) 103  
[GridDisplayElementText complex type](#) 103  
[GridDisplayElementVariance complex type](#) 103  
[GridFontInfo complex type](#) 104  
[GridFormatInfo complex type](#) 104  
[GridHeaderItem complex type](#) 105  
[GridIndicatorSettings complex type](#) 109  
[GridScoreSettings complex type](#) 109  
[GridTargetSettings complex type](#) 109  
[GridVarianceSettings complex type](#) 110  
[GridViewData complex type](#) 111  
[GridViewDefinition complex type](#) 113  
[GridViewTransformReference complex type](#) 116  
[groups](#) 182  
[HeaderAggregationTypes simple type](#) 168  
[Hierarchy complex type](#) 116  
[HierarchyOrigin simple type](#) 168  
[HierarchyType simple type](#) 169  
[HorizontalAlignments simple type](#) 169  
[Indicator complex type](#) 116  
[IndicatorBand complex type](#) 117  
[IndicatorPosition simple type](#) 170  
[IndicatorType simple type](#) 170  
[Item complex type](#) 118  
[Kpi complex type](#) 118  
[KpiMeasure complex type](#) 119  
[KpiNumberFormatProperties complex type](#) 120  
[KpiPattern simple type](#) 171  
[LayoutOrientation simple type](#) 171  
[Level complex type](#) 121  
[ListLocation complex type](#) 122  
[MappedColumnDataTypes simple type](#) 172  
[MappedColumnTypes simple type](#) 172  
[MDXParameterDefinition complex type](#) 122  
[Measure complex type](#) 122  
[Member complex type](#) 123  
[MemberList complex type](#) 124  
[MemberOperation complex type](#) 124  
[MemberOperationAllDescendants complex type](#) 124  
[MemberOperationChildren complex type](#) 125  
[MemberOperationDescendants complex type](#) 125  
[MemberOperationDrillUp complex type](#) 125  
[MemberOperationHide complex type](#) 125  
[MemberOperationLeafDescendants complex type](#) 126  
[MemberParameterDefinition complex type](#) 126  
[MemberRelationship simple type](#) 173  
[MemberSet complex type](#) 126  
[MemberSetFormula complex type](#) 127  
[MemberTransform complex type](#) 127  
[MemberTransformOperation simple type](#) 174  
[MemberTransformType simple type](#) 174  
[MemberType simple type](#) 174  
[NamedSet complex type](#) 128  
[NamedSetParameterDefinition complex type](#) 128  
[NameInfo complex type](#) 128  
[namespaces](#) 29  
[NumericFormat complex type](#) 129  
[NumericFormatsHashtable complex type](#) 130  
[OLAPQueryData complex type](#) 130  
[OLAPReportViewData complex type](#) 130  
[Parameter complex type](#) 131  
[ParameterDefinition complex type](#) 132  
[ParameterMapping complex type](#) 133  
[PasReportViewData complex type](#) 134  
[PropertyBag complex type](#) 135  
[QueryState complex type](#) 135  
[ReportLayout simple type](#) 175  
[ReportView complex type](#) 136  
[RepositoryLocation complex type](#) 139  
[RollupTypes simple type](#) 175  
[Scorecard complex type](#) 140  
[ScorecardEmptyRowsFilterMode simple type](#) 176  
[ScorecardNamedSetType simple type](#) 176  
[ScorecardNodeTypes simple type](#) 177  
[ScoreTypes simple type](#) 178  
[SecondClassElement complex type](#) 140  
[SerializableDictionary complex type](#) 141  
[SetOperation complex type](#) 141  
[simple types](#) 150  
[SizeType simple type](#) 178  
[SortType simple type](#) 178  
[SqlReportViewData complex type](#) 143  
[SqlReportViewDataServerMode simple type](#) 179  
[StatusFilter complex type](#) 143  
[StrategyMapToolBarOptions simple type](#) 179  
[StrategyMapViewData complex type](#) 144  
[StringCollection complex type](#) 144  
[syntax](#) 29  
[Target complex type](#) 144  
[TimeIntelligenceDataSource complex type](#) 145  
[TimeIntelligenceDefinition complex type](#) 145  
[TimeIntelligenceFormula complex type](#) 146  
[TimeIntelligenceLevelBinding complex type](#) 146  
[TimeIntelligenceMdxSettings complex type](#) 146  
[TimeIntelligencePostFormulaDefinition complex type](#) 147  
[TimeIntelligenceSettings complex type](#) 147  
[Title complex type](#) 148  
[ToolBarOptions complex type](#) 148  
[transport](#) 29  
[Trinary simple type](#) 180  
[Tuple complex type](#) 149  
[ValueSources simple type](#) 180  
[VarianceDisplayType simple type](#) 181  
[VarianceType simple type](#) 181  
[VerticalAlignments simple type](#) 182  
[XmlFont complex type](#) 150

**N**

[NamedSet complex type](#) 128  
[NamedSetParameterDefinition complex type](#) 128  
[NameInfo complex type](#) 128



[Namespaces](#) 29  
[Normative references](#) 25  
[NumericFormat complex type](#) 129  
[NumericFormatsHashtable complex type](#) 130

## O

[OLAPQueryData complex type](#) 130  
[OLAPReportViewData complex type](#) 130  
Operations  
    [CreateAnnotation](#) 197  
    [CreateDashboard](#) 199  
    [CreateDataSource](#) 202  
    [CreateFilter](#) 204  
    [CreateIndicator](#) 206  
    [CreateKpi](#) 209  
    [CreateReportView](#) 211  
    [CreateScorecard](#) 214  
    [DeleteAnnotation](#) 216  
    [DeleteDashboard](#) 218  
    [DeleteDataSource](#) 220  
    [DeleteFilter](#) 221  
    [DeleteIndicator](#) 223  
    [DeleteKpi](#) 225  
    [DeleteReportView](#) 226  
    [DeleteScorecard](#) 228  
    [GenerateView](#) 230  
    [GenerateViewDirect](#) 232  
    [GetAllAnnotationsByScorecardLocation](#) 234  
    [GetAnalyticReportView](#) 236  
    [GetAnnotation](#) 238  
    [GetAnnotationByID](#) 241  
    [GetAnnotationSetting](#) 242  
    [GetAsKpis](#) 244  
    [GetCube](#) 246  
    [GetCubeFromDataSource](#) 248  
    [GetCubeMetaData](#) 249  
    [GetCubeMetaDataForDataSource](#) 251  
    [GetCubeNameInfos](#) 253  
    [GetCurrentCultureLcid](#) 255  
    [GetCurrentUserInfo](#) 257  
    [GetDashboard](#) 258  
    [GetDatabaseNamesFromDataSource](#) 260  
    [GetDataSource](#) 262  
    [GetDependentElements](#) 264  
    [GetDimensions](#) 268  
    [GetDimensionsFromDataSource](#) 270  
    [GetFilter](#) 271  
    [GetIndicator](#) 273  
    [GetKpi](#) 275  
    [GetKpisFromScorecard](#) 277  
    [GetLatestAnalyticReportVersion](#) 279  
    [GetListItems](#) 280  
    [GetMdx](#) 282  
    [GetParameterDisplayData](#) 284  
    [GetPreviewDataSet](#) 287  
    [GetQueryResultMembers](#) 289  
    [GetRegisteredCustomFCOs](#) 291  
    [GetReportView](#) 294  
    [GetScorecard](#) 296  
    [QueryChildMembers](#) 298  
    [QueryChildMembersByRangeFromDataSource](#) 300

[QueryChildMembersFromDataSource](#) 302  
    [QueryDimensionRootMembers](#) 303  
    [QueryDimensionRootMembersFromDataSource](#) 305  
    [QueryNamedSets](#) 307  
    [QueryNamedSetsFromDataSource](#) 309  
    [QueryRelatedMember](#) 311  
    [QueryRelatedMemberFromDataSource](#) 313  
    [QueryTimeIntelligence](#) 315  
    [QueryTimeIntelligenceDirect](#) 317  
    [QueryTransformMembers](#) 319  
    [SaveTemporaryAnalyticReport](#) 322  
    [TestConnection](#) 324  
    [TrimAnnotationByOwner](#) 325  
    [TrimAnnotationByScorecardLocation](#) 327  
    [TrimAnnotationUntouchedSince](#) 329  
    [UpdateAnnotation](#) 330  
    [UpdateDashboard](#) 332  
    [UpdateDataSource](#) 335  
    [UpdateFilter](#) 337  
    [UpdateIndicator](#) 340  
    [UpdateKpi](#) 342  
    [UpdateReportView](#) 345  
    [UpdateScorecard](#) 347  
    [ValidateKpi](#) 349  
    [ValidateScorecard](#) 351  
    [ValidateSiteCollection](#) 353  
    [Overview \(synopsis\)](#) 26

## P

[Parameter complex type](#) 131  
    [ParameterDefinition complex type](#) 132  
    [ParameterMapping complex type](#) 133  
    [Parameters - security index](#) 395  
    [PasReportViewData complex type](#) 134  
    [Preconditions](#) 27  
    [Prerequisites](#) 27  
    [Product behavior](#) 500  
    [PropertyBag complex type](#) 135

## Q

[QueryChildMembersFromDataSource example](#) 393  
    [QueryDimensionRootMembersFromDataSource example](#) 393  
    [QueryState complex type](#) 135

## R

References  
    [informative](#) 26  
    [normative](#) 25  
    [Relationship to other protocols](#) 27  
    [ReportLayout simple type](#) 175  
    [ReportView complex type](#) 136  
    [RepositoryLocation complex type](#) 139  
    [RollupTypes simple type](#) 175

## S

[Scorecard complex type](#) 140

[Scorecard update example](#) 357  
[ScorecardEmptyRowsFilterMode simple type](#) 176  
[ScorecardNamedSetType simple type](#) 176  
[ScorecardNodeTypes simple type](#) 177  
[ScoreTypes simple type](#) 178  
[SecondClassElement complex type](#) 140  
Security  
    [implementer considerations](#) 395  
    [parameter index](#) 395  
Sequencing rules  
    [server](#) 193  
[SerializableDictionary complex type](#) 141  
Server  
    [abstract data model](#) 190  
    [CreateAnnotation operation](#) 197  
    [CreateDashboard operation](#) 199  
    [CreateDataSource operation](#) 202  
    [CreateFilter operation](#) 204  
    [CreateIndicator operation](#) 206  
    [CreateKpi operation](#) 209  
    [CreateReportView operation](#) 211  
    [CreateScorecard operation](#) 214  
    [DeleteAnnotation operation](#) 216  
    [DeleteDashboard operation](#) 218  
    [DeleteDataSource operation](#) 220  
    [DeleteFilter operation](#) 221  
    [DeleteIndicator operation](#) 223  
    [DeleteKpi operation](#) 225  
    [DeleteReportView operation](#) 226  
    [DeleteScorecard operation](#) 228  
    [details](#) 190  
    [GenerateView operation](#) 230  
    [GenerateViewDirect operation](#) 232  
    [GetAllAnnotationsByScorecardLocation operation](#) 234  
    [GetAnalyticReportView operation](#) 236  
    [GetAnnotation operation](#) 238  
    [GetAnnotationByID operation](#) 241  
    [GetAnnotationSetting operation](#) 242  
    [GetAskKpis operation](#) 244  
    [GetCube operation](#) 246  
    [GetCubeFromDataSource operation](#) 248  
    [GetCubeMetadata operation](#) 249  
    [GetCubeMetadataForDataSource operation](#) 251  
    [GetCubeNameInfos operation](#) 253  
    [GetCurrentCultureLcid operation](#) 255  
    [GetCurrentUserInfo operation](#) 257  
    [GetDashboard operation](#) 258  
    [GetDatabaseNamesFromDataSource operation](#) 260  
    [GetDataSource operation](#) 262  
    [GetDependentElements operation](#) 264  
    [GetDimensions operation](#) 268  
    [GetDimensionsFromDataSource operation](#) 270  
    [GetFilter operation](#) 271  
    [GetIndicator operation](#) 273  
    [GetKpi operation](#) 275  
    [GetKpisFromScorecard operation](#) 277  
    [GetLatestAnalyticReportVersion operation](#) 279  
    [GetListItems operation](#) 280  
    [GetMdx operation](#) 282  
    [GetParameterDisplayData operation](#) 284  
    [GetPreviewDataSet operation](#) 287  
    [GetQueryResultMembers operation](#) 289  
    [GetRegisteredCustomFCOs operation](#) 291  
    [GetReportView operation](#) 294  
    [GetScorecard operation](#) 296  
    [initialization](#) 193  
    [local events](#) 356  
    [message processing](#) 193  
    [overview](#) 190  
    [QueryChildMembers operation](#) 298  
    [QueryChildMembersByRangeFromDataSource operation](#) 300  
    [QueryChildMembersFromDataSource operation](#) 302  
    [QueryDimensionRootMembers operation](#) 303  
    [QueryDimensionRootMembersFromDataSource operation](#) 305  
    [QueryNamedSets operation](#) 307  
    [QueryNamedSetsFromDataSource operation](#) 309  
    [QueryRelatedMember operation](#) 311  
    [QueryRelatedMemberFromDataSource operation](#) 313  
    [QueryTimeIntelligence operation](#) 315  
    [QueryTimeIntelligenceDirect operation](#) 317  
    [QueryTransformMembers operation](#) 319  
    [SaveTemporaryAnalyticReport operation](#) 322  
    [sequencing rules](#) 193  
    [TestConnection operation](#) 324  
    [timer events](#) 356  
    [timers](#) 193  
    [TrimAnnotationByOwner operation](#) 325  
    [TrimAnnotationByScorecardLocation operation](#) 327  
    [TrimAnnotationUntouchedSince operation](#) 329  
    [UpdateAnnotation operation](#) 330  
    [UpdateDashboard operation](#) 332  
    [UpdateDataSource operation](#) 335  
    [UpdateFilter operation](#) 337  
    [UpdateIndicator operation](#) 340  
    [UpdateKpi operation](#) 342  
    [UpdateReportView operation](#) 345  
    [UpdateScorecard operation](#) 347  
    [ValidateKpi operation](#) 349  
    [ValidateScorecard operation](#) 351  
    [ValidateSiteCollection operation](#) 353  
[SetOperation complex type](#) 141  
Simple types 150  
    [AggregateTypeEnum](#) 153  
    [AlignmentType](#) 154  
    [AnalyticChartType](#) 154  
    [AnalyticLegendLocation](#) 155  
    [AnalyticMarkerStyle](#) 155  
    [AnnotationVersions](#) 156  
    [AxisType](#) 157  
    [BandType](#) 157  
    [BeginPointEmitterType](#) 158  
    [ConnectionContext](#) 158  
    [DataValuePosition](#) 158  
    [DateAggregationTypes](#) 159  
    [DimensionTypeEnum](#) 160

- [EndPointCategory](#) 161
- [ExcelServicesToolbarOptions](#) 161
- [ExcelServicesToolbarType](#) 162
- [ExcelServicesViewOptions](#) 162
- [FactAggregations](#) 163
- [FilterSelectionMode](#) 164
- [FirstClassObjectType](#) 164
- [FontStyle](#) 165
- [FormatNegativeSymbol](#) 166
- [FormatType](#) 166
- [GraphicsUnit](#) 167
- [GridCellElementStatus](#) 167
- [HeaderAggregationTypes](#) 168
- [HierarchyOrigin](#) 168
- [HierarchyType](#) 169
- [HorizontalAlignments](#) 169
- [IndicatorPosition](#) 170
- [IndicatorType](#) 170
- [KpiPattern](#) 171
- [LayoutOrientation](#) 171
- [MappedColumnDataTypes](#) 172
- [MappedColumnTypes](#) 172
- [MemberRelationship](#) 173
- [MemberTransformOperation](#) 174
- [MemberTransformType](#) 174
- [MemberType](#) 174
- [ReportLayout](#) 175
- [RollupTypes](#) 175
- [ScorecardEmptyRowsFilterMode](#) 176
- [ScorecardNamedSetType](#) 176
- [ScorecardNodeTypes](#) 177
- [ScoreTypes](#) 178
- [SizeType](#) 178
- [SortType](#) 178
- [SqlReportViewDataServerMode](#) 179
- [StrategyMapToolbarOptions](#) 179
- [Trinary](#) 180
- [ValueSources](#) 180
- [VarianceDisplayType](#) 181
- [VarianceType](#) 181
- [VerticalAlignments](#) 182
- [SizeType simple type](#) 178
- [SOAP fault detail element](#) 183
- [SortType simple type](#) 178
- [SqlReportViewData complex type](#) 143
- [SqlReportViewDataServerMode simple type](#) 179
- [Standards assignments](#) 28
- [StatusFilter complex type](#) 143
- [StrategyMapToolbarOptions simple type](#) 179
- [StrategyMapViewData complex type](#) 144
- [StringCollection complex type](#) 144
- Syntax
  - [messages - overview](#) 29

**T**

- [Target complex type](#) 144
- [TestDataSource example](#) 389
- [TimeIntelligenceDataSource complex type](#) 145
- [TimeIntelligenceDefinition complex type](#) 145
- [TimeIntelligenceFormula complex type](#) 146
- [TimeIntelligenceLevelBinding complex type](#) 146
- [TimeIntelligenceMdxSettings complex type](#) 146
- [TimeIntelligencePostFormulaDefinition complex type](#) 147
- [TimeIntelligenceSettings complex type](#) 147
- Timer events
  - [server](#) 356
- Timers
  - [server](#) 193
- [Title complex type](#) 148
- [ToolbarOptions complex type](#) 148
- [Tracking changes](#) 502
- [Transport](#) 29
- [Trinary simple type](#) 180
- [Tuple complex type](#) 149
- Types
  - [complex](#) 30
  - [simple](#) 150

**U**

- [UpdateScorecard example](#) 367

**V**

- [ValueSources simple type](#) 180
- [VarianceDisplayType simple type](#) 181
- [VarianceType simple type](#) 181
- [Vendor-extensible fields](#) 28
- [Versioning](#) 28
- [VerticalAlignments simple type](#) 182

**W**

- [WSDL](#) 396

**X**

- [XmlFont complex type](#) 150