

[MS-EXSPWS3]: Excel Calculation Web Service Version 3 Protocol Specification

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Revision Summary

Date	Revision History	Revision Class	Comments
12/01/2010	0.01	Major	Initial Availability
01/20/2012	0.01	No change	No changes to the meaning, language, or formatting of the technical content.
04/11/2012	0.01	No change	No changes to the meaning, language, or formatting of the technical content.

Table of Contents

1 Introduction	26
1.1 Glossary	26
1.2 References	30
1.2.1 Normative References	30
1.2.2 Informative References	32
1.3 Protocol Overview (Synopsis)	32
1.3.1 Session-based Protocol	32
1.3.2 Protocol Operations	32
1.3.3 Published Items and Results Returned by this Protocol	33
1.4 Relationship to Other Protocols	33
1.5 Prerequisites/Preconditions	33
1.6 Applicability Statement	34
1.7 Versioning and Capability Negotiation	34
1.8 Vendor-Extensible Fields	34
1.9 Standards Assignments	34
2 Messages	35
2.1 Transport	35
2.2 Common Message Syntax	35
2.2.1 Namespaces	35
2.2.2 Messages	36
2.2.2.1 Common List of Id Element Values	36
2.2.3 Elements	37
2.2.4 Complex Types	37
2.2.4.1 ArrayOfAnyType	48
2.2.4.2 ArrayOfAutoFilterCriteria	49
2.2.4.3 ArrayOfAutoFilterDateNodeInfo	49
2.2.4.4 ArrayOfExcelServerMessage	49
2.2.4.5 ArrayOfInt	50
2.2.4.6 ArrayOfPivotFilterItem	50
2.2.4.7 ArrayOfPresenceUserInfo	50
2.2.4.8 ArrayOfRangeValuesA1	51
2.2.4.9 ArrayOfSlicerFormatElement	51
2.2.4.10 ArrayOfSlicerItem	52
2.2.4.11 ArrayOfString	52
2.2.4.12 AutoFilterCriteria	52
2.2.4.13 AutoFilterDateNodeInfo	53
2.2.4.14 AutoFilterOptions	54
2.2.4.15 BorderFormat	55
2.2.4.16 CellCompoundValue	56
2.2.4.17 CollaborationParameter	57
2.2.4.18 CollaborationResult	57
2.2.4.19 CollaborationState	57
2.2.4.20 CommandParameter	58
2.2.4.21 CommandResult	60
2.2.4.22 CommandResultExtendedInfo	62
2.2.4.23 ExcelServerMessage	62
2.2.4.24 ExcelServerMessage	63
2.2.4.25 PeriodicRefreshInfo	65
2.2.4.26 PivotFilterItem	65

2.2.4.27	PivotFilterItemList	66
2.2.4.28	PivotOperationOptions	66
2.2.4.29	PresenceUserId	70
2.2.4.30	PresenceUserInfo	71
2.2.4.31	RangeValuesA1	71
2.2.4.32	RequestLimits	71
2.2.4.33	ServerHealthInformation	72
2.2.4.34	ServerHealthInformation	72
2.2.4.35	SheetRange	73
2.2.4.36	SlicerFontType	73
2.2.4.37	SlicerFormatElement	74
2.2.4.38	SlicerFormatElementList	76
2.2.4.39	SlicerItem	76
2.2.4.40	SlicerItemList	76
2.2.4.41	SlicerOptions	77
2.2.4.42	SlicerView	77
2.2.4.43	TypeExporter	79
2.2.4.44	VisibleSheetRange	80
2.2.4.45	WorkOnBehalf	85
2.2.4.46	ArrayOfArrayOfString	85
2.2.4.47	ArrayOfPivotFieldListItem	86
2.2.4.48	ArrayOfPublishedObjectName	86
2.2.4.49	ArrayOfWorksheetChangeInfo	86
2.2.4.50	ArrayOfWorksheetData	87
2.2.4.51	CultureCommandParameter	87
2.2.4.52	OpenWorkbookInParameters	89
2.2.4.53	OpenWorkbookOutParameters	90
2.2.4.54	PivotFieldListItem	90
2.2.4.55	PublishedObjectName	93
2.2.4.56	RestChartPngRequest	93
2.2.4.57	RestChartPngResult	94
2.2.4.58	RestODataRequest	94
2.2.4.59	RestODataResult	95
2.2.4.60	RestPngResult	96
2.2.4.61	RestPublishedObjectsRequest	96
2.2.4.62	RestPublishedObjectsResult	96
2.2.4.63	RestRangePngRequest	97
2.2.4.64	RestRangeValuesRequest	97
2.2.4.65	RestRangeValuesResult	98
2.2.4.66	RestRangeXmlRequest	98
2.2.4.67	RestRangeXmlResult	99
2.2.4.68	RestRequest	100
2.2.4.69	RestResult	100
2.2.4.70	RestWorkbookRequest	100
2.2.4.71	RestWorkbookResult	101
2.2.4.72	SheetCell	101
2.2.4.73	WorkbookGenerationOptions	101
2.2.4.74	WorkbookMetadata	103
2.2.4.75	WorkbookMetadataParameter	103
2.2.4.76	WorkbookMetadataResult	104
2.2.4.77	WorkbookMetadataState	104
2.2.4.78	WorksheetChangeInfo	104
2.2.4.79	WorksheetData	105

2.2.4.80	RestOpenWorkbookRequest	105
2.2.4.81	RestOpenWorkbookResult	106
2.2.4.82	ArrayOfBindingMetadata	106
2.2.4.83	ArrayOfServerEventMetadata	106
2.2.4.84	ArrayOfWebExtensionMetadata	107
2.2.4.85	BindingMetadata	107
2.2.4.86	BindingReference	107
2.2.4.87	DdaSettings	108
2.2.4.88	ServerEventMetadata	108
2.2.4.89	WebExtensionMetadata	109
2.2.4.90	ArrayOfClientUdfCall	109
2.2.4.91	ArrayOfClientUdfDefinition	109
2.2.4.92	ClientUdfCall	110
2.2.4.93	ClientUdfCallInfo	110
2.2.4.94	ClientUdfDefinition	110
2.2.4.95	ClientUdfListInfo	111
2.2.5	Simple Types	111
2.2.5.1	AutoFilterCriteriaType	116
2.2.5.2	AutoFilterDateNodeType	118
2.2.5.3	AutoFilterOperationType	119
2.2.5.4	AutoFilterRelationOperator	120
2.2.5.5	CellError	120
2.2.5.6	CommandParameterFlags	121
2.2.5.7	ExcelServerMessageAppearance	122
2.2.5.8	ExcelServerMessageAppearance	123
2.2.5.9	ExcelServerMessageId	123
2.2.5.10	ExcelServerMessageId	140
2.2.5.11	ExcelServerMessageSeverity	154
2.2.5.12	ExcelServerMessageSeverity	155
2.2.5.13	ExcelServerMessageType	155
2.2.5.14	ExcelServerMessageType	156
2.2.5.15	guid	156
2.2.5.16	NamedObjectType	156
2.2.5.17	PivotFilterType	157
2.2.5.18	RangeReference	163
2.2.5.19	ServerStateFlags	163
2.2.5.20	ServerStateFlags	164
2.2.5.21	SessionIdentifier	164
2.2.5.22	WorkbookType	165
2.2.5.23	GetPublishedObjectsOptions	166
2.2.5.24	OpenWorkbookFlags	166
2.2.5.25	SharedPivotMenuAnchorType	168
2.2.5.26	SheetFlags	169
2.2.5.27	WorkbookGenerationItems	170
2.2.5.28	char	170
2.2.5.29	duration	171
2.2.5.30	guid	171
2.2.5.31	DdaBindingType	171
2.2.5.32	DdaCoerceType	172
2.2.5.33	DdaFilterType	172
2.2.5.34	DdaValueType	173
2.2.5.35	GridRenderingOptions	173
2.2.5.36	SheetType	174

2.2.5.37	SheetVisibility	174
2.2.6	Attributes.....	175
2.2.7	Groups.....	175
2.2.8	Attribute Groups	175
3	Protocol Details.....	176
3.1	Server Details	177
3.1.1	Abstract Data Model	177
3.1.2	Timers	178
3.1.2.1	Session Timeout	178
3.1.2.2	Request Timeout	178
3.1.3	Initialization	178
3.1.4	Message Processing Events and Sequencing Rules.....	178
3.1.4.1	ApplyItemFilter	182
3.1.4.1.1	Messages	182
3.1.4.1.1.1	ExcelServiceSoap_ApplyItemFilter_InputMessage	183
3.1.4.1.1.2	ExcelServiceSoap_ApplyItemFilter_OutputMessage.....	183
3.1.4.1.2	Elements.....	183
3.1.4.1.2.1	ApplyItemFilter	183
3.1.4.1.2.2	ApplyItemFilterResponse	184
3.1.4.1.3	Complex Types	184
3.1.4.1.4	Simple Types.....	184
3.1.4.1.5	Attributes.....	185
3.1.4.1.6	Groups.....	185
3.1.4.1.7	Attribute Groups	185
3.1.4.2	ApplyPivotFilter	185
3.1.4.2.1	Messages	186
3.1.4.2.1.1	ExcelServiceSoap_ApplyPivotFilter_InputMessage.....	186
3.1.4.2.1.2	ExcelServiceSoap_ApplyPivotFilter_OutputMessage.....	186
3.1.4.2.2	Elements.....	187
3.1.4.2.2.1	ApplyPivotFilter	187
3.1.4.2.2.2	ApplyPivotFilterResponse.....	188
3.1.4.2.3	Complex Types	188
3.1.4.2.4	Simple Types.....	188
3.1.4.2.5	Attributes.....	188
3.1.4.2.6	Groups.....	188
3.1.4.2.7	Attribute Groups	188
3.1.4.3	ApplyPivotSort	188
3.1.4.3.1	Messages	190
3.1.4.3.1.1	ExcelServiceSoap_ApplyPivotSort_InputMessage	190
3.1.4.3.1.2	ExcelServiceSoap_ApplyPivotSort_OutputMessage.....	190
3.1.4.3.2	Elements.....	190
3.1.4.3.2.1	ApplyPivotSort	190
3.1.4.3.2.2	ApplyPivotSortResponse	191
3.1.4.3.3	Complex Types	191
3.1.4.3.4	Simple Types.....	191
3.1.4.3.5	Attributes.....	191
3.1.4.3.6	Groups.....	191
3.1.4.3.7	Attribute Groups	191
3.1.4.4	ApplyPivotTop10Filter.....	192
3.1.4.4.1	Messages	193
3.1.4.4.1.1	ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage	193
3.1.4.4.1.2	ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage	193

3.1.4.4.2	Elements.....	193
3.1.4.4.2.1	ApplyPivotTop10Filter	194
3.1.4.4.2.2	ApplyPivotTop10FilterResponse	194
3.1.4.4.3	Complex Types	195
3.1.4.4.4	Simple Types.....	195
3.1.4.4.5	Attributes.....	195
3.1.4.4.6	Groups.....	195
3.1.4.4.7	Attribute Groups	195
3.1.4.5	ApplySlicerSelection.....	195
3.1.4.5.1	Messages	196
3.1.4.5.1.1	ExcelServiceSoap_ApplySlicerSelection_InputMessage	196
3.1.4.5.1.2	ExcelServiceSoap_ApplySlicerSelection_OutputMessage	197
3.1.4.5.2	Elements.....	197
3.1.4.5.2.1	ApplySlicerSelection.....	197
3.1.4.5.2.2	ApplySlicerSelectionResponse	198
3.1.4.5.3	Complex Types	198
3.1.4.5.3.1	ArrayOfSlicerItemRange	198
3.1.4.5.3.2	SlicerItemRange.....	198
3.1.4.5.4	Simple Types.....	199
3.1.4.5.5	Attributes.....	199
3.1.4.5.6	Groups.....	199
3.1.4.5.7	Attribute Groups	199
3.1.4.6	ApplyTop10Filter	199
3.1.4.6.1	Messages	200
3.1.4.6.1.1	ExcelServiceSoap_ApplyTop10Filter_InputMessage	200
3.1.4.6.1.2	ExcelServiceSoap_ApplyTop10Filter_OutputMessage	200
3.1.4.6.2	Elements.....	200
3.1.4.6.2.1	ApplyTop10Filter	200
3.1.4.6.2.2	ApplyTop10FilterResponse	201
3.1.4.6.3	Complex Types	201
3.1.4.6.4	Simple Types.....	201
3.1.4.6.5	Attributes.....	202
3.1.4.6.6	Groups.....	202
3.1.4.6.7	Attribute Groups	202
3.1.4.7	CancelRequest	202
3.1.4.7.1	Messages	202
3.1.4.7.1.1	ExcelServiceSoap_CancelRequest_InputMessage	203
3.1.4.7.1.2	ExcelServiceSoap_CancelRequest_OutputMessage	203
3.1.4.7.2	Elements.....	203
3.1.4.7.2.1	CancelRequest	203
3.1.4.7.2.2	CancelRequestResponse	204
3.1.4.7.3	Complex Types	204
3.1.4.7.4	Simple Types.....	204
3.1.4.7.5	Attributes.....	204
3.1.4.7.6	Groups.....	204
3.1.4.7.7	Attribute Groups	204
3.1.4.8	CloseWorkbook	204
3.1.4.8.1	Messages	205
3.1.4.8.1.1	ExcelServiceSoap_CloseWorkbook_InputMessage	205
3.1.4.8.1.2	ExcelServiceSoap_CloseWorkbook_OutputMessage	205
3.1.4.8.2	Elements.....	205
3.1.4.8.2.1	CloseWorkbook	205
3.1.4.8.2.2	CloseWorkbookResponse	206

3.1.4.8.3	Complex Types	206
3.1.4.8.4	Simple Types.....	206
3.1.4.8.5	Attributes.....	206
3.1.4.8.6	Groups.....	206
3.1.4.8.7	Attribute Groups	206
3.1.4.9	ConnectAndGetPivotFilterItemList	207
3.1.4.9.1	Messages	207
3.1.4.9.1.1	ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage ...	208
3.1.4.9.1.2	ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage ..	208
3.1.4.9.2	Elements.....	208
3.1.4.9.2.1	ConnectAndGetPivotFilterItemList	208
3.1.4.9.2.2	ConnectAndGetPivotFilterItemListResponse.....	209
3.1.4.9.3	Complex Types	209
3.1.4.9.4	Simple Types.....	209
3.1.4.9.5	Attributes.....	209
3.1.4.9.6	Groups.....	209
3.1.4.9.7	Attribute Groups	209
3.1.4.10	ConnectAndGetSlicerItemList	209
3.1.4.10.1	Messages	211
3.1.4.10.1.1	ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage	211
3.1.4.10.1.2	ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage.....	211
3.1.4.10.2	Elements	212
3.1.4.10.2.1	ConnectAndGetSlicerItemList	212
3.1.4.10.2.2	ConnectAndGetSlicerItemListResponse	212
3.1.4.10.3	Complex Types	213
3.1.4.10.4	Simple Types	213
3.1.4.10.5	Attributes	213
3.1.4.10.6	Groups.....	213
3.1.4.10.7	Attribute Groups.....	213
3.1.4.11	ExpandCollapseOutline	213
3.1.4.11.1	Messages	214
3.1.4.11.1.1	ExcelServiceSoap_ExpandCollapseOutline_InputMessage.....	214
3.1.4.11.1.2	ExcelServiceSoap_ExpandCollapseOutline_OutputMessage.....	214
3.1.4.11.2	Elements.....	214
3.1.4.11.2.1	ExpandCollapseOutline	214
3.1.4.11.2.2	ExpandCollapseOutlineResponse	215
3.1.4.11.3	Complex Types	216
3.1.4.11.4	Simple Types	216
3.1.4.11.5	Attributes	216
3.1.4.11.6	Groups.....	216
3.1.4.11.7	Attribute Groups.....	216
3.1.4.12	FindRange.....	216
3.1.4.12.1	Messages	217
3.1.4.12.1.1	ExcelServiceSoap_FindRange_InputMessage	217
3.1.4.12.1.2	ExcelServiceSoap_FindRange_OutputMessage	217
3.1.4.12.2	Elements.....	217
3.1.4.12.2.1	FindRange	217
3.1.4.12.2.2	FindRangeResponse	218
3.1.4.12.3	Complex Types	218
3.1.4.12.4	Simple Types	219
3.1.4.12.5	Attributes	219
3.1.4.12.6	Groups.....	219
3.1.4.12.7	Attribute Groups.....	219

3.1.4.13	GetAutoFilterItemList	219
3.1.4.13.1	Messages	220
3.1.4.13.1.1	ExcelServiceSoap_GetAutoFilterItemList_InputMessage	220
3.1.4.13.1.2	ExcelServiceSoap_GetAutoFilterItemList_OutputMessage	221
3.1.4.13.2	Elements	221
3.1.4.13.2.1	GetAutoFilterItemList	221
3.1.4.13.2.2	GetAutoFilterItemListResponse	221
3.1.4.13.3	Complex Types	222
3.1.4.13.3.1	AutoFilterItemList	222
3.1.4.13.3.2	ArrayOfAutoFilterItem	225
3.1.4.13.3.3	AutoFilterItem	225
3.1.4.13.4	Simple Types	225
3.1.4.13.5	Attributes	225
3.1.4.13.6	Groups	225
3.1.4.13.7	Attribute Groups	225
3.1.4.14	GetChart	226
3.1.4.14.1	Messages	226
3.1.4.14.1.1	ExcelServiceSoap_GetChart_InputMessage	226
3.1.4.14.1.2	ExcelServiceSoap_GetChart_OutputMessage	227
3.1.4.14.2	Elements	227
3.1.4.14.2.1	GetChart	227
3.1.4.14.2.2	GetChartResponse	227
3.1.4.14.3	Complex Types	228
3.1.4.14.3.1	GetChartInformation	228
3.1.4.14.4	Simple Types	228
3.1.4.14.5	Attributes	228
3.1.4.14.6	Groups	228
3.1.4.14.7	Attribute Groups	229
3.1.4.15	GetHealthScore	229
3.1.4.15.1	Messages	229
3.1.4.15.1.1	ExcelServiceSoap_GetHealthScore_InputMessage	229
3.1.4.15.1.2	ExcelServiceSoap_GetHealthScore_OutputMessage	230
3.1.4.15.2	Elements	230
3.1.4.15.2.1	GetHealthScore	230
3.1.4.15.2.2	GetHealthScoreResponse	230
3.1.4.15.3	Complex Types	230
3.1.4.15.4	Simple Types	230
3.1.4.15.5	Attributes	231
3.1.4.15.6	Groups	231
3.1.4.15.7	Attribute Groups	231
3.1.4.16	GetImage	231
3.1.4.16.1	Messages	231
3.1.4.16.1.1	ExcelServiceSoap_GetImage_InputMessage	232
3.1.4.16.1.2	ExcelServiceSoap_GetImage_OutputMessage	232
3.1.4.16.2	Elements	232
3.1.4.16.2.1	GetImage	232
3.1.4.16.2.2	GetImageResponse	232
3.1.4.16.3	Complex Types	233
3.1.4.16.4	Simple Types	233
3.1.4.16.5	Attributes	233
3.1.4.16.6	Groups	233
3.1.4.16.7	Attribute Groups	233
3.1.4.17	GetObjectInformation	233

3.1.4.17.1	Messages	234
3.1.4.17.1.1	ExcelServiceSoap_GetObjectInformation_InputMessage	234
3.1.4.17.1.2	ExcelServiceSoap_GetObjectInformation_OutputMessage	234
3.1.4.17.2	Elements	234
3.1.4.17.2.1	GetObjectInformation	235
3.1.4.17.2.2	GetObjectInformationResponse	235
3.1.4.17.3	Complex Types	235
3.1.4.17.3.1	ObjectInformation	235
3.1.4.17.4	Simple Types	236
3.1.4.17.5	Attributes	236
3.1.4.17.6	Groups	236
3.1.4.17.7	Attribute Groups	236
3.1.4.18	GetPivotFilterItemList	236
3.1.4.18.1	Messages	237
3.1.4.18.1.1	ExcelServiceSoap_GetPivotFilterItemList_InputMessage	237
3.1.4.18.1.2	ExcelServiceSoap_GetPivotFilterItemList_OutputMessage	237
3.1.4.18.2	Elements	238
3.1.4.18.2.1	GetPivotFilterItemList	238
3.1.4.18.2.2	GetPivotFilterItemListResponse	238
3.1.4.18.3	Complex Types	239
3.1.4.18.4	Simple Types	239
3.1.4.18.5	Attributes	239
3.1.4.18.6	Groups	239
3.1.4.18.7	Attribute Groups	239
3.1.4.19	GetPivotMenu	239
3.1.4.19.1	Messages	240
3.1.4.19.1.1	ExcelServiceSoap_GetPivotMenu_InputMessage	240
3.1.4.19.1.2	ExcelServiceSoap_GetPivotMenu_OutputMessage	240
3.1.4.19.2	Elements	240
3.1.4.19.2.1	GetPivotMenu	240
3.1.4.19.2.2	GetPivotMenuResponse	241
3.1.4.19.3	Complex Types	241
3.1.4.19.3.1	PivotMenu	241
3.1.4.19.3.2	ArrayOfPivotField	242
3.1.4.19.3.3	PivotField	243
3.1.4.19.3.4	ArrayOfPivotFilterParameter	248
3.1.4.19.3.5	PivotFilterParameter	248
3.1.4.19.3.6	Top10FilterParameter	249
3.1.4.19.4	Simple Types	250
3.1.4.19.4.1	Top10FilterType	250
3.1.4.19.5	Attributes	251
3.1.4.19.6	Groups	251
3.1.4.19.7	Attribute Groups	251
3.1.4.20	GetPublishedObjects	251
3.1.4.20.1	Messages	251
3.1.4.20.1.1	ExcelServiceSoap_GetPublishedObjects_InputMessage	252
3.1.4.20.1.2	ExcelServiceSoap_GetPublishedObjects_OutputMessage	252
3.1.4.20.2	Elements	252
3.1.4.20.2.1	GetPublishedObjects	252
3.1.4.20.2.2	GetPublishedObjectsResponse	252
3.1.4.20.3	Complex Types	253
3.1.4.20.4	Simple Types	253
3.1.4.20.5	Attributes	253

3.1.4.20.6	Groups.....	253
3.1.4.20.7	Attribute Groups.....	253
3.1.4.21	GetRange.....	253
3.1.4.21.1	Messages	254
3.1.4.21.1.1	ExcelServiceSoap_GetRange_InputMessage	254
3.1.4.21.1.2	ExcelServiceSoap_GetRange_OutputMessage.....	254
3.1.4.21.2	Elements.....	254
3.1.4.21.2.1	GetRange	255
3.1.4.21.2.2	GetRangeResponse	255
3.1.4.21.3	Complex Types	255
3.1.4.21.4	Simple Types	255
3.1.4.21.5	Attributes	255
3.1.4.21.6	Groups.....	255
3.1.4.21.7	Attribute Groups.....	255
3.1.4.22	GetRangeForClipboard	256
3.1.4.22.1	Messages	256
3.1.4.22.1.1	ExcelServiceSoap_GetRangeForClipboard_InputMessage	257
3.1.4.22.1.2	ExcelServiceSoap_GetRangeForClipboard_OutputMessage	257
3.1.4.22.2	Elements.....	257
3.1.4.22.2.1	GetRangeForClipboard	257
3.1.4.22.2.2	GetRangeForClipboardResponse	258
3.1.4.22.3	Complex Types	258
3.1.4.22.4	Simple Types	258
3.1.4.22.5	Attributes	258
3.1.4.22.6	Groups.....	258
3.1.4.22.7	Attribute Groups.....	258
3.1.4.23	GetRangeValues	258
3.1.4.23.1	Messages	260
3.1.4.23.1.1	ExcelServiceSoap_GetRangeValues_InputMessage.....	260
3.1.4.23.1.2	ExcelServiceSoap_GetRangeValues_OutputMessage.....	260
3.1.4.23.2	Elements	260
3.1.4.23.2.1	GetRangeValues	260
3.1.4.23.2.2	GetRangeValuesResponse	261
3.1.4.23.3	Complex Types	261
3.1.4.23.4	Simple Types	261
3.1.4.23.5	Attributes	261
3.1.4.23.6	Groups.....	261
3.1.4.23.7	Attribute Groups.....	261
3.1.4.24	GetRangeValuesA1.....	261
3.1.4.24.1	Messages	263
3.1.4.24.1.1	ExcelServiceSoap_GetRangeValuesA1_InputMessage	263
3.1.4.24.1.2	ExcelServiceSoap_GetRangeValuesA1_OutputMessage	263
3.1.4.24.2	Elements	263
3.1.4.24.2.1	GetRangeValuesA1.....	264
3.1.4.24.2.2	GetRangeValuesA1Response	264
3.1.4.24.3	Complex Types	264
3.1.4.24.4	Simple Types	264
3.1.4.24.4.1	CellDataFormat	265
3.1.4.24.5	Attributes	265
3.1.4.24.6	Groups.....	265
3.1.4.24.7	Attribute Groups.....	265
3.1.4.25	GetSessionInformation	265
3.1.4.25.1	Messages	266

3.1.4.25.1.1	ExcelServiceSoap_GetSessionInformation_InputMessage.....	266
3.1.4.25.1.2	ExcelServiceSoap_GetSessionInformation_OutputMessage	267
3.1.4.25.2	Elements	267
3.1.4.25.2.1	GetSessionInformation	267
3.1.4.25.2.2	GetSessionInformationResponse	267
3.1.4.25.3	Complex Types	268
3.1.4.25.4	Simple Types	268
3.1.4.25.5	Attributes	268
3.1.4.25.6	Groups.....	268
3.1.4.25.7	Attribute Groups.....	268
3.1.4.26	GetSheetNames.....	268
3.1.4.26.1	Messages	269
3.1.4.26.1.1	ExcelServiceSoap_GetSheetNames_InputMessage	269
3.1.4.26.1.2	ExcelServiceSoap_GetSheetNames_OutputMessage	269
3.1.4.26.2	Elements	269
3.1.4.26.2.1	GetSheetNames.....	270
3.1.4.26.2.2	GetSheetNamesResponse	270
3.1.4.26.3	Complex Types	270
3.1.4.26.3.1	ArrayOfSheetName	270
3.1.4.26.3.2	SheetName	271
3.1.4.26.4	Simple Types	271
3.1.4.26.5	Attributes	271
3.1.4.26.6	Groups.....	271
3.1.4.26.7	Attribute Groups.....	271
3.1.4.27	GetSlicerItemList	271
3.1.4.27.1	Messages	273
3.1.4.27.1.1	ExcelServiceSoap_GetSlicerItemList_InputMessage.....	273
3.1.4.27.1.2	ExcelServiceSoap_GetSlicerItemList_OutputMessage	273
3.1.4.27.2	Elements	273
3.1.4.27.2.1	GetSlicerItemList.....	273
3.1.4.27.2.2	GetSlicerItemListResponse.....	274
3.1.4.27.3	Complex Types	274
3.1.4.27.4	Simple Types	274
3.1.4.27.5	Attributes	274
3.1.4.27.6	Groups.....	274
3.1.4.27.7	Attribute Groups.....	274
3.1.4.28	GetSparklines.....	274
3.1.4.28.1	Messages	275
3.1.4.28.1.1	ExcelServiceSoap_GetSparklines_InputMessage	275
3.1.4.28.1.2	ExcelServiceSoap_GetSparklines_OutputMessage	275
3.1.4.28.2	Elements	276
3.1.4.28.2.1	GetSparklines.....	276
3.1.4.28.2.2	GetSparklinesResponse	276
3.1.4.28.3	Complex Types	277
3.1.4.28.4	Simple Types	277
3.1.4.28.5	Attributes	277
3.1.4.28.6	Groups.....	277
3.1.4.28.7	Attribute Groups.....	277
3.1.4.29	GetWorkbook	277
3.1.4.29.1	Messages	278
3.1.4.29.1.1	ExcelServiceSoap_GetWorkbook_InputMessage.....	278
3.1.4.29.1.2	ExcelServiceSoap_GetWorkbook_OutputMessage.....	278
3.1.4.29.2	Elements	278

3.1.4.29.2.1	GetWorkbook	278
3.1.4.29.2.2	GetWorkbookResponse	279
3.1.4.29.3	Complex Types	279
3.1.4.29.4	Simple Types	279
3.1.4.29.5	Attributes	279
3.1.4.29.6	Groups	279
3.1.4.29.7	Attribute Groups	279
3.1.4.30	OpenWorkbook	279
3.1.4.30.1	Messages	282
3.1.4.30.1.1	ExcelServiceSoap_OpenWorkbook_InputMessage	282
3.1.4.30.1.2	ExcelServiceSoap_OpenWorkbook_OutputMessage	282
3.1.4.30.2	Elements	282
3.1.4.30.2.1	OpenWorkbook	283
3.1.4.30.2.2	OpenWorkbookResponse	283
3.1.4.30.3	Complex Types	283
3.1.4.30.4	Simple Types	284
3.1.4.30.4.1	OpenWorkbookOutFlags	284
3.1.4.30.5	Attributes	285
3.1.4.30.6	Groups	285
3.1.4.30.7	Attribute Groups	285
3.1.4.31	ParseRange	285
3.1.4.31.1	Messages	285
3.1.4.31.1.1	ExcelServiceSoap_ParseRange_InputMessage	286
3.1.4.31.1.2	ExcelServiceSoap_ParseRange_OutputMessage	286
3.1.4.31.2	Elements	286
3.1.4.31.2.1	ParseRange	286
3.1.4.31.2.2	ParseRangeResponse	287
3.1.4.31.3	Complex Types	287
3.1.4.31.4	Simple Types	287
3.1.4.31.5	Attributes	287
3.1.4.31.6	Groups	287
3.1.4.31.7	Attribute Groups	287
3.1.4.32	Recalc	287
3.1.4.32.1	Messages	288
3.1.4.32.1.1	ExcelServiceSoap_Recalc_InputMessage	288
3.1.4.32.1.2	ExcelServiceSoap_Recalc_OutputMessage	288
3.1.4.32.2	Elements	288
3.1.4.32.2.1	Recalc	289
3.1.4.32.2.2	RecalcResponse	289
3.1.4.32.3	Complex Types	289
3.1.4.32.4	Simple Types	289
3.1.4.32.5	Attributes	289
3.1.4.32.6	Groups	289
3.1.4.32.7	Attribute Groups	290
3.1.4.33	RecalcA1	290
3.1.4.33.1	Messages	290
3.1.4.33.1.1	ExcelServiceSoap_RecalcA1_InputMessage	291
3.1.4.33.1.2	ExcelServiceSoap_RecalcA1_OutputMessage	291
3.1.4.33.2	Elements	291
3.1.4.33.2.1	RecalcA1	291
3.1.4.33.2.2	RecalcA1Response	292
3.1.4.33.3	Complex Types	292
3.1.4.33.4	Simple Types	292

3.1.4.33.5	Attributes	292
3.1.4.33.6	Groups.....	292
3.1.4.33.7	Attribute Groups.....	292
3.1.4.34	RecalcAll.....	292
3.1.4.34.1	Messages	293
3.1.4.34.1.1	ExcelServiceSoap_RecalcAll_InputMessage	293
3.1.4.34.1.2	ExcelServiceSoap_RecalcAll_OutputMessage	293
3.1.4.34.2	Elements.....	293
3.1.4.34.2.1	RecalcAll.....	294
3.1.4.34.2.2	RecalcAllResponse	294
3.1.4.34.3	Complex Types	294
3.1.4.34.3.1	RecalcParameters	295
3.1.4.34.3.2	ClientUdfResultInfo	295
3.1.4.34.3.3	ArrayOfClientUdfResult	295
3.1.4.34.3.4	ClientUdfResult.....	296
3.1.4.34.4	Simple Types	296
3.1.4.34.4.1	CalculateType.....	296
3.1.4.34.5	Attributes.....	297
3.1.4.34.6	Groups.....	297
3.1.4.34.7	Attribute Groups.....	297
3.1.4.35	Refresh.....	297
3.1.4.35.1	Messages	298
3.1.4.35.1.1	ExcelServiceSoap_Refresh_InputMessage	298
3.1.4.35.1.2	ExcelServiceSoap_Refresh_OutputMessage	298
3.1.4.35.2	Elements.....	299
3.1.4.35.2.1	Refresh	299
3.1.4.35.2.2	RefreshResponse	299
3.1.4.35.3	Complex Types	299
3.1.4.35.4	Simple Types	300
3.1.4.35.5	Attributes.....	300
3.1.4.35.6	Groups.....	300
3.1.4.35.7	Attribute Groups.....	300
3.1.4.36	RefreshAll	300
3.1.4.36.1	Messages	301
3.1.4.36.1.1	ExcelServiceSoap_RefreshAll_InputMessage.....	301
3.1.4.36.1.2	ExcelServiceSoap_RefreshAll_OutputMessage	301
3.1.4.36.2	Elements.....	302
3.1.4.36.2.1	RefreshAll	302
3.1.4.36.2.2	RefreshAllResponse.....	302
3.1.4.36.3	Complex Types	302
3.1.4.36.4	Simple Types	302
3.1.4.36.5	Attributes.....	303
3.1.4.36.6	Groups.....	303
3.1.4.36.7	Attribute Groups.....	303
3.1.4.37	RemovePivotFilter	303
3.1.4.37.1	Messages	304
3.1.4.37.1.1	ExcelServiceSoap_RemovePivotFilter_InputMessage	304
3.1.4.37.1.2	ExcelServiceSoap_RemovePivotFilter_OutputMessage	304
3.1.4.37.2	Elements.....	305
3.1.4.37.2.1	RemovePivotFilter	305
3.1.4.37.2.2	RemovePivotFilterResponse.....	305
3.1.4.37.3	Complex Types	305
3.1.4.37.4	Simple Types	305

3.1.4.37.5	Attributes	306
3.1.4.37.6	Groups.....	306
3.1.4.37.7	Attribute Groups.....	306
3.1.4.38	ResizeRowsColumns	306
3.1.4.38.1	Messages	307
3.1.4.38.1.1	ExcelServiceSoap_ResizeRowsColumns_InputMessage	307
3.1.4.38.1.2	ExcelServiceSoap_ResizeRowsColumns_OutputMessage	307
3.1.4.38.2	Elements.....	307
3.1.4.38.2.1	ResizeRowsColumns.....	307
3.1.4.38.2.2	ResizeRowsColumnsResponse	308
3.1.4.38.3	Complex Types	308
3.1.4.38.3.1	ResizeRowColumnRange	308
3.1.4.38.4	Simple Types	309
3.1.4.38.5	Attributes	309
3.1.4.38.6	Groups.....	309
3.1.4.38.7	Attribute Groups.....	309
3.1.4.39	SaveWorkbook	309
3.1.4.39.1	Messages	310
3.1.4.39.1.1	ExcelServiceSoap_SaveWorkbook_InputMessage	310
3.1.4.39.1.2	ExcelServiceSoap_SaveWorkbook_OutputMessage.....	310
3.1.4.39.2	Elements.....	310
3.1.4.39.2.1	SaveWorkbook	310
3.1.4.39.2.2	SaveWorkbookResponse	311
3.1.4.39.3	Complex Types	311
3.1.4.39.4	Simple Types	311
3.1.4.39.5	Attributes	311
3.1.4.39.6	Groups.....	311
3.1.4.39.7	Attribute Groups.....	311
3.1.4.40	SaveWorkbookAs	311
3.1.4.40.1	Messages	312
3.1.4.40.1.1	ExcelServiceSoap_SaveWorkbookAs_InputMessage	313
3.1.4.40.1.2	ExcelServiceSoap_SaveWorkbookAs_OutputMessage	313
3.1.4.40.2	Elements.....	313
3.1.4.40.2.1	SaveWorkbookAs.....	313
3.1.4.40.2.2	SaveWorkbookAsResponse.....	314
3.1.4.40.3	Complex Types	314
3.1.4.40.4	Simple Types	314
3.1.4.40.4.1	SaveAsFlags.....	314
3.1.4.40.5	Attributes	315
3.1.4.40.6	Groups.....	315
3.1.4.40.7	Attribute Groups.....	315
3.1.4.41	SetCalculationOptions.....	315
3.1.4.41.1	Messages	316
3.1.4.41.1.1	ExcelServiceSoap_SetCalculationOptions_InputMessage	316
3.1.4.41.1.2	ExcelServiceSoap_SetCalculationOptions_OutputMessage	316
3.1.4.41.2	Elements.....	316
3.1.4.41.2.1	SetCalculationOptions	316
3.1.4.41.2.2	SetCalculationOptionsResponse	317
3.1.4.41.3	Complex Types	317
3.1.4.41.4	Simple Types	317
3.1.4.41.4.1	WorkbookCalculation.....	317
3.1.4.41.5	Attributes	318
3.1.4.41.6	Groups.....	318

3.1.4.41.7	Attribute Groups.....	318
3.1.4.42	SetParameters.....	318
3.1.4.42.1	Messages	319
3.1.4.42.1.1	ExcelServiceSoap_SetParameters_InputMessage	319
3.1.4.42.1.2	ExcelServiceSoap_SetParameters_OutputMessage	320
3.1.4.42.2	Elements	320
3.1.4.42.2.1	SetParameters	320
3.1.4.42.2.2	SetParametersResponse	320
3.1.4.42.3	Complex Types	321
3.1.4.42.3.1	ArrayOfWorkbookParameter.....	321
3.1.4.42.3.2	WorkbookParameter.....	321
3.1.4.42.4	Simple Types	322
3.1.4.42.5	Attributes	322
3.1.4.42.6	Groups.....	322
3.1.4.42.7	Attribute Groups.....	323
3.1.4.43	SetRange.....	323
3.1.4.43.1	Messages	324
3.1.4.43.1.1	ExcelServiceSoap_SetRange_InputMessage	324
3.1.4.43.1.2	ExcelServiceSoap_SetRange_OutputMessage	325
3.1.4.43.2	Elements	325
3.1.4.43.2.1	SetRange.....	325
3.1.4.43.2.2	SetRangeResponse	325
3.1.4.43.3	Complex Types	326
3.1.4.43.4	Simple Types	326
3.1.4.43.4.1	ComboKeyType	326
3.1.4.43.5	Attributes	327
3.1.4.43.6	Groups.....	327
3.1.4.43.7	Attribute Groups.....	327
3.1.4.44	SetRangeA1	327
3.1.4.44.1	Messages	328
3.1.4.44.1.1	ExcelServiceSoap_SetRangeA1_InputMessage.....	329
3.1.4.44.1.2	ExcelServiceSoap_SetRangeA1_OutputMessage	329
3.1.4.44.2	Elements	329
3.1.4.44.2.1	SetRangeA1	329
3.1.4.44.2.2	SetRangeA1Response.....	330
3.1.4.44.3	Complex Types	330
3.1.4.44.4	Simple Types	330
3.1.4.44.5	Attributes	330
3.1.4.44.6	Groups.....	330
3.1.4.44.7	Attribute Groups.....	330
3.1.4.45	SortFilterColumn.....	330
3.1.4.45.1	Messages	331
3.1.4.45.1.1	ExcelServiceSoap_SortFilterColumn_InputMessage	331
3.1.4.45.1.2	ExcelServiceSoap_SortFilterColumn_OutputMessage	331
3.1.4.45.2	Elements	331
3.1.4.45.2.1	SortFilterColumn.....	332
3.1.4.45.2.2	SortFilterColumnResponse	332
3.1.4.45.3	Complex Types	332
3.1.4.45.4	Simple Types	332
3.1.4.45.4.1	SortType	333
3.1.4.45.5	Attributes	333
3.1.4.45.6	Groups.....	333
3.1.4.45.7	Attribute Groups.....	333

3.1.4.46	TogglePivotDrill	333
3.1.4.46.1	Messages	335
3.1.4.46.1.1	ExcelServiceSoap_TogglePivotDrill_InputMessage	335
3.1.4.46.1.2	ExcelServiceSoap_TogglePivotDrill_OutputMessage	335
3.1.4.46.2	Elements	335
3.1.4.46.2.1	TogglePivotDrill	335
3.1.4.46.2.2	TogglePivotDrillResponse	336
3.1.4.46.3	Complex Types	336
3.1.4.46.4	Simple Types	336
3.1.4.46.5	Attributes	336
3.1.4.46.6	Groups	336
3.1.4.46.7	Attribute Groups	336
3.1.4.47	ApplyPivot	336
3.1.4.47.1	Messages	338
3.1.4.47.1.1	ExcelServiceSoap_ApplyPivot_InputMessage	338
3.1.4.47.1.2	ExcelServiceSoap_ApplyPivot_OutputMessage	338
3.1.4.47.2	Elements	338
3.1.4.47.2.1	ApplyPivot	338
3.1.4.47.2.2	ApplyPivotResponse	339
3.1.4.47.3	Complex Types	339
3.1.4.47.3.1	PivotFieldApplyData	339
3.1.4.47.4	Simple Types	341
3.1.4.47.5	Attributes	341
3.1.4.47.6	Groups	341
3.1.4.47.7	Attribute Groups	341
3.1.4.48	ApplyPivotFieldManagerHiddenState	341
3.1.4.48.1	Messages	342
3.1.4.48.1.1	ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage	342
3.1.4.48.1.2	ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage	343
3.1.4.48.2	Elements	343
3.1.4.48.2.1	ApplyPivotFieldManagerHiddenState	343
3.1.4.48.2.2	ApplyPivotFieldManagerHiddenStateResponse	343
3.1.4.48.3	Complex Types	344
3.1.4.48.4	Simple Types	344
3.1.4.48.5	Attributes	344
3.1.4.48.6	Groups	344
3.1.4.48.7	Attribute Groups	344
3.1.4.49	ExpandPivotFieldListLevels	344
3.1.4.49.1	Messages	345
3.1.4.49.1.1	ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage	345
3.1.4.49.1.2	ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage	346
3.1.4.49.2	Elements	346
3.1.4.49.2.1	ExpandPivotFieldListLevels	346
3.1.4.49.2.2	ExpandPivotFieldListLevelsResponse	346
3.1.4.49.3	Complex Types	347
3.1.4.49.4	Simple Types	347
3.1.4.49.5	Attributes	347
3.1.4.49.6	Groups	347
3.1.4.49.7	Attribute Groups	347

3.1.4.50	GenerateWorkbookFromHtml.....	347
3.1.4.50.1	Messages	348
3.1.4.50.1.1	ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage	348
3.1.4.50.1.2	ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage	349
3.1.4.50.2	Elements	349
3.1.4.50.2.1	GenerateWorkbookFromHtml	349
3.1.4.50.2.2	GenerateWorkbookFromHtmlResponse	350
3.1.4.50.3	Complex Types	350
3.1.4.50.3.1	TableHtml	350
3.1.4.50.3.2	ArrayOfRowHtml	351
3.1.4.50.3.3	RowHtml	351
3.1.4.50.3.4	ArrayOfCellHtml	351
3.1.4.50.3.5	CellHtml	352
3.1.4.50.3.6	GenerateWorkbookFromHtmlResult	352
3.1.4.50.3.7	ArrayOfGeneratedNamedObject	353
3.1.4.50.3.8	GeneratedNamedObject	353
3.1.4.50.4	Simple Types	353
3.1.4.50.5	Attributes	353
3.1.4.50.6	Groups	354
3.1.4.50.7	Attribute Groups	354
3.1.4.51	GetBixAnalysis.....	354
3.1.4.51.1	Messages	355
3.1.4.51.1.1	ExcelServiceSoap_GetBixAnalysis_InputMessage	355
3.1.4.51.1.2	ExcelServiceSoap_GetBixAnalysis_OutputMessage	355
3.1.4.51.2	Elements	356
3.1.4.51.2.1	GetBixAnalysis	356
3.1.4.51.2.2	GetBixAnalysisResponse	356
3.1.4.51.3	Complex Types	356
3.1.4.51.3.1	BixAnalysis	357
3.1.4.51.3.2	BixDrillContext	357
3.1.4.51.3.3	BixDrillField	358
3.1.4.51.3.4	BixContext	358
3.1.4.51.4	Simple Types	358
3.1.4.51.5	Attributes	358
3.1.4.51.6	Groups	358
3.1.4.51.7	Attribute Groups	359
3.1.4.52	GetPivotFieldListData	359
3.1.4.52.1	Messages	359
3.1.4.52.1.1	ExcelServiceSoap_GetPivotFieldListData_InputMessage	360
3.1.4.52.1.2	ExcelServiceSoap_GetPivotFieldListData_OutputMessage	360
3.1.4.52.2	Elements	360
3.1.4.52.2.1	GetPivotFieldListData	360
3.1.4.52.2.2	GetPivotFieldListDataResponse	361
3.1.4.52.3	Complex Types	361
3.1.4.52.3.1	PivotFieldListData	362
3.1.4.52.3.2	ArrayOfPivotFieldListRelatedGroup	363
3.1.4.52.3.3	PivotFieldListRelatedGroup	363
3.1.4.52.4	Simple Types	363
3.1.4.52.5	Attributes	363
3.1.4.52.6	Groups	363
3.1.4.52.7	Attribute Groups	363
3.1.4.53	GetPivotFieldManagerData	364
3.1.4.53.1	Messages	364

3.1.4.53.1.1	ExcelServiceSoap_GetPivotFieldManagerData_InputMessage	365
3.1.4.53.1.2	ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage	365
3.1.4.53.2	Elements	365
3.1.4.53.2.1	GetPivotFieldManagerData	365
3.1.4.53.2.2	GetPivotFieldManagerDataResponse	366
3.1.4.53.3	Complex Types	366
3.1.4.53.3.1	PivotFieldManagerData	366
3.1.4.53.4	Simple Types	367
3.1.4.53.5	Attributes	367
3.1.4.53.6	Groups	367
3.1.4.53.7	Attribute Groups	367
3.1.4.54	GetRangeImage	367
3.1.4.54.1	Messages	368
3.1.4.54.1.1	ExcelServiceSoap_GetRangeImage_InputMessage	368
3.1.4.54.1.2	ExcelServiceSoap_GetRangeImage_OutputMessage	368
3.1.4.54.2	Elements	368
3.1.4.54.2.1	GetRangeImage	369
3.1.4.54.2.2	GetRangeImageResponse	369
3.1.4.54.3	Complex Types	369
3.1.4.54.3.1	GetRangeImageInformation	370
3.1.4.54.4	Simple Types	371
3.1.4.54.5	Attributes	371
3.1.4.54.6	Groups	371
3.1.4.54.7	Attribute Groups	371
3.1.4.55	GetScaledImage	371
3.1.4.55.1	Messages	372
3.1.4.55.1.1	ExcelServiceSoap_GetScaledImage_InputMessage	372
3.1.4.55.1.2	ExcelServiceSoap_GetScaledImage_OutputMessage	372
3.1.4.55.2	Elements	373
3.1.4.55.2.1	GetScaledImage	373
3.1.4.55.2.2	GetScaledImageResponse	373
3.1.4.55.3	Complex Types	374
3.1.4.55.4	Simple Types	374
3.1.4.55.5	Attributes	374
3.1.4.55.6	Groups	374
3.1.4.55.7	Attribute Groups	374
3.1.4.56	ProcessODataRequest	374
3.1.4.56.1	Messages	375
3.1.4.56.1.1	ExcelServiceSoap_ProcessODataRequest_InputMessage	375
3.1.4.56.1.2	ExcelServiceSoap_ProcessODataRequest_OutputMessage	375
3.1.4.56.2	Elements	375
3.1.4.56.2.1	ProcessODataRequest	375
3.1.4.56.2.2	ProcessODataRequestResponse	376
3.1.4.56.3	Complex Types	376
3.1.4.56.4	Simple Types	376
3.1.4.56.5	Attributes	376
3.1.4.56.6	Groups	376
3.1.4.56.7	Attribute Groups	376
3.1.4.57	ProcessRestRequest	377
3.1.4.57.1	Messages	382
3.1.4.57.1.1	ExcelServiceSoap_ProcessRestRequest_InputMessage	382
3.1.4.57.1.2	ExcelServiceSoap_ProcessRestRequest_OutputMessage	382
3.1.4.57.2	Elements	382

3.1.4.57.2.1	ProcessRestRequest	382
3.1.4.57.2.2	ProcessRestRequestResponse	383
3.1.4.57.3	Complex Types	383
3.1.4.57.4	Simple Types	383
3.1.4.57.5	Attributes	383
3.1.4.57.6	Groups	383
3.1.4.57.7	Attribute Groups	383
3.1.4.58	AutoFit	384
3.1.4.58.1	Messages	384
3.1.4.58.1.1	ExcelServiceSoap_AutoFit_InputMessage	384
3.1.4.58.1.2	ExcelServiceSoap_AutoFit_OutputMessage	385
3.1.4.58.2	Elements	385
3.1.4.58.2.1	AutoFit	385
3.1.4.58.2.2	AutoFitResponse	385
3.1.4.58.3	Complex Types	386
3.1.4.58.4	Simple Types	386
3.1.4.58.5	Attributes	386
3.1.4.58.6	Groups	386
3.1.4.58.7	Attribute Groups	386
3.1.4.59	BixDrill	386
3.1.4.59.1	Messages	387
3.1.4.59.1.1	ExcelServiceSoap_BixDrill_InputMessage	387
3.1.4.59.1.2	ExcelServiceSoap_BixDrill_OutputMessage	388
3.1.4.59.2	Elements	388
3.1.4.59.2.1	BixDrill	388
3.1.4.59.2.2	BixDrillResponse	388
3.1.4.59.3	Complex Types	389
3.1.4.59.4	Simple Types	389
3.1.4.59.5	Attributes	389
3.1.4.59.6	Groups	389
3.1.4.59.7	Attribute Groups	389
3.1.4.60	GetChartElementData	389
3.1.4.60.1	Messages	390
3.1.4.60.1.1	ExcelServiceSoap_GetChartElementData_InputMessage	390
3.1.4.60.1.2	ExcelServiceSoap_GetChartElementData_OutputMessage	390
3.1.4.60.2	Elements	390
3.1.4.60.2.1	GetChartElementData	390
3.1.4.60.2.2	GetChartElementDataResponse	391
3.1.4.60.3	Complex Types	391
3.1.4.60.3.1	ChartDataElement	392
3.1.4.60.3.2	ArrayOfChartDataElement	392
3.1.4.60.3.3	ChartDataElement	392
3.1.4.60.3.4	ArrayOfCoordXY	393
3.1.4.60.3.5	CoordXY	393
3.1.4.60.4	Simple Types	394
3.1.4.60.4.1	ChartDataElementType	394
3.1.4.60.5	Attributes	394
3.1.4.60.6	Groups	395
3.1.4.60.7	Attribute Groups	395
3.1.4.61	GetTimeSlicerFilterState	395
3.1.4.61.1	Messages	395
3.1.4.61.1.1	ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage	395
3.1.4.61.1.2	ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage	396

3.1.4.61.2	Elements	396
3.1.4.61.2.1	GetTimeSlicerFilterState	396
3.1.4.61.2.2	GetTimeSlicerFilterStateResponse	396
3.1.4.61.3	Complex Types	397
3.1.4.61.3.1	TimeSlicerFormatElementList	397
3.1.4.61.3.2	ArrayOfTimeSlicerFormatElement	398
3.1.4.61.3.3	TimeSlicerFormatElement	398
3.1.4.61.3.4	TimeSlicerView	399
3.1.4.61.3.5	TimeDtr	401
3.1.4.61.4	Simple Types	401
3.1.4.61.5	Attributes	401
3.1.4.61.6	Groups	401
3.1.4.61.7	Attribute Groups	401
3.1.4.62	ApplyPivotValueFieldSettings	401
3.1.4.62.1	Messages	403
3.1.4.62.1.1	ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage	403
3.1.4.62.1.2	ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage	403
3.1.4.62.2	Elements	403
3.1.4.62.2.1	ApplyPivotValueFieldSettings	403
3.1.4.62.2.2	ApplyPivotValueFieldSettingsResponse	404
3.1.4.62.3	Complex Types	404
3.1.4.62.3.1	PivotValueFieldSettingsApplyData	404
3.1.4.62.4	Simple Types	405
3.1.4.62.5	Attributes	405
3.1.4.62.6	Groups	405
3.1.4.62.7	Attribute Groups	405
3.1.4.63	ApplyTimeSlicerInteractivity	405
3.1.4.63.1	Messages	406
3.1.4.63.1.1	ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage	407
3.1.4.63.1.2	ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage	407
3.1.4.63.2	Elements	407
3.1.4.63.2.1	ApplyTimeSlicerInteractivity	407
3.1.4.63.2.2	ApplyTimeSlicerInteractivityResponse	408
3.1.4.63.3	Complex Types	408
3.1.4.63.3.1	TimeSlicerFilterState	408
3.1.4.63.3.2	DateTimeRecord	409
3.1.4.63.3.3	TimeSlicerSettings	409
3.1.4.63.4	Simple Types	410
3.1.4.63.4.1	TimeSlicerInteractivityType	410
3.1.4.63.5	Attributes	410
3.1.4.63.6	Groups	410
3.1.4.63.7	Attribute Groups	410
3.1.4.64	GetPivotValueFieldSettings	410
3.1.4.64.1	Messages	411
3.1.4.64.1.1	ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage	411
3.1.4.64.1.2	ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage	412
3.1.4.64.2	Elements	412
3.1.4.64.2.1	GetPivotValueFieldSettings	412
3.1.4.64.2.2	GetPivotValueFieldSettingsResponse	412
3.1.4.64.3	Complex Types	413
3.1.4.64.3.1	PivotValueFieldSettingsInfo	413
3.1.4.64.4	Simple Types	414
3.1.4.64.5	Attributes	414

3.1.4.64.6	Groups.....	414
3.1.4.64.7	Attribute Groups.....	414
3.1.4.65	GetTimeSlicerStrings.....	415
3.1.4.65.1	Messages.....	415
3.1.4.65.1.1	ExcelServiceSoap_GetTimeSlicerStrings_InputMessage.....	415
3.1.4.65.1.2	ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage.....	416
3.1.4.65.2	Elements.....	416
3.1.4.65.2.1	GetTimeSlicerStrings.....	416
3.1.4.65.2.2	GetTimeSlicerStringsResponse.....	416
3.1.4.65.3	Complex Types.....	417
3.1.4.65.3.1	TimeSlicerStringTemplates.....	417
3.1.4.65.4	Simple Types.....	419
3.1.4.65.5	Attributes.....	419
3.1.4.65.6	Groups.....	419
3.1.4.65.7	Attribute Groups.....	419
3.1.4.66	UpdateSlicer.....	419
3.1.4.66.1	Messages.....	420
3.1.4.66.1.1	ExcelServiceSoap_UpdateSlicer_InputMessage.....	420
3.1.4.66.1.2	ExcelServiceSoap_UpdateSlicer_OutputMessage.....	420
3.1.4.66.2	Elements.....	420
3.1.4.66.2.1	UpdateSlicer.....	420
3.1.4.66.2.2	UpdateSlicerResponse.....	421
3.1.4.66.3	Complex Types.....	421
3.1.4.66.4	Simple Types.....	421
3.1.4.66.5	Attributes.....	421
3.1.4.66.6	Groups.....	421
3.1.4.66.7	Attribute Groups.....	421
3.1.4.67	DdaAddBinding.....	421
3.1.4.67.1	Messages.....	422
3.1.4.67.1.1	ExcelServiceSoap_DdaAddBinding_InputMessage.....	422
3.1.4.67.1.2	ExcelServiceSoap_DdaAddBinding_OutputMessage.....	422
3.1.4.67.2	Elements.....	423
3.1.4.67.2.1	DdaAddBinding.....	423
3.1.4.67.2.2	DdaAddBindingResponse.....	423
3.1.4.67.3	Complex Types.....	424
3.1.4.67.4	Simple Types.....	424
3.1.4.67.5	Attributes.....	424
3.1.4.67.6	Groups.....	424
3.1.4.67.7	Attribute Groups.....	424
3.1.4.68	DdaGetAllBindings.....	424
3.1.4.68.1	Messages.....	425
3.1.4.68.1.1	ExcelServiceSoap_DdaGetAllBindings_InputMessage.....	425
3.1.4.68.1.2	ExcelServiceSoap_DdaGetAllBindings_OutputMessage.....	425
3.1.4.68.2	Elements.....	425
3.1.4.68.2.1	DdaGetAllBindings.....	425
3.1.4.68.2.2	DdaGetAllBindingsResponse.....	426
3.1.4.68.3	Complex Types.....	426
3.1.4.68.4	Simple Types.....	426
3.1.4.68.5	Attributes.....	426
3.1.4.68.6	Groups.....	426
3.1.4.68.7	Attribute Groups.....	426
3.1.4.69	DdaGetBinding.....	426
3.1.4.69.1	Messages.....	427

3.1.4.69.1.1	ExcelServiceSoap_DdaGetBinding_InputMessage	427
3.1.4.69.1.2	ExcelServiceSoap_DdaGetBinding_OutputMessage	428
3.1.4.69.2	Elements	428
3.1.4.69.2.1	DdaGetBinding	428
3.1.4.69.2.2	DdaGetBindingResponse	428
3.1.4.69.3	Complex Types	429
3.1.4.69.4	Simple Types	429
3.1.4.69.5	Attributes	429
3.1.4.69.6	Groups	429
3.1.4.69.7	Attribute Groups	429
3.1.4.70	DdaGetBindingData	429
3.1.4.70.1	Messages	430
3.1.4.70.1.1	ExcelServiceSoap_DdaGetBindingData_InputMessage	430
3.1.4.70.1.2	ExcelServiceSoap_DdaGetBindingData_OutputMessage	430
3.1.4.70.2	Elements	430
3.1.4.70.2.1	DdaGetBindingData	431
3.1.4.70.2.2	DdaGetBindingDataResponse	431
3.1.4.70.3	Complex Types	432
3.1.4.70.4	Simple Types	432
3.1.4.70.5	Attributes	432
3.1.4.70.6	Groups	432
3.1.4.70.7	Attribute Groups	432
3.1.4.71	DdaGetSelectedData	432
3.1.4.71.1	Messages	433
3.1.4.71.1.1	ExcelServiceSoap_DdaGetSelectedData_InputMessage	433
3.1.4.71.1.2	ExcelServiceSoap_DdaGetSelectedData_OutputMessage	433
3.1.4.71.2	Elements	434
3.1.4.71.2.1	DdaGetSelectedData	434
3.1.4.71.2.2	DdaGetSelectedDataResponse	434
3.1.4.71.3	Complex Types	435
3.1.4.71.4	Simple Types	435
3.1.4.71.5	Attributes	435
3.1.4.71.6	Groups	435
3.1.4.71.7	Attribute Groups	435
3.1.4.72	DdaLoadSettings	435
3.1.4.72.1	Messages	436
3.1.4.72.1.1	ExcelServiceSoap_DdaLoadSettings_InputMessage	436
3.1.4.72.1.2	ExcelServiceSoap_DdaLoadSettings_OutputMessage	436
3.1.4.72.2	Elements	436
3.1.4.72.2.1	DdaLoadSettings	436
3.1.4.72.2.2	DdaLoadSettingsResponse	437
3.1.4.72.3	Complex Types	437
3.1.4.72.4	Simple Types	437
3.1.4.72.5	Attributes	437
3.1.4.72.6	Groups	437
3.1.4.72.7	Attribute Groups	437
3.1.4.73	DdaReleaseBinding	437
3.1.4.73.1	Messages	438
3.1.4.73.1.1	ExcelServiceSoap_DdaReleaseBinding_InputMessage	438
3.1.4.73.1.2	ExcelServiceSoap_DdaReleaseBinding_OutputMessage	439
3.1.4.73.2	Elements	439
3.1.4.73.2.1	DdaReleaseBinding	439
3.1.4.73.2.2	DdaReleaseBindingResponse	439

3.1.4.73.3	Complex Types	440
3.1.4.73.4	Simple Types	440
3.1.4.73.5	Attributes	440
3.1.4.73.6	Groups	440
3.1.4.73.7	Attribute Groups	440
3.1.4.74	DdaSaveSettings	440
3.1.4.74.1	Messages	441
3.1.4.74.1.1	ExcelServiceSoap_DdaSaveSettings_InputMessage	441
3.1.4.74.1.2	ExcelServiceSoap_DdaSaveSettings_OutputMessage	441
3.1.4.74.2	Elements	441
3.1.4.74.2.1	DdaSaveSettings	441
3.1.4.74.2.2	DdaSaveSettingsResponse	442
3.1.4.74.3	Complex Types	442
3.1.4.74.4	Simple Types	442
3.1.4.74.5	Attributes	442
3.1.4.74.6	Groups	442
3.1.4.74.7	Attribute Groups	442
3.1.4.75	DdaSetBindingData	442
3.1.4.75.1	Messages	443
3.1.4.75.1.1	ExcelServiceSoap_DdaSetBindingData_InputMessage	444
3.1.4.75.1.2	ExcelServiceSoap_DdaSetBindingData_OutputMessage	444
3.1.4.75.2	Elements	444
3.1.4.75.2.1	DdaSetBindingData	444
3.1.4.75.2.2	DdaSetBindingDataResponse	445
3.1.4.75.3	Complex Types	445
3.1.4.75.4	Simple Types	445
3.1.4.75.5	Attributes	445
3.1.4.75.6	Groups	445
3.1.4.75.7	Attribute Groups	445
3.1.4.76	DdaSetSelectedData	445
3.1.4.76.1	Messages	446
3.1.4.76.1.1	ExcelServiceSoap_DdaSetSelectedData_InputMessage	447
3.1.4.76.1.2	ExcelServiceSoap_DdaSetSelectedData_OutputMessage	447
3.1.4.76.2	Elements	447
3.1.4.76.2.1	DdaSetSelectedData	447
3.1.4.76.2.2	DdaSetSelectedDataResponse	448
3.1.4.76.3	Complex Types	448
3.1.4.76.4	Simple Types	448
3.1.4.76.5	Attributes	448
3.1.4.76.6	Groups	448
3.1.4.76.7	Attribute Groups	448
3.1.5	Timer Events	448
3.1.5.1	Session Timeout	448
3.1.5.2	Request Timeout	448
3.1.6	Other Local Events	448
4	Protocol Examples	449
4.1	Filtering and sorting a list and returning XML	449
5	Security	473
5.1	Security Considerations for Implementers	473
5.2	Index of Security Parameters	473

6 Appendix A: Full WSDL	474
6.1	
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal Service/ WSDL	474
6.2 http://tempuri.org/ WSDL.....	507
7 Appendix B: Full XML Schema	526
7.1	
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal Service/ Schema	526
7.2 http://microsoft.com/wsdl/types/ Schema	587
7.3 http://schemas.microsoft.com/2003/10/Serialization/ Schema	588
7.4 http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server Schema	588
8 Appendix C: Product Behavior	596
9 Change Tracking.....	602
10 Index	603

1 Introduction

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

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

1.1 Glossary

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

anonymous user
GUID
Hypertext Transfer Protocol (HTTP)
Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS)
Universal Naming Convention (UNC)
XML

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

A1
absolute path
active cell
alert
ancestor
array formula
ascending order
AutoFilter
automatic calculation mode
border
border thickness
bottom N filter
bottom N filter by count
bottom N filter by percent
bottom N filter by sum
calculate
calculation mode
caption
cell
cell contents
cell value
chart data table
checked out
child
child PivotTable member
clear all state
collapse
collapsed outline state
color stop
column
confirmation

connected data
control button
cube
cube function
custom filter
custom label filter
custom value filter
data connection
data culture
data provider
data source
data table
default column
default filter value
default row
default sheet
default sheet tab color
descendant
descending order
dimension
document library
edit session
embedded image
encrypted document
end user presence
endpoint
expand
expanded outline state
expire
external data
fallback data culture
fallback UI culture
farm
field
file
fill color
filter
filter date value
filter value
filtering state
font face decoration
font face weight
formula
gradient fill
grow
Help topic identifier
hierarchy
horizontal indent
host data language
hyperlink
Information Rights Management (IRM)
item
key performance indicator (KPI)
level
license key

list
locked
manual calculation mode
manual filter
measure group
member
member property
merged cell
Message Bar notification
multidimensional expression (MDX)
named object
named range
new workbook session
non-contiguous range
number format
Office Web Extension
OLAP
OLAP measure
Online Analytical Processing (OLAP)
Open Item permission
outline
outline collapse
outline expand
outline level
outline state
permission
PivotChart
PivotTable
PivotTable area
PivotTable data field
PivotTable field list
PivotTable filter parameter
PivotTable member
PivotTable page field
point
published
published item
published items snapshot
published range
published sheet
query
R1C1 notation
range
reference
refresh
rights
row
scatter chart
search down
search up
selected
server name
session
session identifier
session recycling

sheet
sheet tab
Simple Object Access Protocol (SOAP)
site collection
site identifier
slicer
slicer header
slicer item
snapshot
SOAP action
SOAP body
SOAP fault
SOAP fault detail
sort
sort order
sparkline
state changing
system resources
table
time zone
time zone bias
time zone daylight bias
time zone daylight date
time zone standard bias
time zone standard date
top N filter
top N filter by count
top N filter by percent
top N filter by sum
trusted location
UI culture
Uniform Resource Identifier (URI)
URL zone
user display name
user-defined function (UDF)
view session
view-only mode
visible
Web service
Web Services Description Language (WSDL)
workbook
workbook file
workbook parameter
worksheet
worksheet header
WSDL message
WSDL operation
XML namespace
XML namespace prefix
XML schema
zero-based index

The following terms are specific to this document:

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

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

Open Data Protocol (OData): A web protocol for querying and updating data specified in [MS-ODATA].

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

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

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

1.2 References

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

1.2.1 Normative References

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

[ISO/IEC-29500-1] International Organization for Standardization, "Information Technology - Document description and processing languages - Office Open XML File Formats - Part 1: Fundamentals and Markup Language Reference", ISO/IEC PRF 29500-1:2008, http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51463

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

[MS-EXSPWS2] Microsoft Corporation, "[Excel Calculation Web Service Version 2 Protocol Specification](#)".

[MS-EXSPXML] Microsoft Corporation, "[Excel Calculation Web Service XML Schema Specification](#)".

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

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

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

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

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

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

- [MS-SPSTWS] Microsoft Corporation, "[SharePoint Security Token Service Web Service Protocol Specification](#)".
- [MS-XLSB] Microsoft Corporation, "[Excel Binary File Format \(.xlsb\) Structure Specification](#)".
- [MS-XLSX] Microsoft Corporation, "[Excel Extensions to the Office Open XML SpreadsheetML File Format \(.xlsx\) Specification](#)".
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1.3 Protocol Overview (Synopsis)

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

1.3.1 Session-based Protocol

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

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

1.3.2 Protocol Operations

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

- Open, create new, and close.
- Save or retrieve the contents of an open session (2).
- Recalculation.
- **Refresh connected data.**
- Set specific values into a **range**.
- Set the formatting, including formatting using a **number format**, for a range.
- Get specific values from a range.
- Get rendering data for a range.

- Retrieve charts and images.
- **Sort** and **filter tables**.
- Sort, filter, **expand**, and **collapse PivotTables**.
- Filter **cube functions**.
- Find values.
- Cancel a request.
- Get information about a session.
- Get the version of the protocol.

1.3.3 Published Items and Results Returned by this Protocol

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

1.4 Relationship to Other Protocols

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

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

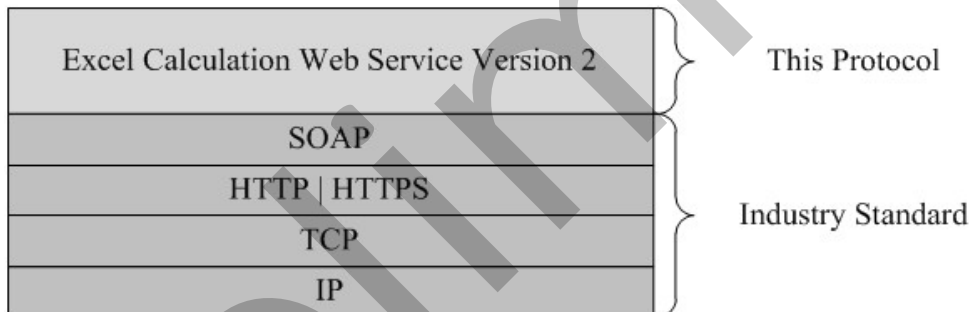


Figure 1: This protocol in relation to other protocols

1.5 Prerequisites/Preconditions

This protocol operates against a protocol server that exposes one or more **endpoint (4) URIs** that are known by protocol clients. The endpoint (4) URI of the protocol server and the transport that is used by the protocol server are either known by the protocol client or obtained by using the discovery mechanism that is described in [\[MS-SPTWS\]](#).

The protocol client obtains the requisite ApplicationClassId and ApplicationVersion values and the endpoint (4) URI of the protocol server that provides the discovery mechanism, as described in [\[MS-SPTWS\]](#), by means that are independent of either protocol.

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

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

1.6 Applicability Statement

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

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

1.7 Versioning and Capability Negotiation

This document covers versioning issues in the following areas:

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

Capability Negotiation: This protocol does not support version negotiation.

1.8 Vendor-Extensible Fields

None.

1.9 Standards Assignments

None.

2 Messages

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

2.1 Transport

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

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

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

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

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

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

2.2 Common Message Syntax

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

2.2.1 Namespaces

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

Prefix	Namespace URI	Reference
q1	http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server	
q2	http://microsoft.com/wsdl/types/	
soap	http://schemas.xmlsoap.org/wsdl/soap/	[SOAP1.1]
tns	http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/	[MS-EXSPWS2]
tns1	http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal	

Prefix	Namespace URI	Reference
	Service/Imports	
tns2	http://schemas.microsoft.com/2003/10/Serialization/	TBD
wsam	http://www.w3.org/2007/05/addressing/metadata	[WSA1.0 Metadata]
wSDL	http://schemas.xmlsoap.org/wSDL/	[WSDL]
xs	http://www.w3.org/2001/XMLSchema	[XMLSCHEM A1] [XMLSCHEM A2]

2.2.2 Messages

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

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

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

2.2.2.1 Common List of Id Element Values

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

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

- **SavingWorkbookFailed**
- **SessionMemoryQuotaExceeded**
- **SpecifiedRangeNotFound**
- **UnableToLoadEditSession**
- **WrongEcs**

2.2.3 Elements

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

2.2.4 Complex Types

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

Complex type	Description
ArrayOfAnyType (section 2.2.4.1)	The ArrayOfAnyType type is an array of anyType elements.
ArrayOfAutoFilterCriteria (section 2.2.4.2)	The ArrayOfAutoFilterCriteria type is an array of AutoFilterCriteria elements (section 2.2.4.12).
ArrayOfAutoFilterDateNodeInfo (section 2.2.4.3)	The ArrayOfAutoFilterDateNodeInfo complex type is an array of AutoFilterDateNodeInfo elements (section 2.2.4.13).
ArrayOfExcelServerMessage (section 2.2.4.4)	The ArrayOfExcelServerMessage type is an array of ExcelServerMessage elements (section 2.2.4.23).
ArrayOfInt (section 2.2.4.5)	The ArrayOfInt type is an array of integer elements.
ArrayOfPivotFilterItem (section 2.2.4.6)	The ArrayOfPivotFilterItem type is an array of PivotFilterItem elements (section 2.2.4.26).
ArrayOfPresenceUserInfo (section 2.2.4.7)	The ArrayOfPresenceUserInfo type is an array of PresenceUserInfo elements (section 2.2.4.30).
ArrayOfRangeValuesA1 (section 2.2.4.8)	The ArrayOfRangeValuesA1 type is an array of RangeValuesA1 elements (section 2.2.4.31).
ArrayOfSlicerFormatElement (section 2.2.4.9)	An array of SlicerFormatElement elements (section 2.2.4.37).
ArrayOfSlicerItem (section 2.2.4.10)	An array of SlicerItem elements (section 2.2.4.39).
ArrayOfString (section 2.2.4.11)	The ArrayOfString complex type is used to specify an array of strings.
AutoFilterCriteria (section 2.2.4.12)	Used to instruct the protocol server on how to apply a filter on an AutoFilter in the workbook.
AutoFilterDateNodeInfo (section 2.2.4.13)	Specifies how AutoFilter filter date values are filtered by the protocol server.
AutoFilterOptions (section 2.2.4.14)	Used to specify the filter applied to an AutoFilter column (2) .

Complex type	Description
BorderFormat (section 2.2.4.15)	Specifies the formatting to apply to the border of one of the slicer visual components.
CellCompoundValue (section 2.2.4.16)	The CellCompoundValue complex type contains the number formatted and the unformatted value of a cell .
CollaborationParameter (section 2.2.4.17)	The CollaborationParameter complex type encapsulates input about end user presence .
CollaborationResult (section 2.2.4.18)	The CollaborationResult complex type encapsulates output about end user presence.
CollaborationState (section 2.2.4.19)	The CollaborationState complex type encapsulates information about the state of the end user presence information.
CommandParameter (section 2.2.4.20)	The CommandParameter complex type is an input used by some protocol server operations.
CommandResult (section 2.2.4.21)	The CommandResult complex type is an operation response message used by most protocol server operations.
CommandResultExtendedInfo (section 2.2.4.22)	The CommandResultExtendedInfo complex type provides extended information for CommandResult (section 2.2.4.21).
ExcelServerMessage (section 2.2.4.23)	An alert (2) information returned by the protocol server.
ExcelServerMessage (section 2.2.4.24)	An alert (2) information returned by the protocol server.
PeriodicRefreshInfo (section 2.2.4.25)	The PeriodicRefreshInfo complex type is used to return expired external data related information.
PivotFilterItem (section 2.2.4.26)	A PivotTable member that is part of a PivotTable manual filter hierarchy .
PivotFilterItemList (section 2.2.4.27)	A list of PivotTable members.
PivotOperationOptions (section 2.2.4.28)	<p>The PivotOperationOptions type is a container for common information used in the following operations related to PivotTables:</p> <ul style="list-style-type: none"> ▪ ApplyPivotFilter (section 3.1.4.2) ▪ ApplyPivotSort (section 3.1.4.3) ▪ ApplyPivotTop10Filter (section 3.1.4.4) ▪ ConnectAndGetPivotFilterItemList (section 3.1.4.9) ▪ GetPivotFilterItemList (section 3.1.4.18) ▪ GetPivotMenu (section 3.1.4.19) ▪ RemovePivotFilter (section 3.1.4.37) ▪ TogglePivotDrill (section 3.1.4.46)

Complex type	Description
PresenceUserId (section 2.2.4.29)	The PresenceUserId complex type contains identifying information about end user presence for a single participant in the session (2).
PresenceUserInfo (section 2.2.4.30)	The PresenceUserInfo complex type contains information about end user presence for a single participant in the session (2).
RangeValuesA1 (section 2.2.4.31)	The RangeValuesA1 type is used to return the values of the cells specified by RangeName .
RequestLimits (section 2.2.4.32)	Specifies a limit on a protocol server operation.
ServerHealthInformation (section 2.2.4.33)	Used to return information about the health of the protocol server.
ServerHealthInformation (section 2.2.4.34)	Used to return information about the health of the protocol server.
SheetRange (section 2.2.4.35)	Specifies a range on a worksheet in a workbook.
SlicerFontType (section 2.2.4.36)	Font specification for one of the slicer visual components.
SlicerFormatElement (section 2.2.4.37)	A slicer formatting element.
SlicerFormatElementList (section 2.2.4.38)	An ordered list of SlicerFormatElement elements.
SlicerItem (section 2.2.4.39)	Display specification for a slicer item .
SlicerItemList (section 2.2.4.40)	An unordered list of SlicerItem elements.
SlicerOptions (section 2.2.4.41)	The SlicerOptions type is a container for common information related to slicers.
SlicerView (section 2.2.4.42)	Specifies slicer attributes such as display properties specific to the slicer and attributes describing the slicer items.
TypeExporter (section 2.2.4.43)	MUST NOT be used.
VisibleSheetRange (section 2.2.4.44)	The VisibleSheetRange complex type is used to specify the Workbook ([MS-EXSPXML] section 2.1.1) to be returned in the response message.
WorkOnBehalf (section 2.2.4.45)	MUST NOT be used.

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

Complex Type	Description
ArrayOfAnyType	The ArrayOfAnyType type is an array of anyType elements.
ArrayOfArrayOfString	The ArrayOfArrayOfString complex type is an array of ArrayOfString elements

Complex Type	Description												
ArrayOfAutoFilterCriteria	The ArrayOfAutoFilterCriteria type is an array of AutoFilterCriteria elements (section 2.2.4.12).												
ArrayOfAutoFilterDateNodeInfo	The ArrayOfAutoFilterDateNodeInfo complex type is an array of AutoFilterDateNodeInfo elements (section 2.2.4.13).												
ArrayOfBindingMetadata	Unordered list of BindingMetadata .												
ArrayOfClientUdfCall	A collection of ClientUdfCall elements.												
ArrayOfClientUdfDefinition	A collection of ClientUdfDefinition elements.												
ArrayOfExcelServerMessage	The ArrayOfExcelServerMessage type is an array of ExcelServerMessage elements (section 2.2.4.23).												
ArrayOfInt	The ArrayOfInt type is an array of integer elements.												
ArrayOfPivotFieldListItem	The ArrayOfPivotFieldListItem type is an array of PivotFieldListItem elements (section 2.2.4.54).												
ArrayOfPivotFilterItem	The ArrayOfPivotFilterItem type is an array of PivotFilterItem elements (section 2.2.4.26).												
ArrayOfPresenceUserInfo	The ArrayOfPresenceUserInfo type is an array of PresenceUserInfo elements (section 2.2.4.30).												
ArrayOfPublishedObjectName	The ArrayOfPublishedObjectName type is an array of PublishedObjectName elements (section 2.2.4.55).												
ArrayOfRangeValuesA1	The ArrayOfRangeValuesA1 type is an array of RangeValuesA1 elements (section 2.2.4.31).												
ArrayOfServerEventMetadata	An unordered list of ServerEventMetadata items.												
ArrayOfSlicerFormatElement	<p>An array of SlicerFormatElement elements (section 2.2.4.37). The position of the SlicerFormatElement in the array indicates which slicer visual component the SlicerFormatElement is applied to. The array MUST have 10 elements. The following table lists the index in the array and the corresponding slicer visual component to which the SlicerFormatElement at that index is applied.</p> <table border="1"> <thead> <tr> <th>Index</th> <th>Slicer visual component</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>Equivalent to the meaning of TseType TSEWHOLETABLE specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td>1</td> <td>Equivalent to the meaning of TseType TSEHEADERROW specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td>2</td> <td>Equivalent to the meaning of TseType TSESLICERITEMSELECTED specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td>3</td> <td>Equivalent to the meaning of TseType TSESLICERITEMUNSELECTED specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td>4</td> <td>Equivalent to the meaning of TseType TSESLICERITEMNODATA specified in [MS-XLSB] section</td> </tr> </tbody> </table>	Index	Slicer visual component	0	Equivalent to the meaning of TseType TSEWHOLETABLE specified in [MS-XLSB] section 2.5.149	1	Equivalent to the meaning of TseType TSEHEADERROW specified in [MS-XLSB] section 2.5.149	2	Equivalent to the meaning of TseType TSESLICERITEMSELECTED specified in [MS-XLSB] section 2.5.149	3	Equivalent to the meaning of TseType TSESLICERITEMUNSELECTED specified in [MS-XLSB] section 2.5.149	4	Equivalent to the meaning of TseType TSESLICERITEMNODATA specified in [MS-XLSB] section
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Complex Type	Description												
	<table border="1"> <tr> <td data-bbox="609 197 716 245"></td> <td data-bbox="716 197 1409 245">2.5.149</td> </tr> <tr> <td data-bbox="609 245 716 344">5</td> <td data-bbox="716 245 1409 344">Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTED specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td data-bbox="609 344 716 443">6</td> <td data-bbox="716 344 1409 443">Equivalent to the meaning of TseType TSESLICERITEMSELECTEDHOVER specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td data-bbox="609 443 716 541">7</td> <td data-bbox="716 443 1409 541">Equivalent to the meaning of TseType TSESLICERITEMUNSELECTEDHOVER specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td data-bbox="609 541 716 640">8</td> <td data-bbox="716 541 1409 640">Equivalent to the meaning of TseType TSESLICERITEMNODATAHOVER specified in [MS-XLSB] section 2.5.149</td> </tr> <tr> <td data-bbox="609 640 716 760">9</td> <td data-bbox="716 640 1409 760">Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTEDHOVER specified in [MS-XLSB] section 2.5.149</td> </tr> </table>		2.5.149	5	Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTED specified in [MS-XLSB] section 2.5.149	6	Equivalent to the meaning of TseType TSESLICERITEMSELECTEDHOVER specified in [MS-XLSB] section 2.5.149	7	Equivalent to the meaning of TseType TSESLICERITEMUNSELECTEDHOVER specified in [MS-XLSB] section 2.5.149	8	Equivalent to the meaning of TseType TSESLICERITEMNODATAHOVER specified in [MS-XLSB] section 2.5.149	9	Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTEDHOVER specified in [MS-XLSB] section 2.5.149
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9	Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTEDHOVER specified in [MS-XLSB] section 2.5.149												
ArrayOfSlicerItem	An array of SlicerItem elements (section 2.2.4.39).												
ArrayOfString	The ArrayOfString complex type is an array of string elements.												
ArrayOfWebExtensionMetadata	An unordered list of WebExtensionMetadata items.												
ArrayOfWorksheetChangeInfo	MUST NOT be used.												
ArrayOfWorksheetData	An array of WorksheetData items.												
AutoFilterCriteria	Used to instruct the protocol server on how to apply a filter on an AutoFilter in the workbook. This complex type is used as part of the AutoFilterOptions complex type (section 2.2.4.14) through the ArrayOfAutoFilterCriteria complex type (section 2.2.4.2).												
AutoFilterDateNodeInfo	Specifies how AutoFilter filter date values are filtered by the protocol server.												
AutoFilterOptions	Used to specify the filter applied to an AutoFilter column (2).												
BindingMetadata	Information about a single Office Web Extension binding that Excel uses to implement features related to bindings.												
BindingReference	Describes a simple worksheet range, intended for BindingMetadata to describe the range to which a binding refers.												
BorderFormat	Specifies the formatting to apply to the border of the slicer visual components.												
CellCompoundValue	<p>The CellCompoundValue complex type contains the number formatted and the unformatted value of a cell.</p> <p>The CellCompoundValue type MUST only be used in the elements in the rangeRequests element of GetRangeValuesA1Response (section 3.1.4.24.2.2).</p>												

Complex Type	Description
ClientUdfCall	Represents the information needed for a single client side UDF result protocol server requires from the protocol client.
ClientUdfCallInfo	Contains a list of ClientUdfCall elements that the protocol server requires from the protocol client to complete a workbook calculation.
ClientUdfDefinition	Represents a client side UDF that the protocol client can calculate for the server.
ClientUdfListInfo	Contains a list of ClientUdfDefinition element.
CollaborationParameter	The CollaborationParameter complex type encapsulates input about end user presence.
CollaborationResult	The CollaborationResult complex type encapsulates output about end user presence.
CollaborationState	The CollaborationState complex type encapsulates information about the state of the end user presence information.
CommandParameter	The CommandParameter complex type is an input used by some protocol server operations.
CommandResult	The CommandResult complex type is an operation response message used by most protocol server operations.
CommandResultExtendedInfo	The CommandResultExtendedInfo complex type provides extended information for CommandResult (section 2.2.4.21).
CultureCommandParameter	The CultureCommandParameter is used to specify UI culture , data culture and host data language related information when creating a new session.
DdaSettings	List of settings for an instance of an Office Web Extension.
ExcelServerMessage	An alert (2) information returned by the protocol server.
ExcelServerMessage	An alert (2) information returned by the protocol server.
OpenWorkbookInParameters	Input parameters for OpenWorkbook .
OpenWorkbookOutParameters	Output parameters for OpenWorkbook
PeriodicRefreshInfo	The PeriodicRefreshInfo complex type is used to return expired external data related information.
PivotFieldListItem	The PivotFieldListItem complex type is used to specify a PivotTable field , visual state information for the PivotTable field, and child PivotTable fields.
PivotFilterItem	A PivotTable member that is part of a PivotTable manual filter hierarchy.
PivotFilterItemList	A list of PivotTable members.
PivotOperationOptions	The PivotOperationOptions complex type is a container for common information that is used by the following operations related to PivotTables: <ul style="list-style-type: none"> ▪ ApplyPivot (section 3.1.4.47)

Complex Type	Description
	<ul style="list-style-type: none"> ▪ ApplyPivotFilter (section 3.1.4.2) ▪ ApplyPivotSort (section 3.1.4.3) ▪ ApplyPivotTop10Filter (section 3.1.4.4) ▪ ApplyPivotValueFieldSettings (section 3.1.4.62) ▪ BixDrill (section 3.1.4.59) ▪ ConnectAndGetPivotFilterItemList (section 3.1.4.9) ▪ ExpandPivotFieldListLevels (section 3.1.4.49) ▪ GetBixAnalysis (section 3.1.4.51) ▪ GetPivotFieldListData (section 3.1.4.52) ▪ GetPivotFieldManagerData (section 3.1.4.53) ▪ GetPivotFilterItemList (section 3.1.4.18) ▪ GetPivotMenu (section 3.1.4.19) ▪ GetPivotValueFieldSettings (section 3.1.4.64) ▪ RemovePivotFilter (section 3.1.4.37) ▪ TogglePivotDrill (section 3.1.4.46) <p>Some of the elements of this type have a common usage among all of the preceding operations and are specified in this section. Other elements have particular usage information that is specified in the sections of this document addressing the particular operations.</p>
PresenceUserId	The PresenceUserId complex type contains identifying information about end user presence for a single participant in the session (2).
PresenceUserInfo	The PresenceUserInfo complex type contains information about end user presence for a single participant in the session (2).
PublishedObjectName	Specifies the name and type of a published item .
RangeValuesA1	The RangeValuesA1 type is used to transfer the values of the cells specified by RangeName .
RequestLimits	Specifies a limit on a protocol server operation.
RestChartPngRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.57.2.1), indicates retrieving that an image representing a chart.
RestChartPngResult	This is the type of the result field of ProcessRestRequestResponse when a RestChartPngRequest is passed as the input.
RestODataRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.57.2.1), indicates retrieving an OData response, as specified in [MS-ODATA] .
RestODataResult	This is the type of the result field of ProcessRestRequestResponse

Complex Type	Description
	when a RestODataRequest is passed as the input.
RestOpenWorkbookRequest	When passed as the request parameter of the ProcessRestRequest input, indicates that the protocol server opens the workbook specified in section 3.1.4.57 .
RestOpenWorkbookResult	This is the type of the result field of ProcessRestRequestResponse when a RestOpenWorkbookRequest is passed as the input.
RestPngResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.57.2.2) when a RestRangePngRequest (section 2.2.4.63) is passed as the input and it is the base type for RestChartPngResult (section 2.2.4.57).
RestPublishedObjectsRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.57.2.1), indicates retrieving a list of published objects.
RestPublishedObjectsResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.57.2.2) when a RestPublishedObjectsRequest (section 2.2.4.61) is passed as the input.
RestRangePngRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.57.2.1), indicates retrieving an image representing a range.
RestRangeValuesRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.57.2.1), indicates retrieving the sheet (2) cell values of a range.
RestRangeValuesResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.57.2.2) when a RestRangeValuesRequest (section 2.2.4.64) is passed as the input.
RestRangeXmlRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.57.2.1), indicates retrieving a representation of a range as specified in [MS-EXSPXML3] .
RestRangeXmlResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.57.2.2) when a RestRangeXmlRequest (section 2.2.4.66) is passed as the input.
RestRequest	Base type for parameters passed to the ProcessRestRequest operation
RestResult	Base type for the result field of ProcessRestRequestResponse .
RestWorkbookRequest	When passed as the request parameter of the ProcessRestRequest input (section 3.1.4.57.2.1), indicates retrieving a the workbook file .
RestWorkbookResult	This is the type of the result field of ProcessRestRequestResponse (section 3.1.4.57.2.2) when a RestWorkbookRequest (section 2.2.4.70) is passed as the input.
ServerEventMetadata	An event of a particular type that occurred during server processing.
ServerHealthInformation	Used to return information about the health of the protocol server.
ServerHealthInformation	Used to return information about the health of the protocol server.

Complex Type	Description
SheetCell	Specifies the coordinates of a cell in a sheet (2).
SheetRange	Specifies a range on a worksheet in a workbook.
SlicerFontType	Font specification for a slicer visual component.
SlicerFormatElement	A slicer formatting specification.
SlicerFormatElementList	Contains an ArrayOfSlicerFormatElement element (section 2.2.4.9).
SlicerItem	Specifies the visual representation for a slicer item.
SlicerItemList	Contains an ArrayOfSlicerItem element (section 2.2.4.10).
SlicerOptions	A container for common information related to a slicer.
SlicerView	Specifies slicer attributes such as display properties specific to the slicer and attributes describing the slicer items.
TypeExporter	MUST NOT be used.
VisibleSheetRange	<p>The VisibleSheetRange complex type is used to specify the Workbook ([MS-EXSPXML] section 2.1.1) to be returned in the response message. The baseline range, in the context of this type and the operation that uses it, is the raw range initially found on the workbook before it is modified to only include visible worksheet cells. If the ObjectName element is present and not empty, and if the associated session is not an edit session, and if DisallowAutoNOV is false, the following apply:</p> <ul style="list-style-type: none"> ▪ If the ExcelRange element is present and not empty: <ul style="list-style-type: none"> ▪ The sheet (2) of the baseline range is determined in the following manner: <ul style="list-style-type: none"> ▪ If a sheet (2) was specified by ExcelRange, that is the sheet (2) which will be used. ▪ Otherwise, the protocol server will locate a published item by matching ObjectName to the name of the published item. <ul style="list-style-type: none"> ▪ If a match is found, the sheet (2) which contains the matching published item MUST be used. ▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in section 2.2.4.24. The Id element of the ExcelServerMessage MUST be EcsInvalidNamedObject. ▪ The protocol server will locate a published range which exactly matches ExcelRange on the baseline range's sheet. <ul style="list-style-type: none"> ▪ If a match is found, the published range is the baseline range. ▪ Otherwise, the protocol server MUST locate a published item on the baseline range's sheet (2), which exactly matches ExcelRange. <ul style="list-style-type: none"> ▪ If a match was found, the published item is the baseline

Complex Type	Description
	<p>range.</p> <ul style="list-style-type: none"> ▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in section 2.2.4.24. The Id element of the ExcelServerMessage MUST be EcsInvalidNamedObject. <ul style="list-style-type: none"> ▪ If ExcelRange is not present or is empty, the protocol server will locate ObjectName in all the published items that belong to the workbook by matching ObjectName to the name of the published item. <ul style="list-style-type: none"> ▪ If a match was found, the baseline range MUST be the published item's range. ▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be EcsInvalidNamedObject. ▪ The protocol server MUST NOT use any range outside of the baseline range to retrieve data from. <p>If ObjectName is not present or is empty, and the workbook contains published items, and if the associated session is not an edit session, and if DisallowAutoNOV is false:</p> <ul style="list-style-type: none"> ▪ If ExcelRange is present and not empty: <ul style="list-style-type: none"> ▪ The sheet (2) of the baseline range MUST be determined in the following manner: <ul style="list-style-type: none"> ▪ If a sheet (2) was specified by ExcelRange, that is the sheet (2) which MUST be used. ▪ Otherwise, the sheet (2) which contains the first published item MUST be used. ▪ The protocol server will locate a published range which exactly matches ExcelRange on the baseline range's sheet (2). <ul style="list-style-type: none"> ▪ If a match is found, the published range is the baseline range. ▪ Otherwise, the protocol server will locate a published item on the baseline range's sheet (2), which contains ExcelRange in its entirety. <ul style="list-style-type: none"> ▪ If a match was found, the published item is the baseline range. ▪ Otherwise, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be EcsInvalidNamedObject. ▪ If ExcelRange is not present or is empty, the baseline range MUST be the range of the first published item. ▪ The protocol server MUST NOT use any range outside of the

Complex Type	Description
	<p>baseline range to retrieve data from.</p> <p>If ObjectName is not present or is empty and the workbook does not contain any published items, or if the associated session is an edit session, or if DisallowAutoNOV is true:</p> <ul style="list-style-type: none"> ▪ If SheetName is not present or empty, the baseline range MUST be the default sheet. Otherwise, SheetName MUST be the sheet (2) of the baseline range. ▪ If FirstRow is -1, the default row MUST be the first row (2) of the baseline range. Otherwise, FirstRow MUST be the first row (2) of the baseline range. ▪ If FirstColumn is -1, the default column MUST be the first column of the baseline range. Otherwise, FirstColumn MUST be the first column of the baseline range. ▪ First row (2) of baseline range+VisibleRowsRequested MUST be the last row (2) of the baseline range. ▪ First column of baseline range+VisibleColumnsRequested MUST be the last column of the baseline range. ▪ FirstColumn MUST be -1 if FirstRow is -1. ▪ FirstRow MUST be -1 if FirstColumn is -1. <p>The product of VisibleRowsRequested and VisibleColumnsRequested MUST be less than or equal to 1,000,000.</p> <p>The first row (2) of the retrieved range MUST be one of the following:</p> <ul style="list-style-type: none"> ▪ The first visible row (2) at or after first row (2) of baseline range+VisibleFirstRowOffset, if VisibleFirstRowOffset is greater than or equal to 0. ▪ The first visible row (2) at or before first row (2) of baseline range+VisibleFirstRowOffset, if VisibleFirstRowOffset is less than 0. <ul style="list-style-type: none"> ▪ If baseline range+VisibleFirstRowOffset is less than 0, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be SpecifiedRangeNotFound. ▪ If there are less than VisibleRowsRequested visible rows (2) between that first visible row (2) and the last visible row (2) of the baseline range, the first row (2) will be the first visible row (2) such that there are VisibleRowsRequested rows (2) between it and the last visible row (2) of baseline range. ▪ Greater than or equal to 0, and less than or equal to 1,048,575 <p>The number of visible rows (2) in the retrieved range MUST be equal to VisibleRowsRequested, unless there are not enough visible rows (2) in the baseline range to retrieve, in which case all the remaining visible rows (2) in the baseline range MUST be retrieved.</p> <p>The first column of the retrieved range MUST be:</p>

Complex Type	Description
	<ul style="list-style-type: none"> ▪ The first visible column at or after first column of baseline range+VisibleFirstColumnOffset, if VisibleFirstColumnOffset is greater than or equal to 0. ▪ The first visible column at or before first column of baseline range+VisibleFirstColumnOffset, if VisibleFirstColumnOffset is less than 0. <ul style="list-style-type: none"> ▪ If baseline range+VisibleFirstColumnOffset is less than 0, the protocol server MUST return an ExcelServerMessage as specified in the section 2.2.4.24. The Id element of the ExcelServerMessage MUST be SpecifiedRangeNotFound. ▪ If there are less than VisibleColumnsRequested visible columns between that first visible column and the last visible column of the baseline range, the first column will be the first visible column such that there are VisibleColumnsRequested columns between it and the last visible column of baseline range. ▪ Greater than or equal to 0 and less than or equal to 16,383. <p>The number of visible columns in the retrieved range MUST be equal to VisibleColumnsRequested unless there are not enough visible columns in the baseline range to retrieve, in which case all the remaining visible columns in the baseline range MUST be retrieved.</p> <p>If the retrieved range is encompassed by a published chart, and either a) ObjectName is present and not empty, or b) ObjectName is not present or is empty, and the workbook contains published items, then the returned Workbook ([MS-EXSPXML] section 2.1.1) will contain the CT_Images element ([MS-EXSPXML] section 2.2.34) with a single CT_Image element ([MS-EXSPXML] section 2.2.33). The type attribute for the CT_Image element ([MS-EXSPXML] section 2.2.33) MUST be chart, as specified in [MS-EXSPXML] section 2.2.33.</p>
WebExtensionMetadata	Information associated with a Office Web Extension .
WorkbookGenerationOptions	Options controlling the execution of GenerateWorkbookFromHtml
WorkbookMetadata	This is a container that encapsulates information about features in the workbook.
WorkbookMetadataParameter	Container for workbook metadata.
WorkbookMetadataResult	Contains information about the state of features in the workbook.
WorkbookMetadataState	State of an associated WorkbookMetadata as specified in section 2.2.4.74 .
WorkOnBehalf	MUST NOT be used.
WorksheetChangeInfo	MUST NOT be used.
WorksheetData	Contains metadata for any sheet (1) in the workbook.

2.2.4.1 ArrayOfAnyType

Namespace:

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

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

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

anyType: An **anyType** value.

2.2.4.2 ArrayOfAutoFilterCriteria

Namespace:

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

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

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

AutoFilterCriteria: An **AutoFilter** criteria as specified in section [2.2.4.12](#).

2.2.4.3 ArrayOfAutoFilterDateNodeInfo

Namespace:

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

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

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

AutoFilterDateNodeInfo: An **AutoFilter** filter date values as specified in section [2.2.4.13](#).

2.2.4.4 ArrayOfExcelServerMessage

Namespace:

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

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

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

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

ExcelServerMessage: An alert (2) as specified in section [2.2.4.23](#).

2.2.4.5 ArrayOfInt

Namespace:

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

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

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

int: An integer value.

2.2.4.6 ArrayOfPivotFilterItem

Namespace:

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

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

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

PivotFilterItem: A **PivotFilterItem** element as specified in section [2.2.4.26](#).

2.2.4.7 ArrayOfPresenceUserInfo

Namespace:

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

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

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

PresenceUserInfo: A **PresenceUserInfo** element as specified in section [2.2.4.30](#).

2.2.4.8 ArrayOfRangeValuesA1

Namespace:

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

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

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

RangeValuesA1: A **RangeValuesA1** element as specified in section [2.2.4.31](#).

2.2.4.9 ArrayOfSlicerFormatElement

Namespace:

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

An array of **SlicerFormatElement** elements (section [2.2.4.37](#)). The position of the **SlicerFormatElement** in the array indicates which slicer visual component the **SlicerFormatElement** is applied to. The array MUST have 10 elements. The following table lists the index in the array and the corresponding slicer visual component to which the **SlicerFormatElement** at that index is applied.

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

Index	Slicer visual component
9	Equivalent to the meaning of TseType TSESLICERITEMNODATASELECTEDHOVER specified in [MS-XLSB] section 2.5.149

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

SlicerFormatElement: A **SlicerFormatElement** element as specified in section [2.2.4.37](#).

2.2.4.10 ArrayOfSlicerItem

Namespace:

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

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

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

SlicerItem: A **SlicerItem** element as specified in section [2.2.4.39](#).

2.2.4.11 ArrayOfString

Namespace:

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

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

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

string: A string value.

2.2.4.12 AutoFilterCriteria

Namespace:

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

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

```

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

```

Type: The type of operation as specified in section [2.2.5.3](#). Used when comparing the **Value** element as specified in section [2.2.4.14](#).

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

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

2.2.4.13 AutoFilterDateNodeInfo

Namespace:

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

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

```

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

```

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

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

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

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

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

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

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

2.2.4.14 AutoFilterOptions

Namespace:

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

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

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

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

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

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

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

Id: The identifier of the table that has the filter applied to it. If the **AutoFilterType** element contains the string "Sheet" then this element MUST be ignored. If the **AutoFilterType** element contains the string "Table" then this element MUST contain a value that was previously returned from the protocol server in the **ID** attribute of **CT_autofilter** complex type as specified in [\[MS-EXSPXML\]](#) section 2.2.19.

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

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

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

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

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

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

2.2.4.15 BorderFormat

Namespace:

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

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

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

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

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

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

Value	Name	Meaning
0	None	No border.
1	Continuous	Equivalent to the [ISO/IEC-29500-1] ST_BorderStyle medium enumeration value.
2	Dash	Equivalent to the [ISO/IEC-29500-1] ST_BorderStyle dash enumeration value.

Value	Name	Meaning
3	Dot	Equivalent to the [ISO/IEC-29500-1] ST_BorderStyle dot enumeration value.
4	DashDot	Equivalent to the [ISO/IEC-29500-1] ST_BorderStyle dashDot enumeration value.
5	DashDotDot	Equivalent to the [ISO/IEC-29500-1] ST_BorderStyle dashDotDot enumeration value.
6	SlantDashDot	Equivalent to the [ISO/IEC-29500-1] ST_BorderStyle slantDashDot enumeration value.
7	Double	Equivalent to the [ISO/IEC-29500-1] ST_BorderStyle double enumeration value.

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

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

2.2.4.16 CellCompoundValue

Namespace:

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

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

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

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

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

- Boolean
- Double
- String

- **CellError** as specified in section [2.2.5.5](#).

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

2.2.4.17 CollaborationParameter

Namespace:

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

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

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

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

2.2.4.18 CollaborationResult

Namespace:

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

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

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

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

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

2.2.4.19 CollaborationState

Namespace:

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

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

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

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

2.2.4.20 CommandParameter

Namespace:

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

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

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

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

WorkbookId: The session identifier (2) that is returned in the **workbookId** as specified in **OpenWorkbookResponse** (section [3.1.4.30.2.2](#)). See section [2.2.5.21](#). If present, it MUST NOT be empty. For all operations other than **OpenWorkbook** (section [3.1.4.30](#)), MUST have a value which has been obtained from a previous call to **OpenWorkbook**. For the **OpenWorkbook**, the following apply:

- If a session identifier has already been returned by the protocol server for a previous **OpenWorkbook**, **WorkbookId** MUST have that value.

- If this operation is used to create a new session (2) on the protocol server then MUST NOT be present.

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

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

WorkOnBehalfRequest: MUST NOT be present.

Confirmation: The external data refresh **confirmation**. MUST be either "ConfirmDataRefresh" or "Blank". MUST be **ConfirmDataRefresh**, with **ConfirmationChoice** set to true to allow external data refresh for the lifetime of the session, or with **ConfirmationChoice** set to false to prevent external data refresh for the current operation. Otherwise, the protocol server MUST ignore **ConfirmationChoice**.

ConfirmationChoice: The external data refresh confirmation choice. See **Confirmation**.

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

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

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

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

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

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

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

Flags: Control flags as specified in section [2.2.5.6](#).

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

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

IsObjectModel: If **true**, the protocol server allows editing of the workbook if the user has permissions to edit the workbook. If **false**, it MUST be ignored by the protocol server.

WantServerEvents: Specifies whether the protocol client receives information about server events that occurred during the processing of the command from the protocol server. If **true**, the protocol client MUST receive information about server events if they occurred during processing. If **false**, the protocol client MUST NOT receive information about server events.

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

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

FrontEndMachineName: The protocol client **server name**.

DoesNotCreatePrivateWorkbook: MUST NOT be used.

2.2.4.21 CommandResult

Namespace:

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

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

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

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

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

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

SpreadsheetData: The range to be returned as the result of a **VisibleSheetRangeRequest**. See section [2.2.4.44](#). MUST NOT be present if the **Messages** element of **CommandResultExtendedInfo** (section [2.2.4.22](#)) contains at least one element. Otherwise, MUST NOT be present if **VisibleSheetRangeRequest** was not present in **CommandParameter** (section [2.2.4.20](#)) in the request message of the same operation. MUST be present if **VisibleSheetRangeRequest** was present in **CommandParameter** in the request message of the same operation.

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

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

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

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

SecondsBeforeNextPoll: MUST be ignored by the protocol client.

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

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

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

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

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

WorkbookMetadataResult: Contains information about features in the workbook as specified in **WorkbookMetadataResult** (section [2.2.4.76](#)). MUST be present.

ServerEvents: An XML string in the form of **CT_ServerEvents** that contains information about server events generated during the processing of the command. If the corresponding **CommandParameter** field **WantServerEvents** is false this SHOULD NOT be present.

2.2.4.22 CommandResultExtendedInfo

Namespace:

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

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

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

Messages: Alert (2) information. See section [2.2.4.4](#). MUST be present.

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

UnsupportedFeaturesRemoved: Specifies whether unsupported content has been removed from the workbook. MUST be **true** if both of the following conditions are true: 1)

HasUnsupportedFeatures was present in the **OpenWorkbookOutFlags** (section [3.1.4.30.4.1](#)) of the **OpenWorkbookResponse** (section [3.1.4.30.2.2](#)), and 2) the workbook no longer contains unsupported content. Otherwise, MUST be false.

2.2.4.23 ExcelServerMessage

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

An alert (2) information returned by the protocol server.

```
<xs:complexType name="ExcelServerMessage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="Appearance" type="q1:ExcelServerMessageAppearance"/>
    <xs:element minOccurs="0" name="Caption" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="DebugInfo" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="Description" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="DisplaysCorrelationId" type="xs:boolean"/>
    <xs:element minOccurs="0" name="ExtendedDescription" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="HasClientUrl" type="xs:boolean"/>
    <xs:element minOccurs="0" name="HasOpenItemPermission" type="xs:boolean"/>
    <xs:element minOccurs="0" name="HealthInformation" nillable="true"
      type="q1:ServerHealthInformation"/>
    <xs:element minOccurs="0" name="HelpDisplayText" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="HelpTopicId" nillable="true" type="xs:string"/>
    <xs:element minOccurs="0" name="Id" type="q1:ExcelServerMessageId"/>
    <xs:element minOccurs="0" name="Severity" type="q1:ExcelServerMessageSeverity"/>
    <xs:element minOccurs="0" name="Type" type="q1:ExcelServerMessageType"/>
  </xs:sequence>
</xs:complexType>
```

```
<xs:element minOccurs="0" name="WrongEcsServerId" nillable="true" type="xs:string"/>
</xs:sequence>
</xs:complexType>
```

Appearance: The **control buttons** of the alert (2) as specified in section [2.2.5.7](#). MUST be present.

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

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

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

DisplaysCorrelationId: Specifies whether the protocol client includes debug information in the alert (2). If set to **true** the protocol client includes debug information in the alert (2). If set to **false** the protocol client excludes debug information from the alert (2).

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

HasClientUrl: Specifies an **absolute path** exists for the workbook file. MUST be **true** if the value of the **ClientWorkbookUri** element of OpenWorkbookOutParameters (section [2.2.4.53](#)) is present and is not empty, and MUST be set to **false** otherwise.

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

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

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

HelpTopicId: The **Help topic identifier**.

Id: The identifier of the alert (2) as specified in section [2.2.5.10](#). MUST be present.

Severity: The severity of the alert (2) as specified in section [2.2.5.12](#). MUST be present.

Type: The type of the alert (2) as specified in section [2.2.5.14](#). MUST be present.

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

2.2.4.24 ExcelServerMessage

Namespace:

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

An alert (2) information returned by the protocol server.

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

```

<xs:element minOccurs="1" maxOccurs="1" name="HasOpenItemPermission" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="HasClientUrl" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="Id" type="tns:ExcelServerMessageId"/>
<xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
<xs:element minOccurs="1" maxOccurs="1" name="Severity"
type="tns:ExcelServerMessageSeverity"/>
<xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:ExcelServerMessageType"/>
<xs:element minOccurs="1" maxOccurs="1" name="Appearance"
type="tns:ExcelServerMessageAppearance"/>
<xs:element minOccurs="0" maxOccurs="1" name="Description" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="ExtendedDescription" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="HelpTopicId" type="xs:string"/>
<xs:element minOccurs="1" maxOccurs="1" name="DisplaysCorrelationId" type="xs:boolean"/>
<xs:element minOccurs="0" maxOccurs="1" name="HelpDisplayText" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="HealthInformation"
type="tns:ServerHealthInformation"/>
<xs:element minOccurs="0" maxOccurs="1" name="WrongEcsServerId" type="xs:string"/>
</xs:sequence>
</xs:complexType>

```

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

HasClientUrl: Specifies an absolute path exists for the workbook file. MUST be **true** if the value of the **ClientWorkbookUri** element of **OpenWorkbookOutParameters** (section [2.2.4.53](#)) is present and is not empty, and MUST be set to **false** otherwise.

Id: The identifier of the alert (2) as specified in section [2.2.5.9](#).

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

Severity: The severity of the alert (2) as specified in section [2.2.5.11](#).

Type: The type of the alert (2) as specified in section [2.2.5.13](#).

Appearance: The control buttons or **Message Bar notification** flag associated with the alert (2) as specified in section [2.2.5.7](#).

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

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

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

HelpTopicId: The Help topic identifier.

DisplaysCorrelationId: Specifies whether the protocol client includes debug information in the alert (2). If set to **true** the protocol client includes debug information in the alert (2). If set to **false** the protocol client excludes debug information from the alert (2).

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

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

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

2.2.4.25 PeriodicRefreshInfo

Namespace:

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

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

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

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

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

2.2.4.26 PivotFilterItem

Namespace:

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

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

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

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

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

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

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

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

2.2.4.27 PivotFilterItemList

Namespace:

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

A list of PivotTable members.

```
<xs:complexType name="PivotFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemListMaxExceeded" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsBlanksSelected" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotFilterItems"
      type="tns:ArrayOfPivotFilterItem"/>
  </xs:sequence>
</xs:complexType>
```

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

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

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

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

2.2.4.28 PivotOperationOptions

Namespace:

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

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

- **ApplyPivot** (section [3.1.4.47](#))

- **ApplyPivotFilter** (section [3.1.4.2](#))
- **ApplyPivotSort** (section [3.1.4.3](#))
- **ApplyPivotTop10Filter** (section [3.1.4.4](#))
- **ApplyPivotValueFieldSettings** (section [3.1.4.62](#))
- **BixDrill** (section [3.1.4.59](#))
- **ConnectAndGetPivotFilterItemList** (section [3.1.4.9](#))
- **ExpandPivotFieldListLevels** (section [3.1.4.49](#))
- **GetBixAnalysis** (section [3.1.4.51](#))
- **GetPivotFieldListData** (section [3.1.4.52](#))
- **GetPivotFieldManagerData** (section [3.1.4.53](#))
- **GetPivotFilterItemList** (section [3.1.4.18](#))
- **GetPivotMenu** (section [3.1.4.19](#))
- **GetPivotValueFieldSettings** (section [3.1.4.64](#))
- **RemovePivotFilter** (section [3.1.4.37](#))
- **TogglePivotDrill** (section [3.1.4.46](#))

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

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

```

    <xs:element minOccurs="1" maxOccurs="1" name="WholeDays" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

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

Value	Type of item
0	A PivotTable.
-1	Neither a PivotTable nor a PivotChart .
1	A PivotChart series.
2	A PivotChart category.
3	A PivotChart data point.
4	A PivotChart filter button.
5	A PivotChart series button.
6	A category button.
7	A general PivotChart area.
8	A PivotChart hierarchy.
9	A PivotTable hierarchy.
10	A field list that was brought up by a PivotChart but is not on the PivotChart.
11	A field list that was brought up by a PivotTable but is not on the PivotTable.

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

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

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

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

SourceIndex: The index of the connected data. MUST be the value of the **ExternalSourceIndex** attribute of the **CT_PivotTable** element, as specified in [\[MS-EXSPXML\]](#) section 2.2.27, that is the PivotTable on which the operation is being performed (except when used in the **GetPivotMenu** operation, which specifies a different behavior).

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

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

- The value of the **IdString** element of one of the **PivotField** elements that have **IsHierarchy** set to **false** and that are nested inside the **PivotFields** element of the **pivotMenu** element that was retrieved from the protocol server in a previous call to **GetPivotMenu** on the same **PivotTable area**.
- The value of the **PageFieldID** attribute of the **CT_Cell** element, as specified in [\[MS-EXSPXML\]](#) section 2.2.41.

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

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

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

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

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

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

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

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

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

Column: The column (2) of the PivotTable area location if **AnchorType** indicates that this operation is being performed on a PivotTable. MUST be the zero-based column (2) number of a worksheet cell of the PivotTable that has the **HasDropDown** attribute of the **CT_Cell** element (as specified in [\[MS-EXSPXML\]](#) section 2.2.41) set to **true**, except when used in the **TogglePivotDrill** operation, which specifies different behavior.

Row: The row (2) of the PivotTable area location if **AnchorType** indicates that this operation is being performed on a PivotTable. MUST be the zero-based row (2) number of a worksheet cell of the PivotTable that has the **HasDropDown** attribute of the **CT_Cell** element (as specified in [\[MS-EXSPXML\]](#) section 2.2.41) set to **true**, except when used in **TogglePivotDrill**, which specifies a different behavior.

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

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

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

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

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

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

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

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

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

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

2.2.4.29 PresenceUserId

Namespace:

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

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

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

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

IsApiUser: MUST be **true** if the value of **ProtocolClientId** element in the **parameter** was "ms-soap" when **OpenWorkbook** was called against the protocol server for the specific participant.

2.2.4.30 PresenceUserInfo

Namespace:

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

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

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

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

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

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

2.2.4.31 RangeValuesA1

Namespace:

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

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

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

RangeName: The name of the range as specified in section [2.2.5.18](#). MUST be present.

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

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

2.2.4.32 RequestLimits

Namespace:

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

Specifies a limit on a protocol server operation.

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

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

2.2.4.33 ServerHealthInformation

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

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

```
<xs:complexType name="ServerHealthInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" name="HealthScore" type="xs:float"/>
    <xs:element minOccurs="0" name="StateFlags" type="q1:ServerStateFlags"/>
  </xs:sequence>
</xs:complexType>
```

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

StateFlags: The state of the protocol server. MUST be present. MUST contain 0 or more values from **ServerStateFlags** (section [2.2.5.19](#)).

2.2.4.34 ServerHealthInformation

Namespace:

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

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

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

StateFlags: The state of the protocol server. MUST be present. MUST contain 0 or more values from **ServerStateFlags** (section [2.2.5.20](#)).

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

2.2.4.35 SheetRange

Namespace:

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

Specifies a range on a worksheet in a workbook.

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

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

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

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

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

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

2.2.4.36 SlicerFontType

Namespace:

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

Font specification for a slicer visual component.

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

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

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

Value	Meaning
0	Equivalent to the [ISO/IEC-29500-1] ST_UnderlineValues none enumeration value.
1	Equivalent to the [ISO/IEC-29500-1] ST_UnderlineValues single enumeration value.

Italic: **Font face decoration.**

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

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

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

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

2.2.4.37 SlicerFormatElement

Namespace:

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

A slicer formatting specification.

```
<xs:complexType name="SlicerFormatElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="GradientStop1" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GradientStop0" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GradientType" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasGradient" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SlicerFontType" type="tns:SlicerFontType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BorderFormat" type="tns:BorderFormat"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FillColor" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Ident" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HorizontalAlignment" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VerticalAlignment" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

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

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

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

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

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

SlicerFontType: Font specification for the slicer visual components.

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

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

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

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

Value	Name	Meaning
0	Automatic	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment general enumeration value.
1	Center	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment center enumeration value.
2	Left	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment left enumeration value.
3	Right	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment right enumeration value.
4	Fill	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment fill enumeration value.
5	Justify	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment justify enumeration value.
6	CenterAcrossSelection	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment centerContinuous enumeration value.
7	Distributed	Equivalent to the [ISO/IEC-29500-1] ST_HorizontalAlignment distributed enumeration value.
8	JustifyDistributed	Combination of Justify and Distributed enumeration values.

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

Value	Name	Meaning
0	Automatic	Equivalent to the [ISO/IEC-29500-1] ST_VerticalAlignment bottom enumeration value.
1	Top	Equivalent to the [ISO/IEC-29500-1] ST_VerticalAlignment top enumeration value.
2	Bottom	Equivalent to the [ISO/IEC-29500-1] ST_VerticalAlignment bottom enumeration value.
3	Center	Equivalent to the [ISO/IEC-29500-1] ST_VerticalAlignment center enumeration value.

2.2.4.38 SlicerFormatElementList

Namespace:

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

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

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

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

2.2.4.39 SlicerItem

Namespace:

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

Specifies the visual representation for a slicer item.

```
<xs:complexType name="SlicerItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NoData" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Hidden" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

DisplayName: Caption of the slicer item.

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

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

2.2.4.40 SlicerItemList

Namespace:

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

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

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

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

2.2.4.41 SlicerOptions

Namespace:

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

A container for common information related to a slicer.

```
<xs:complexType name="SlicerOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerCacheId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerViewId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerExternalSourceIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerItemsOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerItemsCount" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerClearItems" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SlicerVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsNov2" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

SlicerCacheId: An identifier that the protocol server uses in combination with **SlicerViewId** to identify a slicer. MUST be equal to the value of the **SlicerCacheId** attribute of the **CT_Slicer** element (as specified in [\[MS-EXSPXML\]](#) section 2.2.36).

SlicerViewId: An identifier that the protocol server uses in combination with **SlicerCacheId** to identify a slicer. MUST be equal to the value of the **SlicerViewId** attribute of the **CT_Slicer** element, as specified in [\[MS-EXSPXML\]](#) section 2.2.36.

SlicerExternalSourceIndex: The index of the connected data. MUST be equal to the value of the **ExternalSourceIndex** attribute of the **CT_Slicer** element, as specified in [\[MS-EXSPXML\]](#) section 2.2.36.

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

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

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

SlicerVersion: Current version of the slicer on the protocol client. MUST be equal to the value of the **Version** attribute of the **CT_Slicer** element, as specified in [\[MS-EXSPXML\]](#) section 2.2.36.

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

2.2.4.42 SlicerView

Namespace:

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

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

```

<xs:complexType name="SlicerView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="RequiresUpdate" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasEffectiveSelection" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemsToScrollBar" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CellDistance" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CellMargin" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Offset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Margin" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemWidth" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemHeight" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CaptionHeight" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ColCount" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RowCount" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ScrollbarVisible" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CaptionVisible" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="OlapSourced" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Name: The name of the slicer.

Caption: The caption of the slicer.

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

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

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

2.2.4.43 TypeExporter

Namespace:

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

MUST NOT be used.

```
<xs:complexType name="TypeExporter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="CellError" type="tns:CellError"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellCompoundValue"
type="tns:CellCompoundValue"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookGenerationOptions"
type="tns:WorkbookGenerationOptions"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestChartPngRequest"
type="tns:RestChartPngRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangePngRequest"
type="tns:RestRangePngRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPngResult" type="tns:RestPngResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestChartPngResult"
type="tns:RestChartPngResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPublishedObjectsRequest"
type="tns:RestPublishedObjectsRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPublishedObjectsResult"
type="tns:RestPublishedObjectsResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestWorkbookRequest"
type="tns:RestWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestWorkbookResult"
type="tns:RestWorkbookResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeValuesRequest"
type="tns:RestRangeValuesRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeValuesResult"
type="tns:RestRangeValuesResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeXmlRequest"
type="tns:RestRangeXmlRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeXmlResult"
type="tns:RestRangeXmlResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestODataRequest"
type="tns:RestODataRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestODataResult"
type="tns:RestODataResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestOpenWorkbookRequest"
type="tns:RestOpenWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestOpenWorkbookResult"
type="tns:RestOpenWorkbookResult"/>
  </xs:sequence>
</xs:complexType>
```

CellError: MUST NOT be used.

CellCompoundValue: MUST NOT be used.

WorkbookGenerationOptions: MUST NOT be used.

RestChartPngRequest: MUST NOT be used.

RestRangePngRequest: MUST NOT be used.

RestPngResult: MUST NOT be used.

RestChartPngResult: MUST NOT be used.

RestPublishedObjectsRequest: MUST NOT be used.

RestPublishedObjectsResult: MUST NOT be used.

RestWorkbookRequest: MUST NOT be used.

RestWorkbookResult: MUST NOT be used.

RestRangeValuesRequest: MUST NOT be used.

RestRangeValuesResult: MUST NOT be used.

RestRangeXmlRequest: MUST NOT be used.

RestRangeXmlResult: MUST NOT be used.

RestODataRequest: MUST NOT be used.

RestODataResult: MUST NOT be used.

RestOpenWorkbookRequest: MUST NOT be used.

RestOpenWorkbookResult: MUST NOT be used.

2.2.4.44 VisibleSheetRange

Namespace:

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

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

- If the **ExcelRange** element is present and not empty:
 - The sheet (2) of the **baseline range** is determined in the following manner:
 - If a sheet (2) was specified by **ExcelRange**, that is the sheet (2) which will be used.
 - Otherwise, the protocol server will locate a published item by matching **ObjectName** to the name of the published item.

- If a match is found, the sheet (2) which contains the matching published item MUST be used.
- Otherwise, the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#). The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.
- The protocol server will locate a published range which exactly matches **ExcelRange** on the **baseline range**'s sheet.
 - If a match is found, the published range is the **baseline range**.
 - Otherwise, the protocol server MUST locate a published item on the **baseline range**'s sheet (2), which exactly matches **ExcelRange**.
 - If a match was found, the published item is the **baseline range**.
 - Otherwise, the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#). The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.
- If **ExcelRange** is not present or is empty, the protocol server will locate **ObjectName** in all the published items that belong to the workbook by matching **ObjectName** to the name of the published item.
 - If a match was found, the **baseline range** MUST be the published item's range.
 - Otherwise, the protocol server MUST return an **ExcelServerMessage** as specified in the section [2.2.4.24](#). The **Id** element of the **ExcelServerMessage** MUST be **EcsInvalidNamedObject**.
- The protocol server MUST NOT use any range outside of the **baseline range** to retrieve data from.

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

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

- If **ExcelRange** is not present or is empty, the **baseline range** MUST be the range of the first published item.
- The protocol server MUST NOT use any range outside of the **baseline range** to retrieve data from.

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

- If **SheetName** is not present or empty, the **baseline range** MUST be the default sheet. Otherwise, **SheetName** MUST be the sheet (2) of the **baseline range**.
- If **FirstRow** is -1, the default row MUST be the first row (2) of the **baseline range**. Otherwise, **FirstRow** MUST be the first row (2) of the **baseline range**.
- If **FirstColumn** is -1, the default column MUST be the first column of the **baseline range**. Otherwise, **FirstColumn** MUST be the first column of the **baseline range**.
- First row (2) of **baseline range+VisibleRowsRequested** MUST be the last row (2) of the **baseline range**.
- First column of **baseline range+VisibleColumnsRequested** MUST be the last column of the **baseline range**.
- **FirstColumn** MUST be -1 if **FirstRow** is -1.
- **FirstRow** MUST be -1 if **FirstColumn** is -1.

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

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

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

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

The first column of the retrieved range MUST be:

- The first visible column at or after first column of **baseline range+VisibleFirstColumnOffset**, if **VisibleFirstColumnOffset** is greater than or equal to 0.

- The first visible column at or before first column of **baseline range+VisibleFirstColumnOffset**, if **VisibleFirstColumnOffset** is less than 0.
 - If **baseline range+VisibleFirstColumnOffset** is less than 0, the protocol server MUST return an **ExcelServerMessage** as specified in the section [2.2.4.24](#). The **Id** element of the **ExcelServerMessage** MUST be **SpecifiedRangeNotFound**.
- If there are less than **VisibleColumnsRequested** visible columns between that first visible column and the last visible column of the **baseline range**, the first column will be the first visible column such that there are **VisibleColumnsRequested** columns between it and the last visible column of **baseline range**.
- Greater than or equal to 0 and less than or equal to 16,383.

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

If the retrieved range is encompassed by a published chart, and either a) **ObjectName** is present and not empty, or b) **ObjectName** is not present or is empty, and the workbook contains published items, then the returned **Workbook** ([\[MS-EXSPXML\]](#) section 2.1.1) will contain the **CT_Images** element ([\[MS-EXSPXML\]](#) section 2.2.34) with a single **CT_Image** element ([\[MS-EXSPXML\]](#) section 2.2.33). The **type** attribute for the **CT_Image** element ([\[MS-EXSPXML\]](#) section 2.2.33) MUST be **chart**, as specified in [\[MS-EXSPXML\]](#) section 2.2.33.

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

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

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

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

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

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

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

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

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

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

CalculateVisibleOffsetFromOrigin: Specifies whether the protocol server will return information about the offsets for the first visible column and visible row (2), from the first column and row (2) of the **baseline range**. If **true**, then the returned **Workbook** ([\[MS-EXSPXML\]](#) section 2.1.1) will contain the **CurrentFirstRowVisibleOffset** and **CurrentFirstColumnVisibleOffset** attributes in the **CT_Table** element ([\[MS-EXSPXML\]](#) section 2.2.35).

NeedAllBorderValues: Specifies whether the protocol server will return information about all of the borders. MUST be present. If **true**, the protocol server returns information about all borders. If **false**, the protocol server returns information about the bottom and right borders, as specified in the **ST_enmBorderPosition** enumeration in [\[MS-EXSPXML\]](#) section 2.3.20.

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

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

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

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

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

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

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

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

RenderingOptions: Specifies options that the protocol servers MUST use when generating the returned **Workbook** ([MS-EXSPXML3] section 2.1.1) as follows:

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

2.2.4.45 WorkOnBehalf

Namespace:

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

MUST NOT be used.

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

UserName: MUST NOT be used.

UserSid: MUST NOT be used.

UserToken: MUST NOT be used.

UserTokenTtl: MUST NOT be used.

2.2.4.46 ArrayOfArrayOfString

Namespace:

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

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

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

ArrayOfString: Array of string elements.

2.2.4.47 ArrayOfPivotFieldListItem

Namespace:

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

The **ArrayOfPivotFieldListItem** type is an array of **PivotFieldListItem** elements (section [2.2.4.54](#)).

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

PivotFieldListItem: A **PivotFieldListItem** element as specified in section [2.2.4.54](#).

2.2.4.48 ArrayOfPublishedObjectName

Namespace:

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

The **ArrayOfPublishedObjectName** type is an array of **PublishedObjectName** elements (section [2.2.4.55](#)).

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

PublishedObjectName: A **PublishedObjectName** element as specified in section [2.2.4.55](#).

2.2.4.49 ArrayOfWorksheetChangeInfo

Namespace:

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

MUST NOT be used.

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

WorksheetChangeInfo: MUST NOT be used.

2.2.4.50 ArrayOfWorksheetData

Namespace:

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

An array of **WorksheetData** items.

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

WorksheetData: A **WorksheetData** item as specified in section [2.2.4.79](#).

2.2.4.51 CultureCommandParameter

Namespace:

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

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

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

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

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

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

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

TimeZone	=	Bias "#" StandardDate "#" StandardBias "#" DaylightDate "#" DaylightBias
Bias	=	"+"\"-\" 4DIGIT

TimeZone	=	Bias "#" StandardDate "#" StandardBias "#" DaylightDate "#" DaylightBias
StandardDate	=	Date %d84 Time
StandardBias	=	"+"\"-\" 4DIGIT
DaylightDate	=	Date %d84 Time
DaylightBias	=	"+"\"-\" 4DIGIT
Date	=	Year "-" Month "-" DayOfWeek "-" Day
Time	=	Hour ":" Minute ":" Second ":" Millisecond
Year	=	4DIGIT
Month	=	2DIGIT ; 01-12
DayOfWeek	=	2DIGIT ; 00-06 (Sunday-Saturday)
Day	=	2DIGIT ; 01-31
Hour	=	2DIGIT ; 00-23
Minute	=	2DIGIT ; 00-59
Second	=	2DIGIT ; 00-59
Millisecond	=	4DIGIT

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

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

Value	Meaning
00	Sunday

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

2.2.4.52 OpenWorkbookInParameters

Namespace:

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

Input parameters for **OpenWorkbook**.

```
<xs:complexType name="OpenWorkbookInParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Url" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Canary" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SubscriberId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns:OpenWorkbookFlags"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CultureCommandParameter"
type="tns:CultureCommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DocumentProperties"
type="xs:base64Binary"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WacUserSessionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PreviousSessionId" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Url: If **flags** does not contain the **NewWorkbook** value, the location of the workbook file. Otherwise, the **trusted location (1)** of the **new workbook session**. MUST be present. If the specified value is not a Uniform Resource Identifier (URI), as specified in [\[RFC2396\]](#), or a **Universal Naming Convention (UNC)**, the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.2](#), with the value of the **Id** element of the **ExcelServerMessage** set to one of the following:

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

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

Canary: MUST NOT be used.

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

Flags: Control flags, as specified in section [2.2.5.24](#)

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

DocumentProperties: MUST NOT be used.

WacUserSessionId: MUST NOT be used.

PreviousSessionId: If present, MUST be a session identifier (2) as returned in the **workbookId** as specified in **OpenWorkbookResponse** (section [3.1.4.30.2.2](#)). MUST NOT be present for any operations other than **OpenWorkbook**. MUST NOT be present for **OpenWorkbook** when a **workbookId** is present in **CommandParameter** (section [2.2.4.20](#)) in the request message of the same operation.

2.2.4.53 OpenWorkbookOutParameters

Namespace:

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

Output parameters for **OpenWorkbook**

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

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

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

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

2.2.4.54 PivotFieldListItem

Namespace:

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

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

```
<xs:complexType name="PivotFieldListItem" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Children"
      type="tns:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSet" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowFilterArrow" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

```

<xs:element minOccurs="1" maxOccurs="1" name="CanDrag" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="IsCollapsible" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="ShowCheckBox" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="IsCollapsed" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="IsChecked" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="UserRank" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="FilterImage" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="Image" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="InternalMargin" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="TypeTag" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="PivotTableIndex" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="PivotCacheIndex" type="xs:int"/>
<xs:element minOccurs="0" maxOccurs="1" name="ToolTip" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
<xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
</xs:sequence>
</xs:complexType>

```

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

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

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

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

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

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

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

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

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

Value	Meaning
0	Named set
1	Attribute hierarchy
2	User hierarchy
3	BIX (BI Explorer) selection

FilterImage: The PivotTable field filter image as specified by the **Image** element in the **PivotFieldListItem** (section [2.2.4.54](#)) complex type. MUST be present.

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

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

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

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

Value	Meaning
0	None
3	Measure
5	Hierarchy
7	Level
11	Dimension
13	Named set
17	Native
19	Measure group
23	Display folder
29	KPI root
31	KPI
37	KPI measure
39	Cube identity
41	Member folder

Value	Meaning
43	Member
47	Member properties folder
53	Member properties
59	MDX function folder
61	MDX function

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

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

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

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

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

2.2.4.55 PublishedObjectName

Namespace:

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

Specifies the name and type of a published item.

```
<xs:complexType name="PublishedObjectName" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:NamedObjectType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="TableId" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Name: The name of the published item. MUST be present.

Type: The type of the published item as specified in section [2.2.5.16](#).

TableId: The identifier of the published item.

2.2.4.56 RestChartPngRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.57.2.1](#)), indicates retrieving that an image representing a chart.

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

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ChartName" type="xs:string"/>
    </xs:sequence>
  </xs:extension>
</xs:complexContent>
</xs:complexType>

```

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

2.2.4.57 RestChartPngResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** when a **RestChartPngRequest** is passed as the input.

```

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

```

2.2.4.58 RestODataRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.57.2.1](#)), indicates retrieving an OData response, as specified in [\[MS-ODATA\]](#).

```

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

```

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

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

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

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

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

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

2.2.4.59 RestODataResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** when a **RestODataRequest** is passed as the input.

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

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

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

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

2.2.4.60 RestPngResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.57.2.2](#)) when a **RestRangePngRequest** (section [2.2.4.63](#)) is passed as the input and it is the base type for **RestChartPngResult** (section [2.2.4.57](#)).

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

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

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

2.2.4.61 RestPublishedObjectsRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.57.2.1](#)), indicates retrieving a list of published objects.

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

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

2.2.4.62 RestPublishedObjectsResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.57.2.2](#)) when a **RestPublishedObjectsRequest** (section [2.2.4.61](#)) is passed as the input.

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

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

2.2.4.63 RestRangePngRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.57.2.1](#)), indicates retrieving an image representing a range.

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

RangeName: MUST be specified. The name of the range to retrieve.

Nov: If true, then the **ShowHeaders** field of the **getRangeImageInformation** parameter of the **GetRangeImage** input (section [3.1.4.54.2.1](#)) will be set to 1, otherwise the **ShowHeaders** field will be set to 0.

2.2.4.64 RestRangeValuesRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.57.2.1](#)), indicates retrieving the sheet (2) cell values of a range.

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

```

        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType" nillable="true"
type="tns:NamedObjectType"/>
    </xs:sequence>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

Name: MUST be specified. If **NamedObjectType** is specified, then this field is interpreted as the name of a published item. Otherwise, this field MUST follow the **RangeReference** (section [2.2.5.18](#)) specification, with the following exceptions:

- The protocol server MUST support the R1C1 notation.
- If the value is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#), with the value of the **Id** element of the **ExcelServerMessage** set to **EcsInvalidNamedObject**.

NamedObjectType: If specified, this field indicates the type of named object represented by **Name**.

2.2.4.65 RestRangeValuesResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.57.2.2](#)) when a **RestRangeValuesRequest** (section [2.2.4.64](#)) is passed as the input.

```

<xs:complexType name="RestRangeValuesResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfAnyType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Values: The values of the sheet (2) cells. MUST be present. Each element inside the **Values** element MUST be of type **ArrayOfAnyType** and is a row (2) of sheet (2) cells on the protocol server. The number of rows (2) returned MUST be equal to the number of rows (2) requested in the **Name** element of the **RestRangeValuesRequest** (section [2.2.4.64](#)). Each element inside each of the **ArrayOfAnyType** type nested inside **Values** MUST be a single workbook sheet (2) cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of columns (2) requested in the **Name** element of the **RestRangeValuesRequest** (section [2.2.4.64](#)).

2.2.4.66 RestRangeXmlRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.57.2.1](#)), indicates retrieving a representation of a range as specified in [\[MS-EXSPXML3\]](#).

```

<xs:complexType name="RestRangeXmlRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectView" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

StateId: MUST be -1.

RangeName: MUST be specified. If it is not the name of a published item this field MUST follow the RangeReference (section [2.2.5.18](#)) specification, with the following exceptions:

- The protocol server MUST support the R1C1 notation.
- If the value is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#), with the value of the **Id** element of the **ExcelServerMessage** set to **EcsInvalidNamedObject**.

NamedObjectView: Specifies whether to interpret **RangeName** as a published item. If **true**, **RangeName** MUST be interpreted as a published item. Otherwise, **RangeName** MUST NOT be interpreted as a published item.

2.2.4.67 RestRangeXmlResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.57.2.2](#)) when a **RestRangeXmlRequest** (section [2.2.4.66](#)) is passed as the input.

```

<xs:complexType name="RestRangeXmlResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CommandResult"
type="tns:CommandResult"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsChromeRtl" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

CommandResult: The **result** field of the **GetRangeResponse** (section [3.1.4.21.2.2](#)).

IsChromeRtl: Set to true if the UI culture of the session (2) associated with the **ProcessRestRequest** operation (section [3.1.4.57](#)) defaults to right-to-left text ordering.

2.2.4.68 RestRequest

Namespace:

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

Base type for parameters passed to the **ProcessRestRequest** operation

```
<xs:complexType name="RestRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="OpenWorkbookInParameters"
      type="tns:OpenWorkbookInParameters"/>
    <xs:element xmlns:q2="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
      name="RequestSiteId" type="q2:guid"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SessionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ListOfCellsToSet"
      type="tns:ArrayOfRangeValuesA1"/>
  </xs:sequence>
</xs:complexType>
```

OpenWorkbookInParameters: Parameters to use when calling the **OpenWorkbook** operation. Mutually exclusive with **SessionId**.

RequestSiteId: Value to use for the **RequestSiteId** in the **CommandParameter** for all operations performed by the **ProcessRestRequest** operation. MUST be specified.

SessionId: A session identifier (2) to use for the **ProcessRestRequest** operation. Mutually exclusive with **OpenWorkbookInParameters**.

ListOfCellsToSet: If specified and of nonzero length, then the **SetRangeA1** operation will be performed using these values.

2.2.4.69 RestResult

Namespace:

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

Base type for the **result** field of **ProcessRestRequestResponse**.

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

OpenWorkbookOutParameters: Contains the **outParameters** from the **OpenWorkbookResponse** if the **OpenWorkbook** operation was executed during the **ProcessRestRequest** operation.

2.2.4.70 RestWorkbookRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input (section [3.1.4.57.2.1](#)), indicates retrieving a the workbook file.

```

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

```

2.2.4.71 RestWorkbookResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** (section [3.1.4.57.2.2](#)) when a **RestWorkbookRequest** (section [2.2.4.70](#)) is passed as the input.

```

<xs:complexType name="RestWorkbookResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="WorkbookBits" type="xs:base64Binary"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

WorkbookBits: The form of the requested workbook as specified in section [2.2.5.22](#).

2.2.4.72 SheetCell

Namespace:

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

Specifies the coordinates of a cell in a sheet (2).

```

<xs:complexType name="SheetCell" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Row" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

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

Row: The zero-based row (2) index of the cell's coordinates.

Column: The zero-based column (2) index of the cell's coordinates.

2.2.4.73 WorkbookGenerationOptions

Namespace:

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

Options controlling the execution of **GenerateWorkbookFromHtml**

```

<xs:complexType name="WorkbookGenerationOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Locale" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataCulture" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UICulture" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GenerateItems"
type="tns:WorkbookGenerationItems"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DarkColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DarkColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LightColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LightColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AccentColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AccentColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FontSize" type="xs:double"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Attribution" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

WorkbookName: The file name to be associated with the newly created new workbook session.

Locale: MUST NOT be used.

DataCulture: Specifies the data culture that the protocol server SHOULD use when creating the new workbook session.

UICulture: Specifies the ui culture that the protocol server SHOULD use when creating the new workbook session.

GenerateItems: Control flags for **GenerateWorkbookFromHtml**

DarkColor1: Specifies a color the protocol server SHOULD use in the new workbook session. If present, the format of the string MUST be "#RRGGBB", where RR is a two digit hexadecimal number representing the red value, GG is a two digit hexadecimal number representing the green value, and BB is a two digit hexadecimal number representing the blue value.

DarkColor2: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

LightColor1: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

LightColor2: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

AccentColor1: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

AccentColor2: Specifies a color the protocol server SHOULD use in the new workbook session, with the format specified in **DarkColor1**.

FontName: Specifies the name of the font that the protocol server SHOULD use in the new workbook session.

FontSize: Specifies the size of the font in points that the protocol server SHOULD use in the new workbook session.

Attribution: Specifies the value for a cell in the new workbook session. The protocol server MUST use this value if it is present.

2.2.4.74 WorkbookMetadata

Namespace:

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

This is a container that encapsulates information about features in the workbook.

```
<xs:complexType name="WorkbookMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Sheets" type="tns:ArrayOfWorksheetData"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetChanges"
type="tns:ArrayOfWorksheetChangeInfo"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HidePivotFieldList" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ServerEventMetadataList"
type="tns:ArrayOfServerEventMetadata"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WebExtensions"
type="tns:ArrayOfWebExtensionMetadata"/>
  </xs:sequence>
</xs:complexType>
```

Sheets: Contains an **ArrayOfWorksheetData** elements which is metadata for each sheet (1) in the workbook.

SheetChanges: Ignored by the protocol client.

HidePivotFieldList: Specifies whether the **PivotTable field list** is hidden. If the PivotTable field list is hidden, MUST be set to **true**. Otherwise, MUST be **false**.

ServerEventMetadataList: Contains an **ArrayOfServerEventMetadata** elements which is a list of **ServerEventMetadata** items which their version, as specified the **StateVersion** element of **ServerEventMetadata**, is greater than **ServerEventVersion** element value in **WorkbookMetadataState** sent the request.

WebExtensions: Contain an **ArrayOfWebExtensionMetadata** elements which is a list of **WebExtensionMetadata** items one for each Office Web Extension in the workbook.

2.2.4.75 WorkbookMetadataParameter

Namespace:

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

Container for workbook metadata.

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

WorkbookMetadataState: The workbook metadata state as specified in section [2.2.4.77](#).

2.2.4.76 WorkbookMetadataResult

Namespace:

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

Contains information about the state of features in the workbook.

```
<xs:complexType name="WorkbookMetadataResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataState"
type="tns:WorkbookMetadataState"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Metadata" type="tns:WorkbookMetadata"/>
  </xs:sequence>
</xs:complexType>
```

WorkbookMetadataState: MUST be present.

Metadata: MUST be present if the current operation is:

- **ApplyPivotFieldManagerHiddenState**
- **DdaAddBinding**
- **DdaReleaseBinding**

2.2.4.77 WorkbookMetadataState

Namespace:

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

State of an associated **WorkbookMetadata** as specified in section [2.2.4.74](#).

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

MetadataVersion: The version of the **WorkbookMetadata** item.

ServerEventVersion: The version of the **ServerEventMetadata** information of the **ServerEventMetadataList** element of a **WorkbookMetadata** item.

2.2.4.78 WorksheetChangeInfo

Namespace:

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

MUST NOT be used.

```
<xs:complexType name="WorksheetChangeInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StateVersion" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```



```

    <xs:element minOccurs="0" maxOccurs="1" name="NewName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

StateVersion: MUST NOT be used.

Name: MUST NOT be used.

NewName: MUST NOT be used.

Type: MUST NOT be used.

2.2.4.79 WorksheetData

Namespace:

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

Contains metadata for any sheet (1) in the workbook.

```

<xs:complexType name="WorksheetData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TabColor" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns:SheetFlags"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SheetType" type="tns:SheetType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Visibility" type="tns:SheetVisibility"/>
  </xs:sequence>
</xs:complexType>

```

Name: The name of the sheet (1).

TabColor: The color of the **sheet tab** for the sheet (1). If not present, the **default sheet tab color** MUST be used.

Flags: Specifies the options for the sheet (1).

SheetType: Indicates the type of the sheet (1).

Visibility: Indicates the visibility of the sheet (1).

2.2.4.80 RestOpenWorkbookRequest

Namespace:

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

When passed as the **request** parameter of the **ProcessRestRequest** input, indicates that the protocol server opens the workbook specified in section [3.1.4.57](#).

```

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

```

2.2.4.81 RestOpenWorkbookResult

Namespace:

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

This is the type of the **result** field of **ProcessRestRequestResponse** when a **RestOpenWorkbookRequest** is passed as the input.

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

SessionId: The session identifier (2) as described in section [3.1.4.57](#).

2.2.4.82 ArrayOfBindingMetadata

Namespace:

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

Unordered list of **BindingMetadata**.

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

BindingMetadata: A **BindingMetadata** item.

2.2.4.83 ArrayOfServerEventMetadata

Namespace:

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

An unordered list of **ServerEventMetadata** items.

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

ServerEventMetadata: A **ServerEventMetadata** item.

2.2.4.84 ArrayOfWebExtensionMetadata

Namespace:

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

An unordered list of **WebExtensionMetadata** items.

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

WebExtensionMetadata: A **WebExtensionMetadata** item.

2.2.4.85 BindingMetadata

Namespace:

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

Information about a single Office Web Extension binding that Excel uses to implement features related to bindings.

```
<xs:complexType name="BindingMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="BindingType" type="tns:DdaBindingType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Reference" type="tns:BindingReference"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasHeaders" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsValidRef" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

Name: The Office Web Extension defined name for a binding.

BindingType: Indicates the type of this binding.

Version: An integer that is incremented for a change in the size or location of this binding.

Reference: Describes the worksheet range that this binding represents.

HasHeaders: Specifies whether the binding includes a table header. MUST be **true** if the binding includes a table header and **false** otherwise.

IsValidRef: MUST be **true** if the worksheet range specified by **Reference** is a valid sheet (2) location and **false** otherwise.

2.2.4.86 BindingReference

Namespace:

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

Describes a simple worksheet range, intended for BindingMetadata to describe the range to which a binding refers.

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

SheetName: A string that specifies the sheet which contains the binding.

FirstRow: An integer that specifies starting row of the binding.

FirstColumn: An integer that specifies starting column of the binding.

LastRow: An integer that specifies ending row of the binding.

LastColumn: An integer that specifies the ending column of the binding.

2.2.4.87 DdaSettings

Namespace:

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

List of settings for an instance of an Office Web Extension.

```
<xs:complexType name="DdaSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Settings" type="tns:ArrayOfArrayOfString"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Settings: List of strings in key/value pairs that are the Office Web Extension settings.

Version: An integer that is incremented for any change in these settings.

2.2.4.88 ServerEventMetadata

Namespace:

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

An event of a particular type that occurred during server processing.

```
<xs:complexType name="ServerEventMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StateVersion" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ServerEventXml" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

StateVersion: The server event version. Incremented by the protocol server when a server event is generated.

ServerEventXml: XML data associated with a server event see **CT_ServerEvent** ([\[MS-EXSPXML3\]](#) section 2.2.46).

2.2.4.89 WebExtensionMetadata

Namespace:

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

Information associated with a Office Web Extension.

```
<xs:complexType name="WebExtensionMetadata" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WebExtensionId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BindingData"
type="tns:ArrayOfBindingMetadata"/>
  </xs:sequence>
</xs:complexType>
```

WebExtensionId: Unique value for every instance of an Office Web Extension. MUST be present.

BindingData: An unordered list of **BindingData** items that represent all bindings associated with an Office Web Extension.

2.2.4.90 ArrayOfClientUdfCall

Namespace:

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

A collection of ClientUdfCall elements.

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

ClientUdfCall: A ClientUdfCall element as specified in section [2.2.4.92](#).

2.2.4.91 ArrayOfClientUdfDefinition

Namespace:

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

A collection of ClientUdfDefinition elements.

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

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

ClientUdfDefinition: A ClientUdfDefinition element as specified in section [2.2.4.94](#).

2.2.4.92 ClientUdfCall

Namespace:

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

Represents the information needed for a single client side UDF result protocol server requires from the protocol client.

```
<xs:complexType name="ClientUdfCall" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Id" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UdfName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:ArrayOfAnyType"/>
  </xs:sequence>
</xs:complexType>
```

Id: MUST be present. An opaque string used by the protocol server to identify the client side UDF call when the protocol client sends the results to the protocol server as described in section [3.1.4.34.3.4](#).

UdfName: The name of the client side UDF for which the protocol server requires a result.

Parameters: The parameters of the client side UDF for which the protocol server requires a result.

2.2.4.93 ClientUdfCallInfo

Namespace:

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

Contains a list of ClientUdfCall elements that the protocol server requires from the protocol client to complete a workbook calculation.

```
<xs:complexType name="ClientUdfCallInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Calls" type="tns:ArrayOfClientUdfCall"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Calls: A collection of ClientUdfCall element as described in section [2.2.4.92](#).

CalcVersion: Represents a sequential counter maintained by the protocol server. The protocol client sends this number back to the protocol client together with the results of the client side UDF as described in [3.1.4.34.3.2](#).

2.2.4.94 ClientUdfDefinition

Namespace:

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

Represents a client side UDF that the protocol client can calculate for the server.

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

UdfName: MUST be present. The name of the client side UDF that the client protocol knows how to calculate. MUST be unique across the list of client side UDFs sent to the protocol server as part of ClientUdfListInfo as described in section [2.2.4.95](#).

IsVolatile: Specifies whether or not the client side UDF is volatile.

2.2.4.95 ClientUdfListInfo

Namespace:

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

Contains a list of ClientUdfDefinition element.

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

ClientUdfs: A list of ClientUdfDefinition elements, as described in section [2.2.4.94](#).

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
guid	Specifies a GUID value as specified in [RFC4122] .
ExcelServerMessageAppearance	Specifies the control buttons associated with an alert (2) that the protocol server returns to the protocol client.
ExcelServerMessageId	The ExcelServerMessageId type is an enumeration of alerts (2) returned from the protocol server.
ExcelServerMessageSeverity	Specifies the severity of the alert (2) that the protocol server returns to the protocol client.
ExcelServerMessageType	Specifies type of the alert (2) that the protocol server returns to the protocol client.
ServerStateFlags	Specifies the state of the protocol server.
AutoFilterCriteriaType	Specifies how data is to be filtered by the protocol server when

Simple type	Description
	using the AutoFilterOptions complex type (section 2.2.4.14).
CellError	The CellError type is an enumeration of a set of cell error values that a worksheet cell can contain.
CommandParameterFlags	Specifies various options to modify the behavior of operations.
AutoFilterDateNodeType	Specifies how AutoFilter dates data is filtered by the protocol server when using the AutoFilterDateNodeInfo (section 2.2.4.13).
ExcelServerMessageAppearance	Specifies a list of enumeration values corresponding to either control buttons or a Message Bar notification, which is associated with an alert (2) that the protocol server returns to the protocol client.
ExcelServerMessageId	The ExcelServerMessageId type is an enumeration of values, each of which corresponds to a particular alert (2) that is passed between the protocol client and the protocol server.
ExcelServerMessageSeverity	Specifies the severity of the alert (2) that the protocol server returns to the protocol client.
ExcelServerMessageType	Specifies the type of the alert (2) that the protocol server returns to the protocol client.
NamedObjectType	Specifies the type of a published item.
AutoFilterOperationType	Used to instruct the protocol server which comparison method to use when filtering worksheets or tables.
PivotFilterType	The PivotFilterType is an enumeration of types of PivotTable filters that can be applied on a PivotTable field.
RangeReference	A string which is used by the protocol server to identify a range on a worksheet in a workbook, in operations specified by this protocol.
AutoFilterRelationOperator	Specifies the relationship between an AutoFilterCriteria element (section 2.2.4.12) contained in an ArrayOfAutoFilterCriteria (section 2.2.4.2) and the one that potentially follows it.
ServerStateFlags	An enumeration specifying the state of the protocol server.
SessionIdentifier	The SessionIdentifier string is used to uniquely identify a session (2) on the protocol server, and to contain information about the session (2).
WorkbookType	The WorkbookType simple type is an enumeration that is used to specify the form of the requested workbook.

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

Simple type	Description
AutoFilterCriteriaType	Specifies how data is to be filtered by the protocol server when using the AutoFilterOptions complex type (section 2.2.4.14). Each enumeration value falls under one of three categories shown in

Simple type	Description								
	<p>the following table. The category that MUST be used is determined by the CT_item element, as specified in [MS-EXSPXML] section 2.2.18.</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>Agnostic</td> <td>Enumeration values falling under the Agnostic category can always be passed to the protocol server.</td> </tr> <tr> <td>Numeric</td> <td>Enumeration values falling under the Numeric category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, either missing or containing the string "Number".</td> </tr> <tr> <td>Calendar</td> <td>Enumeration values falling under the Calendar category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, containing the string "Date".</td> </tr> </tbody> </table>	Category	Meaning	Agnostic	Enumeration values falling under the Agnostic category can always be passed to the protocol server.	Numeric	Enumeration values falling under the Numeric category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, either missing or containing the string "Number".	Calendar	Enumeration values falling under the Calendar category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, containing the string "Date".
Category	Meaning								
Agnostic	Enumeration values falling under the Agnostic category can always be passed to the protocol server.								
Numeric	Enumeration values falling under the Numeric category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, either missing or containing the string "Number".								
Calendar	Enumeration values falling under the Calendar category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, containing the string "Date".								
AutoFilterDateNodeType	Specifies how AutoFilter dates data is filtered by the protocol server when using the AutoFilterDateNodeInfo (section 2.2.4.13).								
AutoFilterOperationType	Used to instruct the protocol server which comparison method to use when filtering worksheets or tables. All data that is being filtered is compared to the Value element in the AutoFilterCriteria complex type (section 2.2.4.12).								
AutoFilterRelationOperator	Specifies the relationship between an AutoFilterCriteria element (section 2.2.4.12), contained in an ArrayOfAutoFilterCriteria (section 2.2.4.2) and the one that potentially follows it.								
CellError	<p>The CellError type is an enumeration of a set of cell error values that a worksheet cell can contain.</p> <p>The CellError type MUST be used only in a cellValues element of GetRangeValuesResponse (section 3.1.4.23.2.2) and in a cellValues element of GetRangeValuesA1Response (section 3.1.4.24.2.2).</p>								
char	Specifies a character.								
CommandParameterFlags	Specifies various options to modify the behavior of operations.								
DdaBindingType	Type of Office Web Extension binding.								
DdaCoerceType	Describes the data format of a result from a DDA method.								
DdaFilterType	Specifies which type of cells the DDA is applied to.								
DdaValueType	The type of cell data used in the operation.								
duration	Specifies a duration of time.								
ExcelServerMessageAppearance	Specifies the control buttons associated with an alert (2) that the protocol server returns to the protocol client. The list MUST contain either only the value OK or the both the values Yes and No .								
ExcelServerMessageAppearance	Specifies a list of enumeration values corresponding to either control buttons or a Message Bar notification, which is associated with an alert								

Simple type	Description
	<p>(2) that the protocol server returns to the protocol client. The list MUST contain one of the following:</p> <ul style="list-style-type: none"> ▪ OK ▪ Notification ▪ Both Yes and No ▪ Both Notification and OK
ExcelServerMessageId	The ExcelServerMessageId type is an enumeration of alerts (2) returned from the protocol server.
ExcelServerMessageId	The 2.2.5.9 type is an enumeration of values, each of which corresponds to a particular alert (2) that is passed between the protocol client and the protocol server.
ExcelServerMessageSeverity	Specifies the severity of the alert (2) that the protocol server returns to the protocol client.
ExcelServerMessageSeverity	Specifies the severity of the alert (2) that the protocol server returns to the protocol client.
ExcelServerMessageType	Specifies type of the alert (2) that the protocol server returns to the protocol client.
ExcelServerMessageType	Specifies the type of the alert (2) that the protocol server returns to the protocol client.
GetPublishedObjectsOptions	Specifies criteria for the published items returned by the protocol server.
GridRenderingOptions	Specifies options to use when rendering a Workbook ([MS-EXSPXML] section 2.1.1).
guid	Specifies a GUID value, as specified in [RFC4122] .
guid	Specifies a GUID value, as specified in [RFC4122] .
NamedObjectType	Specifies the type of a published item.
OpenWorkbookFlags	Control flags for OpenWorkbook .
PivotFilterType	<p>The PivotFilterType is an enumeration of types of PivotTable filters that can be applied on a PivotTable field. The following types of PivotTable filters are supported:</p> <ul style="list-style-type: none"> ▪ Top N filter or bottom N filter ▪ PivotTable custom label filter ▪ PivotTable custom value filter
RangeReference	A string that is used by the protocol server to identify a range on a worksheet in a workbook, in operations specified by this protocol. MUST NOT be longer than 32,768 characters. MAY <8> use any format to identify the range.

Simple type	Description
ServerStateFlags	Specifies the state of the protocol server.
ServerStateFlags	An enumeration specifying the state of the protocol server.
SessionIdentifier	<p>The SessionIdentifier string is used to uniquely identify a session (2) on the protocol server, and to contain information about the session (2).</p> <p>The SessionIdentifier MUST have the following layout. (Numeric values in parts 1, 3, 5, 6, 8, 10, 12, and 14 MUST follow the s:integer type representation.)</p> <ul style="list-style-type: none"> ▪ Part 1: MUST be the value 1, followed by a period (.). ▪ Part 2: MUST be "E" if the identified session (2) is an edit session. MUST be "G" if the identified session (2) is a new workbook session created by GenerateWorkbookFromHtml. Otherwise, MUST be "V". ▪ Part 3: The number of characters in part 4, followed by a period (.). ▪ Part 4: A unique string. MUST be greater than or equal to 20 and less than or equal to 32,647 characters long. ▪ Part 5: The sum of number of characters in parts 6-11, followed by a period (.). ▪ Part 6: The number of characters in part 7, followed by a period (.). ▪ Part 7: The UI culture of the session (2). A language tag, as specified in [RFC1766], Section 2. ▪ Part 8: The number of characters in part 9, followed by a period (.). ▪ Part 9: The data culture of the session (2). A language tag, as specified in [RFC1766], Section 2. ▪ Part 10: The number of characters in part 11, followed by a period (.). ▪ Part 11: The time zone of the session (2) as specified in CultureCommandParameter complex type (section 3.1.4.20.3.1). ▪ Part 12: The number of characters in part 13, followed by a period (.). ▪ Part 13: MUST be equal to the value of RequestSiteId passed in parameter, in the OpenWorkbook operation. ▪ Part 14: The number of characters in part 15, followed by a period (.). ▪ Part 15: If the identified session (2) is a new workbook session created by GenerateWorkbookFromHtml, MUST be the trusted location (1) of the new workbook session. Else if the identified session (2) is any other new workbook session, then MUST be "U". <p>Otherwise, if the identified session (2) is not an edit session, MUST be "N". If the identified session (2) is an edit session, MUST be a unique string. The protocol server uses this string to uniquely identify a</p>

Simple type	Description
	participant in the session.
SharedPivotMenuAnchorType	Type information about a PivotTable or PivotTable anchor.
SheetFlags	Describes options for a sheet (1).
SheetType	Indicates the type of a sheet (1).
SheetVisibility	Indicates the visibility state of a sheet (2).
WorkbookGenerationItems	Control flags for GenerateWorkbookFromHtml
WorkbookType	The WorkbookType simple type is an enumeration that is used to specify the form of the requested workbook.

2.2.5.1 AutoFilterCriteriaType

Namespace:

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

Specifies how data is to be filtered by the protocol server when using the **AutoFilterOptions** complex type (section [2.2.4.14](#)).

Each enumeration value falls under one of three categories shown in the following table. The category that MUST be used is determined by the **CT_item** element, as specified in [\[MS-EXSPXML\]](#) section 2.2.18.

Category	Meaning
Agnostic	Enumeration values falling under the Agnostic category can always be passed to the protocol server.
Numeric	Enumeration values falling under the Numeric category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, either missing or containing the string "Number".
Calendar	Enumeration values falling under the Calendar category MUST be passed only for AutoFilters that have the DataType attribute of the CT_item element, as specified in [MS-EXSPXML] section 2.2.18, containing the string "Date".

```
<xs:simpleType name="AutoFilterCriteriaType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Nil"/>
    <xs:enumeration value="AboveAverage"/>
    <xs:enumeration value="BelowAverage"/>
    <xs:enumeration value="Tomorrow"/>
    <xs:enumeration value="Today"/>
    <xs:enumeration value="Yesterday"/>
    <xs:enumeration value="NextWeek"/>
    <xs:enumeration value="ThisWeek"/>
    <xs:enumeration value="LastWeek"/>
    <xs:enumeration value="NextMonth"/>
    <xs:enumeration value="ThisMonth"/>
    <xs:enumeration value="LastMonth"/>
    <xs:enumeration value="NextQuarter"/>
    <xs:enumeration value="ThisQuarter"/>
    <xs:enumeration value="LastQuarter"/>
  </xs:restriction>
</xs:simpleType>
```

```

<xs:enumeration value="NextYear"/>
<xs:enumeration value="ThisYear"/>
<xs:enumeration value="LastYear"/>
<xs:enumeration value="YearToDate"/>
<xs:enumeration value="Q1"/>
<xs:enumeration value="Q2"/>
<xs:enumeration value="Q3"/>
<xs:enumeration value="Q4"/>
<xs:enumeration value="M1"/>
<xs:enumeration value="M2"/>
<xs:enumeration value="M3"/>
<xs:enumeration value="M4"/>
<xs:enumeration value="M5"/>
<xs:enumeration value="M6"/>
<xs:enumeration value="M7"/>
<xs:enumeration value="M8"/>
<xs:enumeration value="M9"/>
<xs:enumeration value="M10"/>
<xs:enumeration value="M11"/>
<xs:enumeration value="M12"/>
<xs:enumeration value="LastCount"/>
</xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
Nil	MUST be used when the Criteria element of the AutoFilterOptions is present. Otherwise, MUST NOT be present. Category: Agnostic.
AboveAverage	Filters all numeric values that are greater than the average of the numeric values being filtered. Category: Numeric.
BelowAverage	Filters all numeric values that are less than the average of the numeric values being filtered. Category: Numeric.
Tomorrow	Filters all date values that are set to tomorrow's date. Category: Calendar.
Today	Filters all date values that are set to today's date. Category: Calendar.
Yesterday	Filters all date values that are set to yesterday's date. Category: Calendar.
NextWeek	Filters all date values that fall within next week. Category: Calendar.
ThisWeek	Filters all date values that fall within this week. Category: Calendar.
LastWeek	Filters all date values that fall within last week. Category: Calendar.
NextMonth	Filters all date values that fall within next month. Category: Calendar.
ThisMonth	Filters all date values that fall within this month. Category: Calendar.
LastMonth	Filters all date values that fall within last month. Category: Calendar.
NextQuarter	Filters all date values that fall within the next quarter. Category: Calendar.
ThisQuarter	Filters all date values that fall within this quarter. Category: Calendar.

Value	Meaning
LastQuarter	Filters all date values that fall within the last quarter. Category: Calendar.
NextYear	Filters all date values that fall within next year. Category: Calendar.
ThisYear	Filters all date values that fall within this year. Category: Calendar.
LastYear	Filters all date values that fall within the last year. Category: Calendar.
YearToDate	Filters all date values that occurred between the beginning of the year and up to and including the current date. Category: Calendar.
Q1	Filters all date values that fall within the first quarter of a year. Category: Calendar.
Q2	Filters all date values that fall the second quarter of a year. Category: Calendar.
Q3	Filters all date values that fall within the third quarter of a year. Category: Calendar.
Q4	Filters all date values that fall within the fourth quarter of a year. Category: Calendar.
M1	Filters all date values that fall within the first month of a year. Category: Calendar.
M2	Filters all date values that fall within the second month of a year. Category: Calendar.
M3	Filters all date values that fall within the third month of a year. Category: Calendar.
M4	Filters all date values that fall within the fourth month of a year. Category: Calendar.
M5	Filters all date values that fall within the fifth month of a year. Category: Calendar.
M6	Filters all date values that fall within the sixth month of a year. Category: Calendar.
M7	Filters all date values that fall within the seventh month of a year. Category: Calendar.
M8	Filters all date values that fall within the eighth month of a year. Category: Calendar.
M9	Filters all date values that fall within the ninth month of a year. Category: Calendar.
M10	Filters all date values that fall within the tenth month of a year. Category: Calendar.
M11	Filters all date values that fall within the eleventh month of a year. Category: Calendar.
M12	Filters all date values that fall within the twelfth month of a year. Category: Calendar.
LastCount	MUST NOT be used.

2.2.5.2 AutoFilterDateNodeType

Namespace:

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

Specifies how AutoFilter dates data is filtered by the protocol server when using the **AutoFilterDateNodeInfo** (section [2.2.4.13](#)).

```
<xs:simpleType name="AutoFilterDateNodeType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Nil"/>
    <xs:enumeration value="Year"/>
    <xs:enumeration value="Month"/>
  </xs:restriction>
</xs:simpleType>
```

```

<xs:enumeration value="Day"/>
<xs:enumeration value="Hour"/>
<xs:enumeration value="Minute"/>
<xs:enumeration value="Second"/>
<xs:enumeration value="Max"/>
</xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
Nil	Specifies that the value in AutoFilterDateNodeInfo is excluded from the filtered values of the AutoFilter .
Year	Specifies that the Year element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Month	Specifies that the Month element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Day	Specifies that the Day element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Hour	Specifies that the Hour element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Minute	Specifies that the Minute element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Second	Specifies that the Second element value in AutoFilterDateNodeInfo is included in the filtered values of the AutoFilter .
Max	MUST NOT be used.

2.2.5.3 AutoFilterOperationType

Namespace:

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

Used to instruct the protocol server which comparison method to use when filtering worksheets or tables. All data that is being filtered is compared to the **Value** element in the **AutoFilterCriteria** complex type (section [2.2.4.12](#)).

```

<xs:simpleType name="AutoFilterOperationType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="EQ"/>
    <xs:enumeration value="NEQ"/>
    <xs:enumeration value="GT"/>
    <xs:enumeration value="GTEQ"/>
    <xs:enumeration value="LT"/>
    <xs:enumeration value="LTEQ"/>
    <xs:enumeration value="LastCount"/>
  </xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
EQ	Filter all data that is equal to the value.
NEQ	Filter all data that is not equal to the value.
GT	Filter all data that is greater than the value.
GTEQ	Filter all data that is either greater than or equal to the value.
LT	Filter all data that is less than the value.
LTEQ	Filter all data that is less than or equal to the value.
LastCount	MUST NOT be used.

2.2.5.4 AutoFilterRelationOperator

Namespace:

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

Specifies the relationship between an **AutoFilterCriteria** element (section 2.2.4.12), contained in an **ArrayOfAutoFilterCriteria** (section 2.2.4.2) and the one that potentially follows it.

```
<xs:simpleType name="AutoFilterRelationOperator" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Nil"/>
    <xs:enumeration value="And"/>
    <xs:enumeration value="Or"/>
    <xs:enumeration value="LastCount"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Nil	See the Relation element in the AutoFilterCriteria section.
And	See the Relation element in the AutoFilterCriteria section. The protocol server will satisfy the conditions specified both in the AutoFilterCriteria that contains this value and in the one coming after it in the ArrayOfAutoFilterCriteria .
Or	See the Relation element in the AutoFilterCriteria section. The protocol server will satisfy the conditions specified in the AutoFilterCriteria that contains this value or in the one coming after it in the ArrayOfAutoFilterCriteria .
LastCount	MUST NOT be used.

2.2.5.5 CellError

Namespace:

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

The **CellError** type is an enumeration of a set of cell error values that a worksheet cell can contain.

The **CellError** type MUST be used only in a **cellValues** element of **GetRangeValuesResponse** (section [3.1.4.23.2.2](#)) and in a **cellValues** element of **GetRangeValuesA1Response** (section [3.1.4.24.2.2](#)).

```
<xs:simpleType name="CellError" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Div0"/>
    <xs:enumeration value="NotApplicable"/>
    <xs:enumeration value="Name"/>
    <xs:enumeration value="Null"/>
    <xs:enumeration value="Num"/>
    <xs:enumeration value="Ref"/>
    <xs:enumeration value="Value"/>
    <xs:enumeration value="GettingData"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
None	Worksheet cell contains a value that does not result in an error.
Div0	Worksheet cell contains a number that is divided by 0.
NotApplicable	Worksheet cell contains a value not available to a formula .
Name	Worksheet cell contains text not recognized by a formula.
Null	Worksheet cell contains an intersection of two areas that do not intersect.
Num	Worksheet cell contains invalid numeric values in a formula.
Ref	Worksheet cell contains a reference (3) that is not valid.
Value	Worksheet cell contains a formula that includes worksheet cells that contain different data types.
GettingData	Worksheet cell contains a value that is still being evaluated.

2.2.5.6 CommandParameterFlags

Namespace:

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

Specifies various options to modify the behavior of operations.

```
<xs:simpleType name="CommandParameterFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ForceOneTimeRecalc"/>
        <xs:enumeration value="SuppressOneTimeRecalc"/>
        <xs:enumeration value="LogCpuTime"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

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

```

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

Value	Meaning
ForceOneTimeRecalc	If the current operation is a state changing operation the protocol server will calculate the workbook before returning the response.
SuppressOneTimeRecalc	The protocol server will not calculate the workbook before returning the response for the current operation.
LogCpuTime	MUST be ignored by the protocol server.

2.2.5.7 ExcelServerMessageAppearance

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

Specifies the control buttons associated with an alert (2) that the protocol server returns to the protocol client. The list MUST contain either only the value **OK** or the both the values **Yes** and **No**.

```

<xs:simpleType name="ExcelServerMessageAppearance"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="OK"/>
        <xs:enumeration value="Cancel"/>
        <xs:enumeration value="Yes"/>
        <xs:enumeration value="No"/>
        <xs:enumeration value="Notification"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

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

Value	Meaning
None	MUST NOT be used.
OK	An OK control button.
Cancel	MUST NOT be used.
Yes	A Yes control button.
No	A No control button.
Notification	MUST NOT be used.

2.2.5.8 ExcelServerMessageAppearance

Namespace:

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

Specifies a list of enumeration values corresponding to either control buttons or a Message Bar notification, which is associated with an alert (2) that the protocol server returns to the protocol client. The list **MUST** contain one of the following:

- **OK**
- **Notification**
- Both **Yes** and **No**
- Both **Notification** and **OK**

```
<xs:simpleType name="ExcelServerMessageAppearance"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="OK"/>
        <xs:enumeration value="Cancel"/>
        <xs:enumeration value="Yes"/>
        <xs:enumeration value="No"/>
        <xs:enumeration value="Notification"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

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

Value	Meaning
None	MUST NOT be used.
OK	An OK control button.
Cancel	MUST NOT be used.
Yes	A Yes control button.
No	A No control button.
Notification	A Message Bar notification.

2.2.5.9 ExcelServerMessageId

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

The **ExcelServerMessageId** type is an enumeration of alerts (2) returned from the protocol server.

```
<xs:simpleType name="ExcelServerMessageId" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
```

```
<xs:enumeration value="Blank"/>
<xs:enumeration value="InternalError"/>
<xs:enumeration value="NotMemberOfRole"/>
<xs:enumeration value="EncryptionTooLow"/>
<xs:enumeration value="ConfirmDataRefresh"/>
<xs:enumeration value="ExternalDataRefreshFailed"/>
<xs:enumeration value="ExternalDataRefreshFailedReal"/>
<xs:enumeration value="ExternalDataRefreshFailedReadOnly"/>
<xs:enumeration value="NoAccessToOdcReadOnly"/>
<xs:enumeration value="ErrorConnectingToDataSourceReadOnly"/>
<xs:enumeration value="InvalidUserNameOrPasswordReadOnly"/>
<xs:enumeration value="InvalidUserNameOrPassword"/>
<xs:enumeration value="ExternalDataNotAllowedOnTL"/>
<xs:enumeration value="InvalidUriOrLocalConnectionPath"/>
<xs:enumeration value="DclNotTrusted"/>
<xs:enumeration value="OdcFileDoesNotExist"/>
<xs:enumeration value="ErrorAccessingSsoFromEcs"/>
<xs:enumeration value="SsoError"/>
<xs:enumeration value="ErrorConnectingToDataSource"/>
<xs:enumeration value="UnattendedAccountNotConfigured"/>
<xs:enumeration value="IncorrectAuthUsed"/>
<xs:enumeration value="ExternalDataRefreshFailed_Details"/>
<xs:enumeration value="PivotNoOverlapAllowed"/>
<xs:enumeration value="PivotOverlapList"/>
<xs:enumeration value="PivotCubeNotUnique"/>
<xs:enumeration value="NoDataItemsOlap"/>
<xs:enumeration value="OlapSchemaFail"/>
<xs:enumeration value="InvalidPivot"/>
<xs:enumeration value="OlapNoMoreDetail"/>
<xs:enumeration value="DrillActionInvalid"/>
<xs:enumeration value="DriverNotOlap"/>
<xs:enumeration value="CubeMissing"/>
<xs:enumeration value="SkipLine"/>
<xs:enumeration value="CDimMismatch"/>
<xs:enumeration value="DataSetAxisTooBig"/>
<xs:enumeration value="CubeIntegrityError"/>
<xs:enumeration value="PivotNotExpandedtoProtectCellContents"/>
<xs:enumeration value="PivotTruncatedSheetEdge"/>
<xs:enumeration value="DdlGrpNotSup"/>
<xs:enumeration value="PivotFormulasCollided"/>
<xs:enumeration value="NoRetItems"/>
<xs:enumeration value="OlapConnectVisualModeProvider"/>
<xs:enumeration value="PivotNoSourceData"/>
<xs:enumeration value="PivotFilteringError"/>
<xs:enumeration value="PivotTableIncorrectDateFormat"/>
<xs:enumeration value="PivotTableEndingLargerThanStarting"/>
<xs:enumeration value="PivotTableIncorrectNumberFormat"/>
<xs:enumeration value="PivotTableOutOfRange"/>
<xs:enumeration value="MergedCellOverlap"/>
<xs:enumeration value="PivotSourceNotAvailable"/>
<xs:enumeration value="UnexpectedPivotError"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownReason"/>
<xs:enumeration value="EditModeCannotAcquireLock"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownUser"/>
<xs:enumeration value="EditModeWorkbookCheckedOutRequired"/>
<xs:enumeration value="EditModeWorkbookCheckedOutToLocalDrafts"/>
<xs:enumeration value="SiteTooBusy"/>
<xs:enumeration value="SiteCollectionMemoryQuotaExceeded"/>
<xs:enumeration value="SessionMemoryQuotaExceeded"/>
```

<xs:enumeration value="SiteCollectionChartQuotaExceeded"/>
<xs:enumeration value="RequestLimitsExceeded"/>
<xs:enumeration value="SavingUnsupportedInViewMode"/>
<xs:enumeration value="SavingWorkbookNoWorkbookName"/>
<xs:enumeration value="FileSaveGeneric"/>
<xs:enumeration value="SavingWorkbookInvalidPermissions"/>
<xs:enumeration value="SavingWorkbookLockedOrCheckedOut"/>
<xs:enumeration value="SavingWorkbookNotCheckedOut"/>
<xs:enumeration value="SavingWorkbookAccessDenied"/>
<xs:enumeration value="SavingWorkbookInvalidFileType"/>
<xs:enumeration value="SavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookNotTrustedLocation"/>
<xs:enumeration value="SavingWorkbookInvalidLocation"/>
<xs:enumeration value="SavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookTrustedLocationSettingWarning"/>
<xs:enumeration value="SavingWorkbookAlmostTooLarge"/>
<xs:enumeration value="SavingWorkbookTooLarge"/>
<xs:enumeration value="NewWorkbookInvalidLocation"/>
<xs:enumeration value="FileOpenSecuritySettings"/>
<xs:enumeration value="FileOpenNotFound"/>
<xs:enumeration value="FileOpenAccessDenied"/>
<xs:enumeration value="FileCorrupt"/>
<xs:enumeration value="OpenWorkbookTooLarge"/>
<xs:enumeration value="OpenWorkbookLocationNotTrusted"/>
<xs:enumeration value="OpenWorkbookAccessDenied"/>
<xs:enumeration value="WorkbookNotSupported"/>
<xs:enumeration value="WorkbookNotSupportedViewRight"/>
<xs:enumeration value="UnsupportedFeatureViewWarning"/>
<xs:enumeration value="UnsupportedFeatureSaveCopyWarning"/>
<xs:enumeration value="ExternalWorkbookLinksDisabled"/>
<xs:enumeration value="WorkbookLockedRead"/>
<xs:enumeration value="EditModeCannotEditNonSharePointWorkbook"/>
<xs:enumeration value="EditModeAccessDenied"/>
<xs:enumeration value="GenericFileOpenError"/>
<xs:enumeration value="IRMedWorkbook"/>
<xs:enumeration value="ParameterInvalid"/>
<xs:enumeration value="ParameterLimitExceeded"/>
<xs:enumeration value="WorkbookInternalLimit"/>
<xs:enumeration value="OldFormatConversionFailed"/>
<xs:enumeration value="EditModeWorkbookExternalData"/>
<xs:enumeration value="FormulaEditingNotEnabled"/>
<xs:enumeration value="DimensionMismatch"/>
<xs:enumeration value="SetRangeFailure"/>
<xs:enumeration value="ObjectTypeNotSupported"/>
<xs:enumeration value="ParameterDoesNotExist"/>
<xs:enumeration value="FormulaParseFailed"/>
<xs:enumeration value="SetParameterFailure"/>
<xs:enumeration value="CannotEditPivotTable"/>
<xs:enumeration value="InsDelCellsNonblankCells"/>
<xs:enumeration value="InsDelCellsArrayFmla"/>
<xs:enumeration value="InsDelCellsPivotTable"/>
<xs:enumeration value="InsDelCellsTable"/>
<xs:enumeration value="InsDelCellsMergedCells"/>
<xs:enumeration value="InsDelCellsDatatable"/>
<xs:enumeration value="InsDelCellsRowsForWholeColumn"/>
<xs:enumeration value="InsDelCellsColumnsForWholeRow"/>
<xs:enumeration value="InsertChartPivotTable"/>

```
<xs:enumeration value="SuggestChartNoNumericData"/>
<xs:enumeration value="SuggestChartFailed"/>
<xs:enumeration value="PivotChartInteractivityMissingWarning"/>
<xs:enumeration value="EditChartTitleTooLong"/>
<xs:enumeration value="EditChartTitleStartsWithEquals"/>
<xs:enumeration value="EditChartDataTooLong"/>
<xs:enumeration value="EditChartDataInvalidReference"/>
<xs:enumeration value="EditChartDataOverlapsPivotTable"/>
<xs:enumeration value="ChartOperationNotSupported"/>
<xs:enumeration value="EditChartDataPivotChart"/>
<xs:enumeration value="ChangeChartTypePivotScatter"/>
<xs:enumeration value="ChartTooManyDataSeries"/>
<xs:enumeration value="InvalidSheetName"/>
<xs:enumeration value="RangeParseError"/>
<xs:enumeration value="SpecifiedRangeNotFound"/>
<xs:enumeration value="RangeDefinitionError"/>
<xs:enumeration value="DiscontiguousRangeNotSupported"/>
<xs:enumeration value="RangeRequestAreaExceeded"/>
<xs:enumeration value="SheetRangeMismatch"/>
<xs:enumeration value="ImageGenFailed"/>
<xs:enumeration value="ApiInvalidArgument"/>
<xs:enumeration value="ApiInvalidCoordinate"/>
<xs:enumeration value="ConfirmationUnsupported"/>
<xs:enumeration value="ApiInvalidDimensionReturned"/>
<xs:enumeration value="ApiMissingSiteContext"/>
<xs:enumeration value="Ewr_IllegalPageSize"/>
<xs:enumeration value="Ewr_WorkbookNotSpecified"/>
<xs:enumeration value="Ewr_LoadProgress"/>
<xs:enumeration value="Ewr_FileCorrupt"/>
<xs:enumeration value="Ewr_WorkbookNotSupported"/>
<xs:enumeration value="Ewr_GenericFileOpenError"/>
<xs:enumeration value="Ewr_InvalidParameterGeneric"/>
<xs:enumeration value="Ewr_InvalidParameterMandatoryMissing"/>
<xs:enumeration value="Ewr_InvalidParameterUnexpectedFormat"/>
<xs:enumeration value="Ewr_InvalidParameterOutOfRange"/>
<xs:enumeration value="Ewr_InvalidParameterOperationNotAllowed"/>
<xs:enumeration value="Ewr_ParameterInvalid"/>
<xs:enumeration value="Ewr_ParameterLimitExceeded"/>
<xs:enumeration value="Ewr_ParameterDoesNotExist"/>
<xs:enumeration value="Ewr_SetParameterFailure"/>
<xs:enumeration value="Ewr_SetParameterFailureOnOpen"/>
<xs:enumeration value="Ewr_ParameterReadFromDocPropsError"/>
<xs:enumeration value="Ewr_FormulaEditingNotEnabled"/>
<xs:enumeration value="Ewr_InvalidVisibleItem"/>
<xs:enumeration value="Ewr_EditSaveAsOverCurrentWorkbook"/>
<xs:enumeration value="Ewr_RequestTimedOut"/>
<xs:enumeration value="Ewr_ServerCommunicationError"/>
<xs:enumeration value="Ewr_ServerAuthenticationError"/>
<xs:enumeration value="Ewr_Top10InvalidValue"/>
<xs:enumeration value="Ewr_Top10InvalidValue_Float"/>
<xs:enumeration value="Mewa_PageStateInitFailed"/>
<xs:enumeration value="Mewa_CriticalParameterMissing"/>
<xs:enumeration value="Mewa_GridViewRenderingFailed"/>
<xs:enumeration value="Mewa_FeatureNotActive"/>
<xs:enumeration value="OperationNotSupportedInViewOnly"/>
<xs:enumeration value="OperationOnInvalidState"/>
<xs:enumeration value="InvalidOrTimedOutSession"/>
<xs:enumeration value="InvalidOrTimedOutSessionRecoverable"/>
<xs:enumeration value="InvalidOrTimedOutSessionPageRefresh"/>
```

```
<xs:enumeration value="ScratchPadChangesLost"/>
<xs:enumeration value="MaxSessionsPerUserExceeded"/>
<xs:enumeration value="OperationCanceled"/>
<xs:enumeration value="MaxRequestDurationExceeded"/>
<xs:enumeration value="NoOccurrencesFound"/>
<xs:enumeration value="EcsInvalidNamedObject"/>
<xs:enumeration value="NoPublishedItems"/>
<xs:enumeration value="RetryError"/>
<xs:enumeration value="StopOpenOnRefreshFailure"/>
<xs:enumeration value="ProductExpired"/>
<xs:enumeration value="SortActionInvalid"/>
<xs:enumeration value="SortActionNotSupportedWithPivot"/>
<xs:enumeration value="CircularReferencesFound"/>
<xs:enumeration value="SessionNotFound"/>
<xs:enumeration value="NewWorkbookSessionTimeout"/>
<xs:enumeration value="NewWorkbookSessionTimeoutRecoverable"/>
<xs:enumeration value="EditXLSFile"/>
<xs:enumeration value="UnsupportedFeatureEditWarning"/>
<xs:enumeration value="EditModeSessionExists"/>
<xs:enumeration value="NewerWorkbookExists"/>
<xs:enumeration value="ExternalDataOfficeLive"/>
<xs:enumeration value="PowerPivotOfficeLive"/>
<xs:enumeration value="LostAuthentication"/>
<xs:enumeration value="ListEntryNotFound_1"/>
<xs:enumeration value="ListEntryNotFound_2"/>
<xs:enumeration value="ListEntryAlreadyExists_1"/>
<xs:enumeration value="ListEntryAlreadyExists_2"/>
<xs:enumeration value="InvalidArgumentValue"/>
<xs:enumeration value="MissingArgumentName"/>
<xs:enumeration value="InvalidArgumentName"/>
<xs:enumeration value="ArgumentBadInRemove"/>
<xs:enumeration value="ManagementUIListEntryAlreadyExists"/>
<xs:enumeration value="ManagementUIListEntryNotFound"/>
<xs:enumeration value="ManagementUIInternalError"/>
<xs:enumeration value="UnsupportedUICulture"/>
<xs:enumeration value="UnsupportedDataCulture"/>
<xs:enumeration value="SpecifiedItemNotFound"/>
<xs:enumeration value="EcsSnapshotAccessDenied"/>
<xs:enumeration value="SaveFailed"/>
<xs:enumeration value="WrongEcs"/>
<xs:enumeration value="PasteDataLimitHit"/>
<xs:enumeration value="UndoStackEmpty"/>
<xs:enumeration value="RedoStackEmpty"/>
<xs:enumeration value="UndoRedoCollabFail"/>
<xs:enumeration value="HyperlinkLocationRequired"/>
<xs:enumeration value="CollabLocaleMismatch"/>
<xs:enumeration value="LocaleRestored"/>
<xs:enumeration value="InvalidEditSession"/>
<xs:enumeration value="InvalidEditSessionPageRefresh"/>
<xs:enumeration value="InvalidEditSessionId"/>
<xs:enumeration value="UnableToLoadEditSession"/>
<xs:enumeration value="SavingWorkbookFailed"/>
<xs:enumeration value="RefreshLockFailed"/>
<xs:enumeration value="InvalidChartName"/>
<xs:enumeration value="RetryOutOfSync"/>
<xs:enumeration value="OperationFailed"/>
<xs:enumeration value="OpenInExcelActiveXError"/>
<xs:enumeration value="OpenInExcelCollaborationError"/>
<xs:enumeration value="ProcessingUserChangesFileDownloadIgnored"/>
```

```

<xs:enumeration value="PhoneticDataLossWarning"/>
<xs:enumeration value="NoLicenseError"/>
<xs:enumeration value="NoUnsupportedFeatureCopyAndEdit"/>
<xs:enumeration value="CrossEnvironmentEditNotSupported"/>
<xs:enumeration value="RestBiff8Unsupported"/>
<xs:enumeration value="TransitionXls"/>
<xs:enumeration value="UnsupportedFeaturesSaveOverwrite"/>
<xs:enumeration value="UnsupportedFeaturesSaveCopy"/>
<xs:enumeration value="ChallengeAnonymousUser"/>
<xs:enumeration value="ClipboardAccessDenied"/>
<xs:enumeration value="CannotMergeCellsInTable"/>
<xs:enumeration value="MergeCellsLoseData"/>
<xs:enumeration value="CollabConflictError"/>
<xs:enumeration value="OdfCompatibilityWarning"/>
<xs:enumeration value="OdfUnsupportedEncryption"/>
<xs:enumeration value="OdfUnreadableContentGeneric"/>
<xs:enumeration value="Ewr_OdfUnreadableContentGeneric"/>
<xs:enumeration value="XLSMacroFailure"/>
<xs:enumeration value="XLSPreBiff8Failure"/>
<xs:enumeration value="XLSPasswordProtectionFailure"/>
<xs:enumeration value="XLSIRMFailure"/>
<xs:enumeration value="XLSUnknownFailures"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidProperty"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidGenerationItems"/>
<xs:enumeration value="GenerateWorkbookFailureTable"/>
<xs:enumeration value="GenerateWorkbookFailureConditionalFormatting"/>
<xs:enumeration value="GenerateWorkbookFailureSlicers"/>
<xs:enumeration value="GenerateWorkbookFailureChart"/>
<xs:enumeration value="GenerateWorkbookFailureOpenWorkbook"/>
<xs:enumeration value="GenerateWorkbookFailureUpdateTheme"/>
<xs:enumeration value="GenerateWorkbookFailureAttribution"/>
<xs:enumeration value="CrossDomainAjaxNotSupported"/>
<xs:enumeration value="WorkbookNotInCollection"/>
<xs:enumeration value="Count"/>
</xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
Blank	MUST NOT be used.
InternalError	An unexpected error occurred in the protocol server.
NotMemberOfRole	The user does not have permissions to complete the operation.
EncryptionTooLow	The protocol server is configured to accept only HTTPS, and the protocol client has tried to connect with a non HTTPS.
ConfirmDataRefresh	An connected data refresh confirmation is requested by the protocol client before connected data refresh on a workbook.
ExternalDataRefreshFailed	Connected data refresh failed.

Value	Meaning
ExternalDataRefreshFailedReal	Connected data refresh failed.
ExternalDataRefreshFailedReadOrViewOnly	Connected data refresh failed.
NoAccessToOdcReadOrViewOnly	Connected data refresh failed.
ErrorConnectingToDataSourceReadOrViewOnly	Connected data refresh failed.
InvalidUserNameOrPasswordReadOrViewOnly	Connected data refresh failed.
InvalidUserNameOrPassword	Connected data refresh failed.
ExternalDataNotAllowedOnTL	Connected data refresh failed.
InvalidUriorLocalConnectionPath	Connected data refresh failed.
DclNotTrusted	Connected data refresh failed.
OdcFileDoesNotExist	Connected data refresh failed.
ErrorAccessingSsoFromEcs	Connected data refresh failed.
SsoError	Connected data refresh failed.
ErrorConnectingToDataSource	Connected data refresh failed.
UnattendedAccountNotConfigured	Connected data refresh failed.
IncorrectAuthUsed	Connected data refresh failed.
ExternalDataRefreshFailed_Details	Connected data refresh failed.
PivotNoOverlapAllowed	A PivotTable grew to the point where it would overlap another PivotTable.
PivotOverlapList	A PivotTable grew to the point where it would overlap a list (2) .
PivotCubeNotUnique	An OLAP query found more than one cube of the same name.
NoDataItemsOlap	An OLAP query found nothing to display.
OlapSchemaFail	An OLAP query was unable to fetch the schema of the cube.
InvalidPivot	A PivotTable is not valid.
OlapNoMoreDetail	A PivotTable has reached the lowest level of detail.
DrillActionInvalid	A PivotTable member cannot be expanded any further.
DriverNotOlap	The database does not support OLAP.
CubeMissing	The OLAP query was unable to locate the cube in the database.
SkipLine	Not all data received from the OLAP query could be displayed.

Value	Meaning
CDimMismatch	The OLAP data provider returned an unexpected number of dimensions .
DataSetAxisTooBig	The row (2) or column (2) area of the PivotTable is too large.
CubeIntegrityError	There was a problem with the structure of the OLAP cube.
PivotNotExpandedtoProtectCellContents	The PivotTable would have filled worksheet cells that already contain values so the operation was canceled.
PivotTruncatedSheetEdge	The PivotTable was truncated by a worksheet edge.
DdlGrpNotSup	The PivotTable operation is not supported by the OLAP data provider.
PivotFormulasCollided	Some calculated PivotTable members were removed from the PivotTable because new PivotTable members of the same name appeared during refresh.
NoRetItems	The query of the PivotTable page field did not return any items.
OlapConnectVisualModeProvider	The PivotTable operation is not supported by the OLAP data provider.
PivotNoSourceData	The PivotTable was saved without the underlying data.
PivotFilteringError	The PivotTable could not be filtered.
PivotTableIncorrectDateFormat	The date used to filter the PivotTable is not valid.
PivotTableEndingLargerThanStarting	The pair of starting and ending values used to filter the PivotTable is not valid.
PivotTableIncorrectNumberFormat	A non-numeric value was used to filter the PivotTable, when a numeric value was required.
PivotTableOutOfRange	An out of range value was used to filter the PivotTable.
MergedCellOverlap	The PivotTable could not grow over part of a merged cell .
PivotSourceNotAvailable	The PivotTable could not be refreshed because its source is missing.
UnexpectedPivotError	The PivotTable has encountered an unexpected error.
EditModeCannotAcquireLockUnknownReason	An attempt to acquire or refresh a lock on a file failed.
EditModeCannotAcquireLock	An attempt to acquire or refresh a lock on a file failed because the file is already locked .
EditModeCannotAcquireLockUnknownUser	An attempt to acquire or refresh a lock on a file failed because the file is locked by an unknown user.
EditModeWorkbookCheckedOutRequired	An attempt to acquire or refresh a lock on a file failed

Value	Meaning
	because the file is not checked out .
EditModeWorkbookCheckedOutToLocalDrafts	An attempt to acquire or refresh a lock on a file failed because the file is checked out to a local drafts folder.
SiteTooBusy	MUST NOT be used.
SiteCollectionMemoryQuotaExceeded	MUST NOT be used.
SessionMemoryQuotaExceeded	MUST NOT be used.
SiteCollectionChartQuotaExceeded	MUST NOT be used.
RequestLimitsExceeded	Too many cells requested.
SavingUnsupportedInViewMode	An attempt was made to save a workbook from a view session .
SavingWorkbookNoWorkbookName	An attempt was made to save a workbook from a new workbook session.
FileSaveGeneric	The save operation failed.
SavingWorkbookInvalidPermissions	The user does not have permissions to save to the specified location.
SavingWorkbookLockedOrCheckedOut	An attempt to save a workbook failed because the file is locked or checked out.
SavingWorkbookNotCheckedOut	An attempt to save a workbook failed because the file is not checked out.
SavingWorkbookAccessDenied	An attempt to save a workbook failed because the user does not have permission to overwrite an existing file.
SavingWorkbookInvalidFileType	MUST NOT be used.
SavingWorkbookFileNameExists	An attempt to save a workbook failed because the file already exists and the option to overwrite existing files was not specified.
HostedSavingWorkbookFileNameExists	MUST NOT be used.
HostedSavingWorkbookInvalidFileName	MUST NOT be used.
SavingWorkbookNotTrustedLocation	An attempt to save a workbook failed because of the security settings on the protocol server.
SavingWorkbookInvalidLocation	An attempt to save a workbook failed because the specified file location is not valid.
SavingWorkbookInvalidFileName	An attempt to save a workbook failed because the specified file name is not valid.
SavingWorkbookTrustedLocationSettingWarning	An attempt to save a workbook failed because of the security settings on the protocol server.
SavingWorkbookAlmostTooLarge	MUST NOT be used.

Value	Meaning
SavingWorkbookTooLarge	MUST NOT be used.
NewWorkbookInvalidLocation	An attempt to create a new workbook failed because the specified location is not valid.
FileOpenSecuritySettings	Cannot open workbook because of security settings.
FileOpenNotFound	The specified workbook file does not exist.
FileOpenAccessDenied	The user does not have access to the workbook file.
FileCorrupt	The workbook file is in a format not recognized by the protocol server.
OpenWorkbookTooLarge	The protocol server failed to create a session (2) for a workbook because it is too large.
OpenWorkbookLocationNotTrusted	The protocol server failed to create a session (2) for a workbook because of the security settings on the protocol server.
OpenWorkbookAccessDenied	The protocol server failed to create a session (2) for a workbook because the user does not have sufficient permissions.
WorkbookNotSupported	The protocol server failed to create a session (2) for this workbook because it has unsupported content.
WorkbookNotSupportedViewRight	The protocol server failed to create a session (2) for this workbook because it has unsupported content and the user does not have Open Item permission.
UnsupportedFeatureViewWarning	MUST NOT be used.
UnsupportedFeatureSaveCopyWarning	MUST NOT be used.
ExternalWorkbookLinksDisabled	MUST NOT be used.
WorkbookLockedRead	An attempt to open a workbook failed because a file lock prevents it from being read.
EditModeCannotEditNonSharePointWorkbook	An attempt to open an edit session failed because the file is not in a document library.
EditModeAccessDenied	An attempt to open a workbook in an edit session failed because the user does not have sufficient permissions to edit the workbook file.
GenericFileOpenError	An unspecified error occurred when opening the workbook file.
IRMedWorkbook	An attempt to open a workbook failed because the workbook is in an Information Rights Management (IRM) document library.
ParameterInvalid	An attempt to open a workbook failed because the workbook contains one or more workbook parameters that are not valid.

Value	Meaning
ParameterLimitExceeded	An attempt to open a workbook failed because the workbook contains too many workbook parameters.
WorkbookInternalLimit	The workbook cannot be loaded by the protocol server because of the file size limitation.
OldFormatConversionFailed	MUST NOT be used.
EditModeWorkbookExternalData	An attempt to open a workbook as an edit session failed because it contains connected data or user-defined functions (UDFs) , and the workbook file has not been checked out.
FormulaEditingNotEnabled	The operation failed because it tried to set a formula into a workbook parameter.
DimensionMismatch	An attempt to set a range failed because the dimensions (2) of the specified array of cells do not match the specified range.
SetRangeFailure	The operation failed to set a value into a cell.
ObjectTypeNotSupported	The operation failed because it tried to update a cell with an object of an unsupported type.
ParameterDoesNotExist	The specified workbook parameter does not exist.
FormulaParseFailed	The specified formula could not be parsed.
SetParameterFailure	An unspecified error occurred when attempting to set a workbook parameter.
CannotEditPivotTable	The operation failed because it tried to set a cell in a PivotTable.
InsDelCellsNonblankCells	The operation failed because it would require shifting non-blank cells off the sheet (2).
InsDelCellsArrayFmla	The operation failed because it tried to change part of an array formula .
InsDelCellsPivotTable	The operation failed because it tried to change part of a PivotTable.
InsDelCellsTable	The operation failed because it tried to change part of a table.
InsDelCellsMergedCells	The operation failed because it tried to change part of a merged cell.
InsDelCellsDatatable	The operation failed because it tried to change part of a data table (1) .
InsDelCellsRowsForWholeColumn	The operation failed because it tried to insert or delete a whole row (2), but the specified range is a whole column (2).
InsDelCellsColumnsForWholeRow	The operation failed because it tried to insert or delete a whole column (2), but the specified range is a whole

Value	Meaning
	row (2).
InsertChartPivotTable	The specified chart data table overlaps a PivotTable.
SuggestChartNoNumericData	MUST NOT be used.
SuggestChartFailed	MUST NOT be used.
PivotChartInteractivityMissingWarning	The operation failed because the chart based on a PivotTable is not interactive.
EditChartTitleTooLong	MUST NOT be used.
EditChartTitleStartsWithEquals	MUST NOT be used.
EditChartDataTooLong	MUST NOT be used.
EditChartDataInvalidReference	The string does not correspond to a valid range of cells.
EditChartDataOverlapsPivotTable	The specified chart data table overlaps a PivotTable.
ChartOperationNotSupported	The operation is not valid for the specified chart.
EditChartDataPivotChart	The chart data table cannot be changed for chart based on a PivotTable.
ChangeChartTypePivotScatter	A chart based on a PivotTable cannot be changed to a scatter chart .
ChartTooManyDataSeries	The chart data table specified exceeds the allowed limits.
InvalidSheetName	The operation failed because the specified sheet (1) name does not exist.
RangeParseError	The operation failed because the specified range is not valid.
SpecifiedRangeNotFound	The operation failed because the specified range was not found.
RangeDefinitionError	The operation failed because the specified range is not a valid sheet (2) location.
DiscontiguousRangeNotSupported	The operation failed because a non-contiguous range was specified.
RangeRequestAreaExceeded	The requested range was too large.
SheetRangeMismatch	The sheet (1) provided as the sheet (1) argument is not the same as the sheet (1) specified in the range argument.
ImageGenFailed	The protocol server failed to create an image.
ApiInvalidArgument	MUST NOT be used.
ApiInvalidCoordinate	MUST NOT be used.

Value	Meaning
ConfirmationUnsupported	MUST NOT be used.
ApiInvalidDimensionReturned	MUST NOT be used.
ApiMissingSiteContext	MUST NOT be used.
Ewr_IllegalPageSize	MUST NOT be used.
Ewr_WorkbookNotSpecified	MUST NOT be used.
Ewr_LoadProgress	MUST NOT be used.
Ewr_FileCorrupt	MUST NOT be used.
Ewr_WorkbookNotSupported	MUST NOT be used.
Ewr_GenericFileOpenError	MUST NOT be used.
Ewr_InvalidParameterGeneric	MUST NOT be used.
Ewr_InvalidParameterMandatoryMissing	MUST NOT be used.
Ewr_InvalidParameterUnexpectedFormat	MUST NOT be used.
Ewr_InvalidParameterOutOfRange	MUST NOT be used.
Ewr_InvalidParameterOperationNotAllowed	MUST NOT be used.
Ewr_ParameterInvalid	MUST NOT be used.
Ewr_ParameterLimitExceeded	MUST NOT be used.
Ewr_ParameterDoesNotExist	MUST NOT be used.
Ewr_SetParameterFailure	MUST NOT be used.
Ewr_SetParameterFailureOnOpen	MUST NOT be used.
Ewr_ParameterReadFromDocPropsError	MUST NOT be used.
Ewr_FormulaEditingNotEnabled	MUST NOT be used.
Ewr_InvalidVisibleItem	MUST NOT be used.
Ewr_EditSaveAsOverCurrentWorkbook	MUST NOT be used.
Ewr_RequestTimedOut	MUST NOT be used.
Ewr_ServerCommunicationError	MUST NOT be used.
Ewr_ServerAuthenticationError	MUST NOT be used.
Ewr_Top10InvalidValue	MUST NOT be used.
Ewr_Top10InvalidValue_Float	MUST NOT be used.
Mewa_PageStateInitFailed	MUST NOT be used.
Mewa_CriticalParameterMissing	MUST NOT be used.

Value	Meaning
Mewa_GridViewRenderingFailed	MUST NOT be used.
Mewa_FeatureNotActive	MUST NOT be used.
OperationNotSupportedInViewOnly	The operation failed because it is not supported in a view session.
OperationOnInvalidState	An attempt was made to open a session (2) that already has a workbook assigned.
InvalidOrTimedOutSession	The operation failed because the session (2) is not valid or timed out.
InvalidOrTimedOutSessionRecoverable	The operation failed because the session (2) is not valid or timed out.
InvalidOrTimedOutSessionPageRefresh	The operation failed because the session (2) is not valid or timed out.
ScratchPadChangesLost	A view session (2) that is not in view-only mode timed out while the user was attempting to convert it to an edit session.
MaxSessionsPerUserExceeded	The user has exceeded the maximum allowed session (2) count by the protocol server.
OperationCanceled	The user canceled a request that was being processed by a session (2).
MaxRequestDurationExceeded	The request failed because it took too long to process.
NoOccurrencesFound	The protocol server could not match the sought string to any worksheet cell relevant to the search.
EcsInvalidNamedObject	A named object was requested that is not valid.
NoPublishedItems	The workbook does not have any published items.
RetryError	The protocol server is low on system resources .
StopOpenOnRefreshFailure	An attempt to open a workbook failed because connected data refresh failed.
ProductExpired	The protocol server returns this error when the application license key is not valid.
SortActionInvalid	Sorting an AutoFilter failed because it contains merged cells that are not all the same size.
SortActionNotSupportedWithPivot	Sorting an AutoFilter failed because it contains a PivotTable.
CircularReferencesFound	MUST NOT be used.
SessionNotFound	MUST NOT be used.
NewWorkbookSessionTimeout	A new workbook session has timed out.
NewWorkbookSessionTimeoutRecoverable	A new workbook session has timed out.

Value	Meaning
EditXLSFile	MUST NOT be used.
UnsupportedFeatureEditWarning	Edit session is not supported for this workbook.
EditModeSessionExists	The view session could not be saved because the workbook is open in an edit session.
NewerWorkbookExists	The view session could not be saved because the workbook has been modified since the session (2) was opened.
ExternalDataOfficeLive	MUST NOT be used.
PowerPivotOfficeLive	MUST NOT be used.
LostAuthentication	MUST NOT be used.
ListEntryNotFound_1	MUST NOT be used.
ListEntryNotFound_2	MUST NOT be used.
ListEntryAlreadyExists_1	MUST NOT be used.
ListEntryAlreadyExists_2	MUST NOT be used.
InvalidArgumentValue	MUST NOT be used.
MissingArgumentName	MUST NOT be used.
InvalidArgumentName	MUST NOT be used.
ArgumentBadInRemove	MUST NOT be used.
ManagementUIListEntryAlreadyExists	MUST NOT be used.
ManagementUIListEntryNotFound	MUST NOT be used.
ManagementUIInternalError	MUST NOT be used.
UnsupportedUICulture	The UI culture is not supported by the protocol server.
UnsupportedDataCulture	The data culture is not supported by the protocol server.
SpecifiedItemNotFound	An attempt to set a range of cells in a workbook failed because the user does not have Open Item permission.
EcsSnapshotAccessDenied	The protocol server cannot return the workbook or a snapshot , because the user does not have Open Item permission.
SaveFailed	A save operation failed.
WrongEcs	An attempt was made to access an edit session that is owned by another instance of a protocol server in the farm .
PasteDataLimitHit	The string exceeds the maximum permitted length.

Value	Meaning
UndoStackEmpty	MUST NOT be used.
RedoStackEmpty	MUST NOT be used.
UndoRedoCollabFail	MUST NOT be used.
HyperlinkLocationRequired	MUST NOT be used.
CollabLocaleMismatch	The user joined an edit session whose data culture does not match the user's data culture.
LocaleRestored	The data culture of an edit session has been restored to the user's data culture.
InvalidEditSession	The edit session is not valid.
InvalidEditSessionPageRefresh	The edit session is not valid.
InvalidEditSessionId	MUST NOT be used.
UnableToLoadEditSession	Unable to load an edit session.
SavingWorkbookFailed	Failed to save workbook.
RefreshLockFailed	An attempt to refresh a lock on a workbook file failed.
InvalidChartName	An invalid chart name was specified.
RetryOutOfSync	The PivotTable operation failed.
OperationFailed	A workbook operation failed.
OpenInExcelActiveXError	MUST NOT be used.
OpenInExcelCollaborationError	MUST NOT be used.
ProcessingUserChangesFileDownloadIgnored	MUST NOT be used.
PhoneticDataLossWarning	MUST NOT be used.
NoLicenseError	MUST NOT be used.
NoUnsupportedFeatureCopyAndEdit	MUST NOT be used.
CrossEnvironmentEditNotSupported	MUST NOT be used.
RestBiff8Unsupported	MUST NOT be used.
TransitionXls	MUST NOT be used.
UnsupportedFeaturesSaveOverwrite	MUST NOT be used.
UnsupportedFeaturesSaveCopy	The protocol server succeeded to create a session (2) for this workbook but it has unsupported content.
ChallengeAnonymousUser	The anonymous user does not have access to the workbook file.
ClipboardAccessDenied	MUST NOT be used.

Value	Meaning
CannotMergeCellsInTable	MUST NOT be used.
MergeCellsLoseData	MUST NOT be used.
CollabConflictError	A workbook operation on an edit session failed.
OdfCompatibilityWarning	MUST NOT be used.
OdfUnsupportedEncryption	The protocol server failed to create a session (2) for the specified workbook file, which is in a format specified by [ODF], because it is an encrypted document .
OdfUnreadableContentGeneric	The protocol server failed to create a session (2) for the specified workbook file, which is in a format specified by [ODF], because it contains unsupported content.
Ewr_OdfUnreadableContentGeneric	MUST NOT be used.
XLSMacroFailure	MUST NOT be used.
XLSPreBiff8Failure	MUST NOT be used.
XLSPasswordProtectionFailure	MUST NOT be used.
XLSIRMFailure	MUST NOT be used.
XLSUnknownFailures	MUST NOT be used.
GenerateWorkbookFailureInvalidProperty	MUST NOT be used.
GenerateWorkbookFailureInvalidGenerationItems	MUST NOT be used.
GenerateWorkbookFailureTable	The protocol server encountered an error while inserting a Table into the new workbook session as part of GenerateWorkbookFromHtml
GenerateWorkbookFailureConditionalFormatting	The protocol server encountered an error while applying additional formatting to the Table in the new workbook session as part of GenerateWorkbookFromHtml
GenerateWorkbookFailureSlicers	The protocol server encountered an error while inserting a Slicers into the new workbook session as part of GenerateWorkbookFromHtml
GenerateWorkbookFailureChart	The protocol server encountered an error while inserting a Chart into the new workbook session as part of GenerateWorkbookFromHtml
GenerateWorkbookFailureOpenWorkbook	The protocol server encountered an error while creating the new workbook session as part of GenerateWorkbookFromHtml
GenerateWorkbookFailureUpdateTheme	The protocol server encountered an error while applying the values of one or more of the following fields of the WorkbookGenerationOptions parameter to GenerateWorkbookFromHtml :

Value	Meaning
	<ul style="list-style-type: none"> ▪ DarkColor1 ▪ DarkColor2 ▪ LightColor1 ▪ LightColor2 ▪ AccentColor1 ▪ AccentColor2 ▪ FontSize ▪ FontName
GenerateWorkbookFailureAttribution	The protocol server encountered an error while inserting the value of the Attribution field of the WorkbookGenerationOptions parameter to GenerateWorkbookFromHtml
CrossDomainAjaxNotSupported	MUST NOT be used.
WorkbookNotInCollection	MUST NOT be used.
Count	MUST NOT be used.

2.2.5.10 ExcelServerMessageId

Namespace:

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

The **2.2.5.9** type is an enumeration of values, each of which corresponds to a particular alert (2) that is passed between the protocol client and the protocol server.

```
<xs:simpleType name="ExcelServerMessageId" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Blank"/>
    <xs:enumeration value="InternalError"/>
    <xs:enumeration value="NotMemberOfRole"/>
    <xs:enumeration value="EncryptionTooLow"/>
    <xs:enumeration value="ConfirmDataRefresh"/>
    <xs:enumeration value="ExternalDataRefreshFailed"/>
    <xs:enumeration value="ExternalDataRefreshFailedReal"/>
    <xs:enumeration value="ExternalDataRefreshFailedReadOrViewOnly"/>
    <xs:enumeration value="NoAccessToOdcReadOrViewOnly"/>
    <xs:enumeration value="ErrorConnectingToDataSourceReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPasswordReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPassword"/>
    <xs:enumeration value="ExternalDataNotAllowedOnTL"/>
    <xs:enumeration value="InvalidUriorLocalConnectionPath"/>
    <xs:enumeration value="DoINotTrusted"/>
    <xs:enumeration value="OdcFileDoesNotExist"/>
    <xs:enumeration value="ErrorAccessingSsoFromEcs"/>
    <xs:enumeration value="SsoError"/>
    <xs:enumeration value="ErrorConnectingToDataSource"/>
  </xs:restriction>
</xs:simpleType>
```

```
<xs:enumeration value="UnattendedAccountNotConfigured"/>
<xs:enumeration value="IncorrectAuthUsed"/>
<xs:enumeration value="ExternalDataRefreshFailed_Details"/>
<xs:enumeration value="PivotNoOverlapAllowed"/>
<xs:enumeration value="PivotOverlapList"/>
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<xs:enumeration value="OlapSchemaFail"/>
<xs:enumeration value="InvalidPivot"/>
<xs:enumeration value="OlapNoMoreDetail"/>
<xs:enumeration value="DrillActionInvalid"/>
<xs:enumeration value="DriverNotOlap"/>
<xs:enumeration value="CubeMissing"/>
<xs:enumeration value="SkipLine"/>
<xs:enumeration value="CDimMismatch"/>
<xs:enumeration value="DataSetAxisTooBig"/>
<xs:enumeration value="CubeIntegrityError"/>
<xs:enumeration value="PivotNotExpandedtoProtectCellContents"/>
<xs:enumeration value="PivotTruncatedSheetEdge"/>
<xs:enumeration value="DdlGrpNotSup"/>
<xs:enumeration value="PivotFormulasCollided"/>
<xs:enumeration value="NoRetItems"/>
<xs:enumeration value="OlapConnectVisualModeProvider"/>
<xs:enumeration value="PivotNoSourceData"/>
<xs:enumeration value="PivotFilteringError"/>
<xs:enumeration value="PivotTableIncorrectDateFormat"/>
<xs:enumeration value="PivotTableEndingLargerThanStarting"/>
<xs:enumeration value="PivotTableIncorrectNumberFormat"/>
<xs:enumeration value="PivotTableOutOfRange"/>
<xs:enumeration value="MergedCellOverlap"/>
<xs:enumeration value="PivotSourceNotAvailable"/>
<xs:enumeration value="UnexpectedPivotError"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownReason"/>
<xs:enumeration value="EditModeCannotAcquireLock"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownUser"/>
<xs:enumeration value="EditModeWorkbookCheckedOutRequired"/>
<xs:enumeration value="EditModeWorkbookCheckedOutToLocalDrafts"/>
<xs:enumeration value="SiteTooBusy"/>
<xs:enumeration value="SiteCollectionMemoryQuotaExceeded"/>
<xs:enumeration value="SessionMemoryQuotaExceeded"/>
<xs:enumeration value="SiteCollectionChartQuotaExceeded"/>
<xs:enumeration value="RequestLimitsExceeded"/>
<xs:enumeration value="SavingUnsupportedInViewMode"/>
<xs:enumeration value="SavingWorkbookNoWorkbookName"/>
<xs:enumeration value="FileSaveGeneric"/>
<xs:enumeration value="SavingWorkbookInvalidPermissions"/>
<xs:enumeration value="SavingWorkbookLockedOrCheckedOut"/>
<xs:enumeration value="SavingWorkbookNotCheckedOut"/>
<xs:enumeration value="SavingWorkbookAccessDenied"/>
<xs:enumeration value="SavingWorkbookInvalidFileType"/>
<xs:enumeration value="SavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookNotTrustedLocation"/>
<xs:enumeration value="SavingWorkbookInvalidLocation"/>
<xs:enumeration value="SavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookTrustedLocationSettingWarning"/>
<xs:enumeration value="SavingWorkbookAlmostTooLarge"/>
<xs:enumeration value="SavingWorkbookTooLarge"/>
```

```
<xs:enumeration value="NewWorkbookInvalidLocation"/>
<xs:enumeration value="FileOpenSecuritySettings"/>
<xs:enumeration value="FileOpenNotFound"/>
<xs:enumeration value="FileOpenAccessDenied"/>
<xs:enumeration value="FileCorrupt"/>
<xs:enumeration value="OpenWorkbookTooLarge"/>
<xs:enumeration value="OpenWorkbookLocationNotTrusted"/>
<xs:enumeration value="OpenWorkbookAccessDenied"/>
<xs:enumeration value="WorkbookNotSupported"/>
<xs:enumeration value="WorkbookNotSupportedViewRight"/>
<xs:enumeration value="UnsupportedFeatureViewWarning"/>
<xs:enumeration value="UnsupportedFeatureSaveCopyWarning"/>
<xs:enumeration value="ExternalWorkbookLinksDisabled"/>
<xs:enumeration value="WorkbookLockedRead"/>
<xs:enumeration value="EditModeCannotEditNonSharePointWorkbook"/>
<xs:enumeration value="EditModeAccessDenied"/>
<xs:enumeration value="GenericFileOpenError"/>
<xs:enumeration value="IRMedWorkbook"/>
<xs:enumeration value="ParameterInvalid"/>
<xs:enumeration value="ParameterLimitExceeded"/>
<xs:enumeration value="WorkbookInternalLimit"/>
<xs:enumeration value="OldFormatConversionFailed"/>
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<xs:enumeration value="FormulaEditingNotEnabled"/>
<xs:enumeration value="DimensionMismatch"/>
<xs:enumeration value="SetRangeFailure"/>
<xs:enumeration value="ObjectTypeNotSupported"/>
<xs:enumeration value="ParameterDoesNotExist"/>
<xs:enumeration value="FormulaParseFailed"/>
<xs:enumeration value="SetParameterFailure"/>
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<xs:enumeration value="InsDelCellsNonblankCells"/>
<xs:enumeration value="InsDelCellsArrayFmla"/>
<xs:enumeration value="InsDelCellsPivotTable"/>
<xs:enumeration value="InsDelCellsTable"/>
<xs:enumeration value="InsDelCellsMergedCells"/>
<xs:enumeration value="InsDelCellsDatatable"/>
<xs:enumeration value="InsDelCellsRowsForWholeColumn"/>
<xs:enumeration value="InsDelCellsColumnsForWholeRow"/>
<xs:enumeration value="InsertChartPivotTable"/>
<xs:enumeration value="SuggestChartNoNumericData"/>
<xs:enumeration value="SuggestChartFailed"/>
<xs:enumeration value="PivotChartInteractivityMissingWarning"/>
<xs:enumeration value="EditChartTitleTooLong"/>
<xs:enumeration value="EditChartTitleStartsWithEquals"/>
<xs:enumeration value="EditChartDataTooLong"/>
<xs:enumeration value="EditChartDataInvalidReference"/>
<xs:enumeration value="EditChartDataOverlapsPivotTable"/>
<xs:enumeration value="ChartOperationNotSupported"/>
<xs:enumeration value="EditChartDataPivotChart"/>
<xs:enumeration value="ChangeChartTypePivotScatter"/>
<xs:enumeration value="ChartTooManyDataSeries"/>
<xs:enumeration value="InvalidSheetName"/>
<xs:enumeration value="RangeParseError"/>
<xs:enumeration value="SpecifiedRangeNotFound"/>
<xs:enumeration value="RangeDefinitionError"/>
<xs:enumeration value="DiscontiguousRangeNotSupported"/>
<xs:enumeration value="RangeRequestAreaExceeded"/>
<xs:enumeration value="SheetRangeMismatch"/>
```

```
<xs:enumeration value="ImageGenFailed"/>
<xs:enumeration value="ApiInvalidArgument"/>
<xs:enumeration value="ApiInvalidCoordinate"/>
<xs:enumeration value="ConfirmationUnsupported"/>
<xs:enumeration value="ApiInvalidDimensionReturned"/>
<xs:enumeration value="ApiMissingSiteContext"/>
<xs:enumeration value="Ewr_IllegalPageSize"/>
<xs:enumeration value="Ewr_WorkbookNotSpecified"/>
<xs:enumeration value="Ewr_LoadProgress"/>
<xs:enumeration value="Ewr_FileCorrupt"/>
<xs:enumeration value="Ewr_WorkbookNotSupported"/>
<xs:enumeration value="Ewr_GenericFileOpenError"/>
<xs:enumeration value="Ewr_InvalidParameterGeneric"/>
<xs:enumeration value="Ewr_InvalidParameterMandatoryMissing"/>
<xs:enumeration value="Ewr_InvalidParameterUnexpectedFormat"/>
<xs:enumeration value="Ewr_InvalidParameterOutOfRange"/>
<xs:enumeration value="Ewr_InvalidParameterOperationNotAllowed"/>
<xs:enumeration value="Ewr_ParameterInvalid"/>
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<xs:enumeration value="Ewr_ParameterDoesNotExist"/>
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<xs:enumeration value="Ewr_SetParameterFailureOnOpen"/>
<xs:enumeration value="Ewr_ParameterReadFromDocPropsError"/>
<xs:enumeration value="Ewr_FormulaEditingNotEnabled"/>
<xs:enumeration value="Ewr_InvalidVisibleItem"/>
<xs:enumeration value="Ewr_EditSaveAsOverCurrentWorkbook"/>
<xs:enumeration value="Ewr_RequestTimedOut"/>
<xs:enumeration value="Ewr_ServerCommunicationError"/>
<xs:enumeration value="Ewr_ServerAuthenticationError"/>
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<xs:enumeration value="Ewr_Top10InvalidValue_Float"/>
<xs:enumeration value="Mewa_PageStateInitFailed"/>
<xs:enumeration value="Mewa_CriticalParameterMissing"/>
<xs:enumeration value="Mewa_GridViewRenderingFailed"/>
<xs:enumeration value="Mewa_FeatureNotActive"/>
<xs:enumeration value="OperationNotSupportedInViewOnly"/>
<xs:enumeration value="OperationOnInvalidState"/>
<xs:enumeration value="InvalidOrTimedOutSession"/>
<xs:enumeration value="InvalidOrTimedOutSessionRecoverable"/>
<xs:enumeration value="InvalidOrTimedOutSessionPageRefresh"/>
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<xs:enumeration value="MaxSessionsPerUserExceeded"/>
<xs:enumeration value="OperationCanceled"/>
<xs:enumeration value="MaxRequestDurationExceeded"/>
<xs:enumeration value="NoOccurrencesFound"/>
<xs:enumeration value="EcsInvalidNamedObject"/>
<xs:enumeration value="NoPublishedItems"/>
<xs:enumeration value="RetryError"/>
<xs:enumeration value="StopOpenOnRefreshFailure"/>
<xs:enumeration value="ProductExpired"/>
<xs:enumeration value="SortActionInvalid"/>
<xs:enumeration value="SortActionNotSupportedWithPivot"/>
<xs:enumeration value="CircularReferencesFound"/>
<xs:enumeration value="SessionNotFound"/>
<xs:enumeration value="NewWorkbookSessionTimeout"/>
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<xs:enumeration value="EditXLSFile"/>
<xs:enumeration value="UnsupportedFeatureEditWarning"/>
<xs:enumeration value="EditModeSessionExists"/>
```

```
<xs:enumeration value="NewerWorkbookExists"/>
<xs:enumeration value="ExternalDataOfficeLive"/>
<xs:enumeration value="PowerPivotOfficeLive"/>
<xs:enumeration value="LostAuthentication"/>
<xs:enumeration value="ListEntryNotFound_1"/>
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<xs:enumeration value="ManagementUIInternalError"/>
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<xs:enumeration value="SpecifiedItemNotFound"/>
<xs:enumeration value="EcsSnapshotAccessDenied"/>
<xs:enumeration value="SaveFailed"/>
<xs:enumeration value="WrongEcs"/>
<xs:enumeration value="PasteDataLimitHit"/>
<xs:enumeration value="UndoStackEmpty"/>
<xs:enumeration value="RedoStackEmpty"/>
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<xs:enumeration value="HyperlinkLocationRequired"/>
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<xs:enumeration value="InvalidEditSessionPageRefresh"/>
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<xs:enumeration value="InvalidChartName"/>
<xs:enumeration value="RetryOutOfSync"/>
<xs:enumeration value="OperationFailed"/>
<xs:enumeration value="OpenInExcelActiveXError"/>
<xs:enumeration value="OpenInExcelCollaborationError"/>
<xs:enumeration value="ProcessingUserChangesFileDownloadIgnored"/>
<xs:enumeration value="PhoneticDataLossWarning"/>
<xs:enumeration value="NoLicenseError"/>
<xs:enumeration value="NoUnsupportedFeatureCopyAndEdit"/>
<xs:enumeration value="CrossEnvironmentEditNotSupported"/>
<xs:enumeration value="RestBiff8Unsupported"/>
<xs:enumeration value="TransitionXls"/>
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<xs:enumeration value="CollabConflictError"/>
<xs:enumeration value="OdfCompatibilityWarning"/>
<xs:enumeration value="OdfUnsupportedEncryption"/>
<xs:enumeration value="OdfUnreadableContentGeneric"/>
<xs:enumeration value="Ewr_OdfUnreadableContentGeneric"/>
<xs:enumeration value="XLSMacroFailure"/>
<xs:enumeration value="XLSPreBiff8Failure"/>
```



```

<xs:enumeration value="XLSPasswordProtectionFailure"/>
<xs:enumeration value="XLSIRMFailure"/>
<xs:enumeration value="XLSUnknownFailures"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidProperty"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidGenerationItems"/>
<xs:enumeration value="GenerateWorkbookFailureTable"/>
<xs:enumeration value="GenerateWorkbookFailureConditionalFormatting"/>
<xs:enumeration value="GenerateWorkbookFailureSlicers"/>
<xs:enumeration value="GenerateWorkbookFailureChart"/>
<xs:enumeration value="GenerateWorkbookFailureOpenWorkbook"/>
<xs:enumeration value="GenerateWorkbookFailureUpdateTheme"/>
<xs:enumeration value="GenerateWorkbookFailureAttribution"/>
<xs:enumeration value="CrossDomainAjaxNotSupported"/>
<xs:enumeration value="WorkbookNotInCollection"/>
<xs:enumeration value="Count"/>
</xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
Blank	For details, see section 2.2.5.9 .
InternalServerError	For details, see section 2.2.5.9 .
NotMemberOfRole	For details, see section 2.2.5.9 .
EncryptionTooLow	For details, see section 2.2.5.9 .
ConfirmDataRefresh	For details, see section 2.2.5.9 .
ExternalDataRefreshFailed	For details, see section 2.2.5.9 .
ExternalDataRefreshFailedReal	For details, see section 2.2.5.9 .
ExternalDataRefreshFailedReadOrViewOnly	For details, see section 2.2.5.9 .
NoAccessToOdcReadOrViewOnly	For details, see section 2.2.5.9 .
ErrorConnectingToDataSourceReadOrViewOnly	For details, see section 2.2.5.9 .
InvalidUserNameOrPasswordReadOrViewOnly	For details, see section 2.2.5.9 .
InvalidUserNameOrPassword	For details, see section 2.2.5.9 .
ExternalDataNotAllowedOnTL	For details, see section 2.2.5.9 .
InvalidUriorLocalConnectionPath	For details, see section 2.2.5.9 .
DclNotTrusted	For details, see section 2.2.5.9 .
OdcFileDoesNotExist	For details, see section 2.2.5.9 .
ErrorAccessingSsoFromEcs	For details, see section 2.2.5.9 .
SsoError	For details, see section 2.2.5.9 .
ErrorConnectingToDataSource	For details, see section 2.2.5.9 .

Value	Meaning
UnattendedAccountNotConfigured	For details, see section 2.2.5.9 .
IncorrectAuthUsed	For details, see section 2.2.5.9 .
ExternalDataRefreshFailed_Details	For details, see section 2.2.5.9 .
PivotNoOverlapAllowed	For details, see section 2.2.5.9 .
PivotOverlapList	For details, see section 2.2.5.9 .
PivotCubeNotUnique	For details, see section 2.2.5.9 .
NoDataItemsOlap	For details, see section 2.2.5.9 .
OlapSchemaFail	For details, see section 2.2.5.9 .
InvalidPivot	For details, see section 2.2.5.9 .
OlapNoMoreDetail	For details, see section 2.2.5.9 .
DrillActionInvalid	For details, see section 2.2.5.9 .
DriverNotOlap	For details, see section 2.2.5.9 .
CubeMissing	For details, see section 2.2.5.9 .
SkipLine	For details, see section 2.2.5.9 .
CDimMismatch	For details, see section 2.2.5.9 .
DataSetAxisTooBig	For details, see section 2.2.5.9 .
CubeIntegrityError	For details, see section 2.2.5.9 .
PivotNotExpandedtoProtectCellContents	For details, see section 2.2.5.9 .
PivotTruncatedSheetEdge	For details, see section 2.2.5.9 .
DdlGrpNotSup	For details, see section 2.2.5.9 .
PivotFormulasCollided	For details, see section 2.2.5.9 .
NoRetItems	For details, see section 2.2.5.9 .
OlapConnectVisualModeProvider	For details, see section 2.2.5.9 .
PivotNoSourceData	For details, see section 2.2.5.9 .
PivotFilteringError	For details, see section 2.2.5.9 .
PivotTableIncorrectDateFormat	For details, see section 2.2.5.9 .
PivotTableEndingLargerThanStarting	For details, see section 2.2.5.9 .
PivotTableIncorrectNumberFormat	For details, see section 2.2.5.9 .
PivotTableOutOfRange	For details, see section 2.2.5.9 .
MergedCellOverlap	For details, see section 2.2.5.9 .

Value	Meaning
PivotSourceNotAvailable	For details, see section 2.2.5.9 .
UnexpectedPivotError	For details, see section 2.2.5.9 .
EditModeCannotAcquireLockUnknownReason	For details, see section 2.2.5.9 .
EditModeCannotAcquireLock	For details, see section 2.2.5.9 .
EditModeCannotAcquireLockUnknownUser	For details, see section 2.2.5.9 .
EditModeWorkbookCheckedOutRequired	For details, see section 2.2.5.9 .
EditModeWorkbookCheckedOutToLocalDrafts	For details, see section 2.2.5.9 .
SiteTooBusy	For details, see section 2.2.5.9 .
SiteCollectionMemoryQuotaExceeded	For details, see section 2.2.5.9 .
SessionMemoryQuotaExceeded	For details, see section 2.2.5.9 .
SiteCollectionChartQuotaExceeded	For details, see section 2.2.5.9 .
RequestLimitsExceeded	For details, see section 2.2.5.9 .
SavingUnsupportedInViewMode	For details, see section 2.2.5.9 .
SavingWorkbookNoWorkbookName	For details, see section 2.2.5.9 .
FileSaveGeneric	For details, see section 2.2.5.9 .
SavingWorkbookInvalidPermissions	For details, see section 2.2.5.9 .
SavingWorkbookLockedOrCheckedOut	For details, see section 2.2.5.9 .
SavingWorkbookNotCheckedOut	For details, see section 2.2.5.9 .
SavingWorkbookAccessDenied	For details, see section 2.2.5.9 .
SavingWorkbookInvalidFileType	For details, see section 2.2.5.9 .
SavingWorkbookFileNameExists	For details, see section 2.2.5.9 .
HostedSavingWorkbookFileNameExists	For details, see section 2.2.5.9 .
HostedSavingWorkbookInvalidFileName	For details, see section 2.2.5.9 .
SavingWorkbookNotTrustedLocation	For details, see section 2.2.5.9 .
SavingWorkbookInvalidLocation	For details, see section 2.2.5.9 .
SavingWorkbookInvalidFileName	For details, see section 2.2.5.9 .
SavingWorkbookTrustedLocationSettingWarning	For details, see section 2.2.5.9 .
SavingWorkbookAlmostTooLarge	A notification that the workbook is close to the maximum allowed file size.
SavingWorkbookTooLarge	A notification that the workbook exceeds the maximum allowed file size.

Value	Meaning
NewWorkbookInvalidLocation	For details, see section 2.2.5.9 .
FileOpenSecuritySettings	For details, see section 2.2.5.9 .
FileOpenNotFound	For details, see section 2.2.5.9 .
FileOpenAccessDenied	For details, see section 2.2.5.9 .
FileCorrupt	For details, see section 2.2.5.9 .
OpenWorkbookTooLarge	For details, see section 2.2.5.9 .
OpenWorkbookLocationNotTrusted	For details, see section 2.2.5.9 .
OpenWorkbookAccessDenied	For details, see section 2.2.5.9 .
WorkbookNotSupported	For details, see section 2.2.5.9 .
WorkbookNotSupportedViewRight	For details, see section 2.2.5.9 .
UnsupportedFeatureViewWarning	The specified workbook contains unsupported content, but this did not prevent the protocol server from creating a session (2).
UnsupportedFeatureSaveCopyWarning	For details, see section 2.2.5.9 .
ExternalWorkbookLinksDisabled	A notification that the workbook contains links to external workbooks. Whilst the links are disabled, this does not prevent the workbook from loading.
WorkbookLockedRead	For details, see section 2.2.5.9 .
EditModeCannotEditNonSharePointWorkbook	For details, see section 2.2.5.9 .
EditModeAccessDenied	For details, see section 2.2.5.9 .
GenericFileOpenError	For details, see section 2.2.5.9 .
IRMedWorkbook	For details, see section 2.2.5.9 .
ParameterInvalid	For details, see section 2.2.5.9 .
ParameterLimitExceeded	For details, see section 2.2.5.9 .
WorkbookInternalLimit	For details, see section 2.2.5.9 .
OldFormatConversionFailed	For details, see section 2.2.5.9 .
EditModeWorkbookExternalData	For details, see section 2.2.5.9 .
FormulaEditingNotEnabled	For details, see section 2.2.5.9 .
DimensionMismatch	For details, see section 2.2.5.9 .
SetRangeFailure	For details, see section 2.2.5.9 .
ObjectTypeNotSupported	For details, see section 2.2.5.9 .
ParameterDoesNotExist	For details, see section 2.2.5.9 .

Value	Meaning
FormulaParseFailed	For details, see section 2.2.5.9 .
SetParameterFailure	For details, see section 2.2.5.9 .
CannotEditPivotTable	For details, see section 2.2.5.9 .
InsDelCellsNonblankCells	For details, see section 2.2.5.9 .
InsDelCellsArrayFmla	For details, see section 2.2.5.9 .
InsDelCellsPivotTable	For details, see section 2.2.5.9 .
InsDelCellsTable	For details, see section 2.2.5.9 .
InsDelCellsMergedCells	For details, see section 2.2.5.9 .
InsDelCellsDatatable	For details, see section 2.2.5.9 .
InsDelCellsRowsForWholeColumn	For details, see section 2.2.5.9 .
InsDelCellsColumnsForWholeRow	For details, see section 2.2.5.9 .
InsertChartPivotTable	For details, see section 2.2.5.9 .
SuggestChartNoNumericData	For details, see section 2.2.5.9 .
SuggestChartFailed	For details, see section 2.2.5.9 .
PivotChartInteractivityMissingWarning	For details, see section 2.2.5.9 .
EditChartTitleTooLong	For details, see section 2.2.5.9 .
EditChartTitleStartsWithEquals	For details, see section 2.2.5.9 .
EditChartDataTooLong	For details, see section 2.2.5.9 .
EditChartDataInvalidReference	For details, see section 2.2.5.9 .
EditChartDataOverlapsPivotTable	For details, see section 2.2.5.9 .
ChartOperationNotSupported	For details, see section 2.2.5.9 .
EditChartDataPivotChart	For details, see section 2.2.5.9 .
ChangeChartTypePivotScatter	For details, see section 2.2.5.9 .
ChartTooManyDataSeries	For details, see section 2.2.5.9 .
InvalidSheetName	For details, see section 2.2.5.9 .
RangeParseError	For details, see section 2.2.5.9 .
SpecifiedRangeNotFound	For details, see section 2.2.5.9 .
RangeDefinitionError	For details, see section 2.2.5.9 .
DiscontiguousRangeNotSupported	For details, see section 2.2.5.9 .
RangeRequestAreaExceeded	For details, see section 2.2.5.9 .

Value	Meaning
SheetRangeMismatch	For details, see section 2.2.5.9 .
ImageGenFailed	For details, see section 2.2.5.9 .
ApiInvalidArgument	For details, see section 2.2.5.9 .
ApiInvalidCoordinate	For details, see section 2.2.5.9 .
ConfirmationUnsupported	For details, see section 2.2.5.9 .
ApiInvalidDimensionReturned	For details, see section 2.2.5.9 .
ApiMissingSiteContext	For details, see section 2.2.5.9 .
Ewr_IllegalPageSize	For details, see section 2.2.5.9 .
Ewr_WorkbookNotSpecified	For details, see section 2.2.5.9 .
Ewr_LoadProgress	For details, see section 2.2.5.9 .
Ewr_FileCorrupt	For details, see section 2.2.5.9 .
Ewr_WorkbookNotSupported	For details, see section 2.2.5.9 .
Ewr_GenericFileOpenError	For details, see section 2.2.5.9 .
Ewr_InvalidParameterGeneric	For details, see section 2.2.5.9 .
Ewr_InvalidParameterMandatoryMissing	For details, see section 2.2.5.9 .
Ewr_InvalidParameterUnexpectedFormat	For details, see section 2.2.5.9 .
Ewr_InvalidParameterOutOfRange	For details, see section 2.2.5.9 .
Ewr_InvalidParameterOperationNotAllowed	For details, see section 2.2.5.9 .
Ewr_ParameterInvalid	For details, see section 2.2.5.9 .
Ewr_ParameterLimitExceeded	For details, see section 2.2.5.9 .
Ewr_ParameterDoesNotExist	For details, see section 2.2.5.9 .
Ewr_SetParameterFailure	For details, see section 2.2.5.9 .
Ewr_SetParameterFailureOnOpen	For details, see section 2.2.5.9 .
Ewr_ParameterReadFromDocPropsError	For details, see section 2.2.5.9 .
Ewr_FormulaEditingNotEnabled	For details, see section 2.2.5.9 .
Ewr_InvalidVisibleItem	For details, see section 2.2.5.9 .
Ewr_EditSaveAsOverCurrentWorkbook	For details, see section 2.2.5.9 .
Ewr_RequestTimedOut	For details, see section 2.2.5.9 .
Ewr_ServerCommunicationError	For details, see section 2.2.5.9 .
Ewr_ServerAuthenticationError	For details, see section 2.2.5.9 .

Value	Meaning
Ewr_Top10InvalidValue	For details, see section 2.2.5.9 .
Ewr_Top10InvalidValue_Float	For details, see section 2.2.5.9 .
Mewa_PageStateInitFailed	For details, see section 2.2.5.9 .
Mewa_CriticalParameterMissing	For details, see section 2.2.5.9 .
Mewa_GridViewRenderingFailed	For details, see section 2.2.5.9 .
Mewa_FeatureNotActive	For details, see section 2.2.5.9 .
OperationNotSupportedInViewOnly	For details, see section 2.2.5.9 .
OperationOnInvalidState	For details, see section 2.2.5.9 .
InvalidOrTimedOutSession	For details, see section 2.2.5.9 .
InvalidOrTimedOutSessionRecoverable	For details, see section 2.2.5.9 .
InvalidOrTimedOutSessionPageRefresh	For details, see section 2.2.5.9 .
ScratchPadChangesLost	For details, see section 2.2.5.9 .
MaxSessionsPerUserExceeded	For details, see section 2.2.5.9 .
OperationCanceled	For details, see section 2.2.5.9 .
MaxRequestDurationExceeded	For details, see section 2.2.5.9 .
NoOccurrencesFound	For details, see section 2.2.5.9 .
EcsInvalidNamedObject	For details, see section 2.2.5.9 .
NoPublishedItems	For details, see section 2.2.5.9 .
RetryError	For details, see section 2.2.5.9 .
StopOpenOnRefreshFailure	For details, see section 2.2.5.9 .
ProductExpired	For details, see section 2.2.5.9 .
SortActionInvalid	For details, see section 2.2.5.9 .
SortActionNotSupportedWithPivot	For details, see section 2.2.5.9 .
CircularReferencesFound	For details, see section 2.2.5.9 .
SessionNotFound	For details, see section 2.2.5.9 .
NewWorkbookSessionTimeout	For details, see section 2.2.5.9 .
NewWorkbookSessionTimeoutRecoverable	For details, see section 2.2.5.9 .
EditXLSFile	For details, see section 2.2.5.9 .
UnsupportedFeatureEditWarning	For details, see section 2.2.5.9 .
EditModeSessionExists	For details, see section 2.2.5.9 .

Value	Meaning
NewerWorkbookExists	For details, see section 2.2.5.9 .
ExternalDataOfficeLive	For details, see section 2.2.5.9 .
PowerPivotOfficeLive	For details, see section 2.2.5.9 .
LostAuthentication	For details, see section 2.2.5.9 .
ListEntryNotFound_1	For details, see section 2.2.5.9 .
ListEntryNotFound_2	For details, see section 2.2.5.9 .
ListEntryAlreadyExists_1	For details, see section 2.2.5.9 .
ListEntryAlreadyExists_2	For details, see section 2.2.5.9 .
InvalidArgumentValue	For details, see section 2.2.5.9 .
MissingArgumentName	For details, see section 2.2.5.9 .
InvalidArgumentName	For details, see section 2.2.5.9 .
ArgumentBadInRemove	For details, see section 2.2.5.9 .
ManagementUICollectionEntryAlreadyExists	For details, see section 2.2.5.9 .
ManagementUICollectionEntryNotFound	For details, see section 2.2.5.9 .
ManagementUIInternalError	For details, see section 2.2.5.9 .
UnsupportedUICulture	For details, see section 2.2.5.9 .
UnsupportedDataCulture	For details, see section 2.2.5.9 .
SpecifiedItemNotFound	For details, see section 2.2.5.9 .
EcsSnapshotAccessDenied	For details, see section 2.2.5.9 .
SaveFailed	For details, see section 2.2.5.9 .
WrongEcs	For details, see section 2.2.5.9 .
PasteDataLimitHit	For details, see section 2.2.5.9 .
UndoStackEmpty	For details, see section 2.2.5.9 .
RedoStackEmpty	For details, see section 2.2.5.9 .
UndoRedoCollabFail	For details, see section 2.2.5.9 .
HyperlinkLocationRequired	For details, see section 2.2.5.9 .
CollabLocaleMismatch	For details, see section 2.2.5.9 .
LocaleRestored	For details, see section 2.2.5.9 .
InvalidEditSession	For details, see section 2.2.5.9 .
InvalidEditSessionPageRefresh	For details, see section 2.2.5.9 .

Value	Meaning
InvalidEditSessionId	For details, see section 2.2.5.9 .
UnableToLoadEditSession	For details, see section 2.2.5.9 .
SavingWorkbookFailed	For details, see section 2.2.5.9 .
RefreshLockFailed	For details, see section 2.2.5.9 .
InvalidChartName	For details, see section 2.2.5.9 .
RetryOutOfSync	For details, see section 2.2.5.9 .
OperationFailed	For details, see section 2.2.5.9 .
OpenInExcelActiveXError	For details, see section 2.2.5.9 .
OpenInExcelCollaborationError	For details, see section 2.2.5.9 .
ProcessingUserChangesFileDownloadIgnored	For details, see section 2.2.5.9 .
PhoneticDataLossWarning	For details, see section 2.2.5.9 .
NoLicenseError	For details, see section 2.2.5.9 .
NoUnsupportedFeatureCopyAndEdit	For details, see section 2.2.5.9 .
CrossEnvironmentEditNotSupported	For details, see section 2.2.5.9 .
RestBiff8Unsupported	For details, see section 2.2.5.9 .
TransitionXls	For details, see section 2.2.5.9 .
UnsupportedFeaturesSaveOverwrite	For details, see section 2.2.5.9 .
UnsupportedFeaturesSaveCopy	For details, see section 2.2.5.9 .
ChallengeAnonymousUser	For details, see section 2.2.5.9 .
ClipboardAccessDenied	For details, see section 2.2.5.9 .
CannotMergeCellsInTable	For details, see section 2.2.5.9 .
MergeCellsLoseData	For details, see section 2.2.5.9 .
CollabConflictError	For details, see section 2.2.5.9 .
OdfCompatibilityWarning	For details, see section 2.2.5.9 .
OdfUnsupportedEncryption	For details, see section 2.2.5.9 .
OdfUnreadableContentGeneric	For details, see section 2.2.5.9 .
Ewr_OdfUnreadableContentGeneric	For details, see section 2.2.5.9 .
XLSMacroFailure	For details, see section 2.2.5.9 .
XLSPreBiff8Failure	For details, see section 2.2.5.9 .
XLSPasswordProtectionFailure	For details, see section 2.2.5.9 .

Value	Meaning
XLSIRMFailure	For details, see section 2.2.5.9 .
XLSUnknownFailures	For details, see section 2.2.5.9 .
GenerateWorkbookFailureInvalidProperty	For details, see section 2.2.5.9 .
GenerateWorkbookFailureInvalidGenerationItems	For details, see section 2.2.5.9 .
GenerateWorkbookFailureTable	For details, see section 2.2.5.9 .
GenerateWorkbookFailureConditionalFormatting	For details, see section 2.2.5.9 .
GenerateWorkbookFailureSlicers	For details, see section 2.2.5.9 .
GenerateWorkbookFailureChart	For details, see section 2.2.5.9 .
GenerateWorkbookFailureOpenWorkbook	For details, see section 2.2.5.9 .
GenerateWorkbookFailureUpdateTheme	For details, see section 2.2.5.9 .
GenerateWorkbookFailureAttribution	For details, see section 2.2.5.9 .
CrossDomainAjaxNotSupported	For details, see section 2.2.5.9 .
WorkbookNotInCollection	For details, see section 2.2.5.9 .
Count	For details, see section 2.2.5.9 .

2.2.5.11 ExcelServerMessageSeverity

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

Specifies the severity of the alert (2) that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageSeverity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error"/>
    <xs:enumeration value="Warning"/>
    <xs:enumeration value="Information"/>
    <xs:enumeration value="Progress"/>
    <xs:enumeration value="GettingStarted"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Error	The alert (2) is of type error.
Warning	The alert (2) is of type warning.
Information	The alert (2) is of type information.
Progress	MUST NOT be used.

Value	Meaning
GettingStarted	MUST NOT be used.

2.2.5.12 ExcelServerMessageSeverity

Namespace:

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

Specifies the severity of the alert (2) that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageSeverity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error"/>
    <xs:enumeration value="Warning"/>
    <xs:enumeration value="Information"/>
    <xs:enumeration value="Progress"/>
    <xs:enumeration value="GettingStarted"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Error	The alert (2) is of type error.
Warning	The alert (2) is of type warning.
Information	The alert (2) is of type information.
Progress	MUST NOT be used.
GettingStarted	MUST NOT be used.

2.2.5.13 ExcelServerMessageType

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

Specifies type of the alert (2) that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Alert"/>
    <xs:enumeration value="Status"/>
    <xs:enumeration value="Confirmation"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Alert	The alert (2) is of type alert.

Value	Meaning
Status	The alert (2) is of type status.
Confirmation	The alert (2) is of type confirmation.

2.2.5.14 ExcelServerMessageType

Namespace:

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

Specifies the type of the alert (2) that the protocol server returns to the protocol client.

```
<xs:simpleType name="ExcelServerMessageType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Alert"/>
    <xs:enumeration value="Status"/>
    <xs:enumeration value="Confirmation"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
Alert	The alert (2) is of type alert.
Status	The alert (2) is of type status.
Confirmation	The alert (2) is of type confirmation.

2.2.5.15 guid

Namespace: http://microsoft.com/wsdl/types/

Specifies a GUID value, as specified in [RFC4122](#).

```
<xs:simpleType name="guid" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:pattern value="[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}"/>
  </xs:restriction>
</xs:simpleType>
```

2.2.5.16 NamedObjectType

Namespace:

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

Specifies the type of a published item.

```
<xs:simpleType name="NamedObjectType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="InvalidNamedObjectType"/>
  </xs:restriction>
</xs:simpleType>
```

```

<xs:enumeration value="Chart"/>
<xs:enumeration value="PivotTable"/>
<xs:enumeration value="Table"/>
<xs:enumeration value="NamedRange"/>
<xs:enumeration value="WebExtension"/>
<xs:enumeration value="MaxNamedObjectType"/>
</xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
InvalidNamedObjectType	MUST NOT be used.
Chart	Specifies that the published item is a chart.
PivotTable	Specifies that the published item is a PivotTable.
Table	Specifies that the published item is a table.
NamedRange	Specifies that the published item is a named range .
WebExtension	Specifies that the published item is an Office Web Extension.
MaxNamedObjectType	MUST NOT be used.

2.2.5.17 PivotFilterType

Namespace:

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

The **PivotFilterType** is an enumeration of types of PivotTable filters that can be applied on a PivotTable field. The following types of PivotTable filters are supported:

- Top N filter or bottom N filter
- PivotTable custom label filter
- PivotTable custom value filter

```

<xs:simpleType name="PivotFilterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Invalid"/>
    <xs:enumeration value="FirstTop10"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Percent"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="LastTop10"/>
    <xs:enumeration value="CaptionFirst"/>
    <xs:enumeration value="CaptionEquals"/>
    <xs:enumeration value="CaptionDoesNotEqual"/>
    <xs:enumeration value="CaptionBeginsWith"/>
    <xs:enumeration value="CaptionDoesNotBeginWith"/>
    <xs:enumeration value="CaptionEndsWith"/>
    <xs:enumeration value="CaptionDoesNotEndWith"/>
    <xs:enumeration value="CaptionContains"/>
  </xs:restriction>
</xs:simpleType>

```

```
<xs:enumeration value="CaptionDoesNotContain"/>
<xs:enumeration value="CaptionIsGreaterThan"/>
<xs:enumeration value="CaptionIsGreaterThanOrEqualTo"/>
<xs:enumeration value="CaptionIsLessThan"/>
<xs:enumeration value="CaptionIsLessThanOrEqualTo"/>
<xs:enumeration value="CaptionIsBetween"/>
<xs:enumeration value="CaptionIsNotBetween"/>
<xs:enumeration value="ValueFirst"/>
<xs:enumeration value="ValueEqual"/>
<xs:enumeration value="ValueNotEqual"/>
<xs:enumeration value="ValueGreaterThan"/>
<xs:enumeration value="ValueGreaterThanOrEqual"/>
<xs:enumeration value="ValueLessThan"/>
<xs:enumeration value="ValueLessThanOrEqual"/>
<xs:enumeration value="ValueBetween"/>
<xs:enumeration value="ValueNotBetween"/>
<xs:enumeration value="DateFirst"/>
<xs:enumeration value="DateEquals"/>
<xs:enumeration value="DateOlderThan"/>
<xs:enumeration value="DateNewerThan"/>
<xs:enumeration value="DateBetween"/>
<xs:enumeration value="DateTomorrow"/>
<xs:enumeration value="DateToday"/>
<xs:enumeration value="DateYesterday"/>
<xs:enumeration value="DateNextWeek"/>
<xs:enumeration value="DateThisWeek"/>
<xs:enumeration value="DateLastWeek"/>
<xs:enumeration value="DateNextMonth"/>
<xs:enumeration value="DateThisMonth"/>
<xs:enumeration value="DateLastMonth"/>
<xs:enumeration value="DateNextQuarter"/>
<xs:enumeration value="DateThisQuarter"/>
<xs:enumeration value="DateLastQuarter"/>
<xs:enumeration value="DateNextYear"/>
<xs:enumeration value="DateThisYear"/>
<xs:enumeration value="DateLastYear"/>
<xs:enumeration value="DateYearToDate"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter1"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter2"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter3"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter4"/>
<xs:enumeration value="DateAllDatesInPeriodJanuary"/>
<xs:enumeration value="DateAllDatesInPeriodFebruary"/>
<xs:enumeration value="DateAllDatesInPeriodMarch"/>
<xs:enumeration value="DateAllDatesInPeriodApril"/>
<xs:enumeration value="DateAllDatesInPeriodMay"/>
<xs:enumeration value="DateAllDatesInPeriodJune"/>
<xs:enumeration value="DateAllDatesInPeriodJuly"/>
<xs:enumeration value="DateAllDatesInPeriodAugust"/>
<xs:enumeration value="DateAllDatesInPeriodSeptember"/>
<xs:enumeration value="DateAllDatesInPeriodOctober"/>
<xs:enumeration value="DateAllDatesInPeriodNovember"/>
<xs:enumeration value="DateAllDatesInPeriodDecember"/>
<xs:enumeration value="DateNotEqual"/>
<xs:enumeration value="DateOlderOrEqual"/>
<xs:enumeration value="DateNewerOrEqual"/>
<xs:enumeration value="DateNotBetween"/>
<xs:enumeration value="Last"/>
</xs:restriction>
```

</xs:simpleType>

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

Value	Meaning
Invalid	Neither a PivotTable custom filter nor a top N filter nor a bottom N filter are applied.
FirstTop10	A top N filter by count or a bottom N filter by count is applied. Used with top N filter or bottom N filter.
Count	A top N filter by count or a bottom N filter by count is applied. Used with top N filter or bottom N filter.
Percent	A top N filter by percent or a bottom N filter by percent is applied. Used with top N filter or bottom N filter.
Sum	A top N filter by sum or a bottom N filter by sum is applied. Used with top N filter or bottom N filter.
LastTop10	A top N filter by sum or a bottom N filter by sum is applied. Used with top N filter or bottom N filter.
CaptionFirst	The PivotTable member caption is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionEquals	The PivotTable member caption is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotEqual	The PivotTable member caption is not equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionBeginsWith	The PivotTable member caption begins with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotBeginWith	The PivotTable member caption does not begin with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionEndsWith	The PivotTable member caption ends with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotEndWith	The PivotTable member caption does not end with the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionContains	The PivotTable member caption contains the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionDoesNotContain	The PivotTable member caption does not contain the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.

Value	Meaning
CaptionIsGreaterThan	The PivotTable member caption is greater than the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsGreaterThanOrEqualTo	The PivotTable member caption is greater than or equal to the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsLessThan	The PivotTable member caption is less than the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsLessThanOrEqualTo	The PivotTable member caption is less than or equal to the value in the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
CaptionIsBetween	The PivotTable member caption is greater than or equal to the value of the first PivotTable filter parameter and less than or equal to the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
CaptionIsNotBetween	The PivotTable member caption is less than the value of the first PivotTable filter parameter or greater than the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
ValueFirst	The value of the PivotTable member is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueEqual	The value of the PivotTable member is equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueNotEqual	The value of the PivotTable member is not equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueGreaterThan	The value of the PivotTable member is greater than the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueGreaterThanOrEqual	The value of the PivotTable member is greater than or equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueLessThan	The value of the PivotTable member is less than the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueLessThanOrEqual	The value of the PivotTable member is less than or equal to the value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom value filter.
ValueBetween	The value of the PivotTable member is greater than or equal to the value of the first PivotTable filter parameter and less than or equal to the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom value filter.

Value	Meaning
ValueNotBetween	The value of the PivotTable member is less than the value of the first PivotTable filter parameter or greater than the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom value filter.
DateFirst	The PivotTable member caption is equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateEquals	The PivotTable member caption is equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateOlderThan	The PivotTable member caption is less than the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateNewerThan	The PivotTable member caption is greater than the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateBetween	The PivotTable member caption is greater than or equal to the value of the first PivotTable filter parameter and less than or equal to the value of the second PivotTable filter parameter. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
DateTomorrow	The PivotTable member caption is tomorrow's date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateToday	The PivotTable member caption is today's date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateYesterday	The PivotTable member caption is yesterday's date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNextWeek	The PivotTable member caption is a date next week. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisWeek	The PivotTable member caption is a date this week. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateLastWeek	The PivotTable member caption is a date last week. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNextMonth	The PivotTable member caption is a date next month. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisMonth	The PivotTable member caption is a date this month. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateLastMonth	The PivotTable member caption is a date last month. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNextQuarter	The PivotTable member caption is a date next quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisQuarter	The PivotTable member caption is a date this quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.

Value	Meaning
DateLastQuarter	The PivotTable member caption is a date last quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNextYear	The PivotTable member caption is a date next year. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateThisYear	The PivotTable member caption is a date this year. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateLastYear	The PivotTable member caption is a date last year. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateYearToDate	The PivotTable member caption is a date year to date. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter1	The PivotTable member caption is a date in the first quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter2	The PivotTable member caption is a date in the second quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter3	The PivotTable member caption is a date in the third quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodQuarter4	The PivotTable member caption is a date in the fourth quarter. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodJanuary	The PivotTable member caption is a date in January. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodFebruary	The PivotTable member caption is a date in February. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodMarch	The PivotTable member caption is a date in March. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodApril	The PivotTable member caption is a date in April. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodMay	The PivotTable member caption is a date in May. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodJune	The PivotTable member caption is a date in June. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodJuly	The PivotTable member caption is a date in July. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodAugust	The PivotTable member caption is a date in August. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodSeptember	The PivotTable member caption is a date in September. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodOctober	The PivotTable member caption is a date in October. Supports zero

Value	Meaning
	PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodNovember	The PivotTable member caption is a date in November. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateAllDatesInPeriodDecember	The PivotTable member caption is a date in December. Supports zero PivotTable filter parameters. Used with PivotTable custom label filter.
DateNotEqual	The PivotTable member caption is not equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateOlderOrEqual	The PivotTable member caption is less than or equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateNewerOrEqual	The PivotTable member caption is greater than or equal to the date value of the PivotTable filter parameter. Supports one PivotTable filter parameter. Used with PivotTable custom label filter.
DateNotBetween	The PivotTable member caption is a date less than the first parameter or greater than the second parameter PivotTable filter parameters. Supports two PivotTable filter parameters. Used with PivotTable custom label filter.
Last	MUST NOT be used.

2.2.5.18 RangeReference

Namespace:

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

A string that is used by the protocol server to identify a range on a worksheet in a workbook, in operations specified by this protocol. MUST NOT be longer than 32,768 characters. MAY <9> use any format to identify the range.

```
<xs:simpleType name="RangeReference" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string"/>
</xs:simpleType>
```

2.2.5.19 ServerStateFlags

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

Specifies the state of the protocol server.

```
<xs:simpleType name="ServerStateFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Probation"/>
        <xs:enumeration value="ShuttingDown"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

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

```

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

Value	Meaning
None	MUST NOT be used.
Probation	MUST NOT be used.
ShuttingDown	The protocol server is shutting down.

2.2.5.20 ServerStateFlags

Namespace:

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

An enumeration specifying the state of the protocol server.

```

<xs:simpleType name="ServerStateFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ShuttingDown"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

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

Value	Meaning
ShuttingDown	The protocol server is shutting down.

2.2.5.21 SessionIdentifier

Namespace:

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

The **SessionIdentifier** string is used to uniquely identify a session (2) on the protocol server, and to contain information about the session (2).

The **SessionIdentifier** MUST have the following layout. (Numeric values in parts 1, 3, 5, 6, 8, 10, 12, and 14 MUST follow the **s:integer** type representation.)

- **Part 1:** MUST be the value 1, followed by a period (.).
- **Part 2:** MUST be "E" if the identified session (2) is an edit session. MUST be "G" if the identified session (2) is a new workbook session created by **GenerateWorkbookFromHtml**. Otherwise, MUST be "V".
- **Part 3:** The number of characters in part 4, followed by a period (.).

- **Part 4:** A unique string. MUST be greater than or equal to 20 and less than or equal to 32,647 characters long.
- **Part 5:** The sum of number of characters in parts 6-11, followed by a period (.).
- **Part 6:** The number of characters in part 7, followed by a period (.).
- **Part 7:** The UI culture of the session (2). A language tag, as specified in [\[RFC1766\]](#), Section 2.
- **Part 8:** The number of characters in part 9, followed by a period (.).
- **Part 9:** The data culture of the session (2). A language tag, as specified in [\[RFC1766\]](#), Section 2.
- **Part 10:** The number of characters in part 11, followed by a period (.).
- **Part 11:** The time zone of the session (2) as specified in **CultureCommandParameter** complex type (section [3.1.4.20.3.1](#)).
- **Part 12:** The number of characters in part 13, followed by a period (.).
- **Part 13:** MUST be equal to the value of **RequestSiteId** passed in **parameter**, in the **OpenWorkbook** operation.
- **Part 14:** The number of characters in part 15, followed by a period (.).
- **Part 15:** If the identified session (2) is a new workbook session created by **GenerateWorkbookFromHtml**, MUST be the trusted location (1) of the new workbook session. Else if the identified session (2) is any other new workbook session, then MUST be "U".

Otherwise, if the identified session (2) is not an edit session, MUST be "N". If the identified session (2) is an edit session, MUST be a unique string. The protocol server uses this string to uniquely identify a participant in the session.

```
<xs:simpleType name="SessionIdentifier" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string"/>
</xs:simpleType>
```

2.2.5.22 WorkbookType

Namespace:

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

The **WorkbookType** simple type is an enumeration that is used to specify the form of the requested workbook.

```
<xs:simpleType name="WorkbookType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="FullWorkbook"/>
    <xs:enumeration value="FullSnapshot"/>
    <xs:enumeration value="PublishedItemsSnapshot"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
FullWorkbook	The protocol server returns the workbook.
FullSnapshot	The protocol server returns a snapshot that contains the entire contents of the workbook.
PublishedItemsSnapshot	The protocol server returns a published items snapshot .

2.2.5.23 GetPublishedObjectsOptions

Namespace:

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

Specifies criteria for the published items returned by the protocol server.

```
<xs:simpleType name="GetPublishedObjectsOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ReturnImplicitPublish"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

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

Value	Meaning
ReturnImplicitPublish	Specifies that, if the workbook contains no items that have been published explicitly, the list returned from the operation will contain, from each published sheet , the charts from that sheet (1) and the named objects that intersect the used range of that sheet (1). The used range is the smallest range containing all cells that are not empty.

2.2.5.24 OpenWorkbookFlags

Namespace:

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

Control flags for **OpenWorkbook**.

```
<xs:simpleType name="OpenWorkbookFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="NewWorkbook"/>
        <xs:enumeration value="EditMode"/>
        <xs:enumeration value="DisableUndo"/>
        <xs:enumeration value="Recyclable"/>
        <xs:enumeration value="ShouldCheckCanary"/>
        <xs:enumeration value="InternalWorkbook"/>
        <xs:enumeration value="EmbedView"/>
        <xs:enumeration value="DisallowXls"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

```

    <xs:enumeration value="IsCopiedOrConvertedFile"/>
    <xs:enumeration value="ForceAnonymous"/>
    <xs:enumeration value="GenerateWorkbook"/>
    <xs:enumeration value="PreviouslyHadUnsupportedFeatures"/>
    <xs:enumeration value="OnlyOpenFromCollection"/>
    <xs:enumeration value="LoadedOnDemand"/>
  </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>

```

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

Value	Meaning
NewWorkbook	The protocol server creates a new workbook session. Mutually exclusive to EditMode .
EditMode	The protocol server creates an edit session, or adds a participant to an existing open edit session. Mutually exclusive to NewWorkbook , ForceViewOnly , and Recyclable .
DisableUndo	The protocol server disables undo functionality in the open workbook.
Recyclable	The protocol server uses session recycling . Mutually exclusive to EditMode .
ShouldCheckCanary	MUST NOT be used.
InternalWorkbook	MUST NOT be used.
EmbedView	MUST NOT be used.
DisallowXIs	MUST NOT be used.
IsCopiedOrConvertedFile	MUST NOT be used.
ForceAnonymous	The protocol server creates a view session (2), treating all accesses to the session (2) as originating from an anonymous user. Mutually exclusive to NewWorkbook and EditMode .
GenerateWorkbook	MUST NOT be used.
PreviouslyHadUnsupportedFeatures	The protocol server is reopening a workbook that previously had unsupported content. MUST be used if the PreviousSessionId value of OpenWorkbookInParameters (section 2.2.4.52) is present and HasUnsupportedFeatures was present in the OpenWorkbookOutFlags (section 3.1.4.30.4.1) of the OpenWorkbookResponse (section 3.1.4.30.2.2) from which the PreviousSessionId value was taken. Otherwise, MUST NOT be used.
OnlyOpenFromCollection	MUST NOT be used.
LoadedOnDemand	MUST NOT be used.

2.2.5.25 SharedPivotMenuAnchorType

Namespace:

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

Type information about a PivotTable or PivotTable anchor.

```
<xs:simpleType name="SharedPivotMenuAnchorType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="AnchorNotOnPivot"/>
    <xs:enumeration value="AnchorOnSheetCell"/>
    <xs:enumeration value="AnchorOnChartSeries"/>
    <xs:enumeration value="AnchorOnChartCat"/>
    <xs:enumeration value="AnchorOnChartDataPoint"/>
    <xs:enumeration value="AnchorOnChartPageButton"/>
    <xs:enumeration value="AnchorOnChartRowButton"/>
    <xs:enumeration value="AnchorOnChartColButton"/>
    <xs:enumeration value="AnchorOnChart"/>
    <xs:enumeration value="AnchorOnPivotChartHierarchy"/>
    <xs:enumeration value="AnchorOnPivotHierarchy"/>
    <xs:enumeration value="AnchorOnPivotChartHierarchyNotOnPivot"/>
    <xs:enumeration value="AnchorOnPivotHierarchyNotOnPivot"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
AnchorNotOnPivot	The anchor is not on a PivotTable or PivotChart
AnchorOnSheetCell	The anchor is on a cell of a sheet (2), and the cell MUST be in a PivotTable
AnchorOnChartSeries	The anchor is on a chart series
AnchorOnChartCat	The anchor is on a chart category
AnchorOnChartDataPoint	The anchor is on a chart data point
AnchorOnChartPageButton	The anchor is on the filter button of a PivotChart. If the PivotChart has a PivotTable connected to it, the anchor corresponding to a hierarchy in the filter area of the OLAP - based PivotTable, or a field in the filter area of the native-based PivotTable
AnchorOnChartRowButton	The anchor is on the filter button of a PivotChart. If the PivotChart has a PivotTable connected to it, the anchor corresponding to a hierarchy in the row area of the OLAP - based PivotTable, or a field in the row area of the native-based PivotTable.
AnchorOnChartColButton	The anchor is on the filter button of a PivotChart. If the PivotChart has a PivotTable connected to it, the anchor corresponding to a hierarchy in the column area of the OLAP - based PivotTable, or a field in the column area of the native-based PivotTable.

Value	Meaning
AnchorOnChart	The anchor is on a PivotChart, but not on specific PivotChart element
AnchorOnPivotChartHierarchy	The anchor is on the field in the field list of a native-based PivotChart, or on a hierarchy in the field list of an OLAP-based PivotChart. The field or the hierarchy MUST be used explicitly as a series, category, data point, or implicitly used as a filter criteria for the PivotChart.
AnchorOnPivotHierarchy	The anchor is on the field in the field list of native-based PivotChart, or on a hierarchy in the field list of an OLAP-based PivotChart. The field or the hierarchy MUST NOT be shown explicitly as a series, category, data point, or implicitly used as a filter criteria for the PivotChart.
AnchorOnPivotChartHierarchyNotOnPivot	The anchor is on the field in the field list of native-based PivotChart, or on a hierarchy in the field list of an OLAP-based PivotChart. The field or the hierarchy MUST NOT be used explicitly as a series, category, data point, and it MUST NOT be used as a filter criteria for the PivotChart.
AnchorOnPivotHierarchyNotOnPivot	The anchor is on the field in the field list of native-based PivotTable, or on a hierarchy in the field list of an OLAP-based PivotTable. The field or the hierarchy MUST NOT be used in row area, column area, data area, filter criteria in the PivotTable.

2.2.5.26 SheetFlags

Namespace:

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

Describes options for a sheet (1).

```
<xs:simpleType name="SheetFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="RtlName"/>
        <xs:enumeration value="DisplayRtl"/>
        <xs:enumeration value="HeadersVisible"/>
        <xs:enumeration value="DisplayOutlines"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

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

Value	Meaning
None	Used if the sheet (1) is not a worksheet, or if none of the other values are set.
RtlName	MUST be present if the worksheet name will display in right-to-left format. MUST NOT

Value	Meaning
	be present if the worksheet name will display in left-to-right format.
DisplayRtl	MUST be present if the worksheet content will display in right-to-left format. MUST NOT be present if worksheet content will display in left-to-right format.
HeadersVisible	MUST be present if the worksheet will display worksheet header , otherwise if MUST NOT be present.
DisplayOutlines	MUST be present if the worksheet will display outlines , otherwise it MUST NOT be present.

2.2.5.27 WorkbookGenerationItems

Namespace:

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

Control flags for **GenerateWorkbookFromHtml**

```
<xs:simpleType name="WorkbookGenerationItems" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="Table"/>
        <xs:enumeration value="Slicers"/>
        <xs:enumeration value="Chart"/>
        <xs:enumeration value="ConditionalFormatting"/>
        <xs:enumeration value="All"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

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

Value	Meaning
Table	The protocol server MUST insert a table into the session (2)
Slicers	The protocol server MUST insert slicers for the table into the session (2)
Chart	The protocol server SHOULD insert a chart into the session (2)
ConditionalFormatting	The protocol server MUST provide additional formatting for the previously inserted table in the session (2)
All	Equivalent to combining all of the preceding values.

2.2.5.28 char

Namespace: <http://schemas.microsoft.com/2003/10/Serialization/>

Specifies a character.

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

```

    <xs:restriction base="xs:int"/>
  </xs:simpleType>

```

2.2.5.29 duration

Namespace: http://schemas.microsoft.com/2003/10/Serialization/

Specifies a duration of time.

```

<xs:simpleType name="duration" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:duration">
    <xs:pattern value="\-?P(\d*D)?(T(\d*H)?(\d*M)?(\d*(\.\d*)?S)?)?" />
    <xs:minInclusive value="-P10675199DT2H48M5.4775808S" />
    <xs:maxInclusive value="P10675199DT2H48M5.4775807S" />
  </xs:restriction>
</xs:simpleType>

```

2.2.5.30 guid

Namespace: http://schemas.microsoft.com/2003/10/Serialization/

Specifies a GUID value, as specified in [RFC4122](#).

```

<xs:simpleType name="guid" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:pattern value="\da-fA-F}{8}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{12}"/>
  </xs:restriction>
</xs:simpleType>

```

2.2.5.31 DdaBindingType

Namespace:

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

Type of Office Web Extension binding.

```

<xs:simpleType name="DdaBindingType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None" />
    <xs:enumeration value="Table" />
    <xs:enumeration value="Text" />
    <xs:enumeration value="Matrix" />
  </xs:restriction>
</xs:simpleType>

```

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

Value	Meaning
None	Represents an uninitialized or invalid binding type.

Value	Meaning
Table	Represents a single cell's value.
Text	Represents an Excel table object.
Matrix	Represents a range in a worksheet.

2.2.5.32 DdaCoerceType

Namespace:

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

Describes the data format of a result from a DDA method.

```
<xs:simpleType name="DdaCoerceType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="Text"/>
    <xs:enumeration value="Matrix"/>
    <xs:enumeration value="Html"/>
    <xs:enumeration value="Ooxml"/>
  </xs:restriction>
</xs:simpleType>
```

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

Value	Meaning
None	Represents an uninitialized or invalid coerce type.
Table	Result in the format of a table with a header row and cell data.
Text	Result in the format of a single string of text.
Matrix	Result n the format of cell data matrix.
Html	MUST NOT be used.
Ooxml	MUST NOT be used.

2.2.5.33 DdaFilterType

Namespace:

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

Specifies which type of cells the DDA is applied to.

```
<xs:simpleType name="DdaFilterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="All"/>
    <xs:enumeration value="OnlyVisible"/>
  </xs:restriction>
</xs:simpleType>
```

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

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

Value	Meaning
None	Represents an uninitialized or invalid filter type.
All	All cells included in the operation.
OnlyVisible	Hidden cells are omitted from the operation.

2.2.5.34 DdaValueType

Namespace:

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

The type of cell data used in the operation.

```
<xs:simpleType name="DdaValueType" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="None"/>  
    <xs:enumeration value="Formatted"/>  
    <xs:enumeration value="Unformatted"/>  
  </xs:restriction>  
</xs:simpleType>
```

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

Value	Meaning
None	Represents an uninitialized or invalid filter type.
Formatted	Use the formatted value and string type of a cell.
Unformatted	Use the unformatted value and type of a cell.

2.2.5.35 GridRenderingOptions

Namespace:

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

Specifies options to use when rendering a **Workbook** ([\[MS-EXSPXML\]](#) section 2.1.1).

```
<xs:simpleType name="GridRenderingOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:list>  
    <xs:simpleType>  
      <xs:restriction base="xs:string">  
        <xs:enumeration value="None"/>  
        <xs:enumeration value="HideGridlines"/>  
        <xs:enumeration value="HideRowAndColumnHeaders"/>  
      </xs:restriction>  
    </xs:simpleType>  
  </xs:list>
```

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

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

Value	Meaning
None	Use the default style.
HideGridlines	Do not include gridlines.
HideRowAndColumnHeaders	Do not include row and column headers.

2.2.5.36 SheetType

Namespace:

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

Indicates the type of a sheet (1).

```
<xs:simpleType name="SheetType" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="Worksheet"/>  
    <xs:enumeration value="Chart"/>  
  </xs:restriction>  
</xs:simpleType>
```

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

Value	Meaning
Worksheet	A worksheet consisting of cell data.
Chart	A sheet (1) that consists of a single chart object and no cell data.

2.2.5.37 SheetVisibility

Namespace:

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

Indicates the visibility state of a sheet (2).

```
<xs:simpleType name="SheetVisibility" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:restriction base="xs:string">  
    <xs:enumeration value="Visible"/>  
    <xs:enumeration value="Hidden"/>  
    <xs:enumeration value="VeryHidden"/>  
  </xs:restriction>  
</xs:simpleType>
```

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

Value	Meaning
Visible	sheet (2) is visible to the user.
Hidden	sheet (2) is not visible to the user, but can be unhidden by the user.
VeryHidden	sheet (2) is not visible to the user and cannot be unhidden by the user.

2.2.6 Attributes

None.

2.2.7 Groups

None.

2.2.8 Attribute Groups

None.

3 Protocol Details

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

The client side of this protocol is simply a pass-through. That is, no additional timers or other state is required on the client side of this protocol. Calls made by the higher-layer protocol or application are passed directly to the transport, and the results returned by the transport are passed directly back to the higher-layer protocol or application.

Except where specified, protocol clients SHOULD interpret HTTP status codes returned by the protocol server as specified in [RFC2616](#), section 10.

This protocol allows protocol servers to perform implementation-specific authorization checks and notify protocol clients of authorization faults as specified previously in this section.

This protocol allows protocol servers to perform implementation-specific localization of text in various messages. Except where specified, the localization of this text is an implementation-specific behavior of the protocol server and not significant for interoperability.

The following high-level sequence diagram illustrates the operation of the protocol.

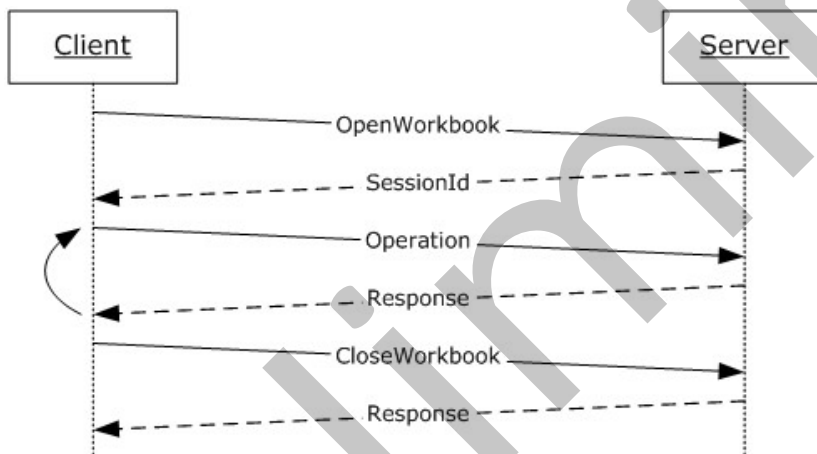


Figure 2: Excel Calculation Web Service Protocol high-level sequence diagram

Session Behavior

View Sessions

A view session is created on a successful **OpenWorkbook** request, as specified in **OpenWorkbook** (section [3.1.4.30](#)). A view session stops responding to operations after a successful call to the **CloseWorkbook** operation or after the view session has timed out.

NewWorkbook Sessions

A new workbook session is created on a successful **OpenWorkbook** request, as specified in **OpenWorkbook**. A new workbook session stops responding to operations after a successful call to the **CloseWorkbook** operation or after the new workbook session has timed out.

Edit Sessions

An edit session is created on a successful **OpenWorkbook** request, unless one already exists for the same workbook, as specified by the **url** element in **OpenWorkbook**. A new participant is added to the edit session on a successful **OpenWorkbook** request.

The current participant is removed from the edit session on a successful call to **CloseWorkbook**. An edit session stops responding to operations when all of its participants have been removed.

Request Behavior

A request is created when a **Web service** operation starts running on the protocol server, and ends when the Web service operation finishes, when it is successfully cancelled by a **CancelRequest** call, or after the request has timed out.

3.1 Server Details

3.1.1 Abstract Data Model

This section describes a conceptual model of possible data organization that an implementation maintains to participate in this protocol. The described organization is provided to facilitate the explanation of how the protocol behaves. This document does not mandate that implementations adhere to this model as long as their external behavior is consistent with that described in this document.

Session: An entity which gives context to operations done against a workbook. A session (2) is associated with a workbook state, which can be modified by state changing operations.

State Identifier: Each session has a counter which represents its state.

Request: An entity which represents a running request on the protocol server.

Instance Identifier: A unique identifier for the protocol server. Used to identify each instance of the protocol server in farm installations.

Asynchronous Operations: An operation on the protocol server which begins when a request is received, in which the protocol server returns a response before the operation is complete. The protocol client–protocol server communication is defined as follows:

1. The protocol client issues an initiating request against the server, specifying an estimated response timeout.
2. The protocol server begins a normal operation.
3. If the operation has finished before the estimated response timeout, the protocol server returns a response to the protocol client, as expected for the specific operation.
4. If the operation has not finished before the estimated response timeout, the protocol server returns a response which contains a unique request identifier to the protocol client.
5. The protocol client then queries the protocol server about the completion of the operation by issuing the same operation that was issued in the initiating request, including the unique request identifier which was returned by the protocol server on the response to the initiating request.

6. If the operation is still incomplete, go back to step 4.
7. If the operation is complete, the protocol server returns a response to the protocol client, as expected for the specific operation.

3.1.2 Timers

3.1.2.1 Session Timeout

The **Session Timeout** timer measures the time it take for a sessions (2) to time out.

3.1.2.2 Request Timeout

The **Request Timeout** timer measures the time it takes for a request to time out.

3.1.3 Initialization

None.

3.1.4 Message Processing Events and Sequencing Rules

This section includes specifications of operations for this protocol.

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

Operation	Description
ApplyItemFilter	This operation is used to change the filtering of a table or worksheet AutoFilter in the workbook.
ApplyPivot	This operation is used to modify a PivotTable or a PivotChart.
ApplyPivotFieldManagerHiddenState	This operation is used to set the visibility of the PivotTable or PivotChart field list for the workbook.
ApplyPivotFilter	This operation is used to apply a PivotTable custom filter or a PivotTable manual filter on a PivotTable field.
ApplyPivotSort	This operation is used to change the sort order (2) of a PivotTable field or PivotChart elements in the workbook.
ApplyPivotTop10Filter	This operation is used to apply a top N filter or a bottom N filter on a PivotTable field.
ApplyPivotValueFieldSettings	This operation is used to modify a PivotTable or PivotChart by changing the aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts. The result is a query.
ApplySlicerSelection	This operation is used to update the state of the slicer items that are part of a slicer.
ApplyTimeSlicerInteractivity	This operation is used to update the state of the time slicer.
ApplyTop10Filter	This operation is used to apply a top N filter or a bottom N filter on a column (2) in a worksheet or in a table.
AutoFit	This operation adjusts the heights of rows (2) or the widths of columns (2), in a workbook, if necessary, to fit the contents in

Operation	Description
	those rows (2) or columns (2).
BixDrill	Applies a drill operation to the PivotTable and displays PivotCache hierarchy members at the defined level. This will result in a query.
CancelRequest	This operation is used to cancel all requests currently running on the protocol server against the session.
CloseWorkbook	This operation is used to close a session (2) or leave an edit session on the protocol server.
ConnectAndGetPivotFilterItemList	This operation is used to return the PivotTable members that are part of a PivotTable manual filter hierarchy.
ConnectAndGetSlicerItemList	This operation is used to return the slicer items and formatting information for the slicer visual components that are part of a slicer.
DdaAddBinding	Adds a new or modifies an existing Office Web Extension binding.
DdaGetAllBindings	Returns a list of BindingMetadata items associated with the given Office Web Extension.
DdaGetBinding	Returns BindingMetadata for a single binding associated with an Office Web Extension.
DdaGetBindingData	Returns worksheet cell contents associated with a binding and Office Web Extension.
DdaGetSelectedData	Returns worksheet cell contents associated with the given range.
DdaLoadSettings	Returns settings associated with the given Office Web Extension.
DdaReleaseBinding	Removes the binding specified by name from the given Office Web Extension.
DdaSaveSettings	Replaces all existing settings on the Office Web Extension with the given settings.
DdaSetBindingData	Sets worksheet cell contents associated with a binding on the given Office Web Extension.
DdaSetSelectedData	Sets worksheet cell contents associated with the given range.
ExpandCollapseOutline	This operation is used to toggle the outline state in the workbook.
ExpandPivotFieldListLevels	This operation is used to expand the levels on a PivotTable or PivotChart.
FindRange	This operation is used to find a string inside a workbook.
GenerateWorkbookFromHtml	This operation is used to create a new workbook session containing named objects based on the input parameters.
GetAutoFilterItemList	This operation is used to retrieve the filter values and filter date values and their captions in the AutoFilterItemList (section 3.1.4.13.3.1) in the operation response for an AutoFilter in the workbook.
GetBixAnalysis	This operation is used to get the set of analysis operations that

Operation	Description
	could be applied to a PivotTable or a PivotChart.
GetChart	This operation is used to return a chart image.
GetChartData	This operation returns information about the chart elements in a PivotChart.
GetHealthScore	This operation is used to return information about the health of the protocol server.
GetImage	This operation is used to return a chart image or embedded image .
GetObjectInformation	This operation returns the range of a published item in a workbook
GetPivotFieldListData	This operation is used to get the PivotTable fields that are associated with a PivotTable or PivotChart.
GetPivotFieldManagerData	This operation is used to get the PivotTable fields that are associated with a PivotTable or PivotChart query.
GetPivotFilterItemList	This operation is used to return child PivotTable members that are part of a PivotTable manual filter hierarchy, or child PivotChart members that are part of a PivotChart manual filter hierarchy. This operation is used after calling either the ConnectAndGetPivotFilterItemList operation (section 3.1.4.9) or this operation for an ancestor in the hierarchy.
GetPivotMenu	This operation is used to return information about a PivotTable area.
GetPivotValueFieldSettings	This operation is used to get a list of the PivotTable or PivotChart aggregation types and the selected aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts.
GetPublishedObjects	This operation returns a list of the published items in a workbook.
GetRange	This operation returns information about the workbook as specified in [MS-EXSPXML] .
GetRangeForClipboard	This operation is used to get the number formatted values of visible worksheet cells in a specified range in a workbook.
GetRangeImage	This operation is used to return an image of a worksheet range.
GetRangeValues	This operation is used to get the values contained in a specified range in a workbook.
GetRangeValuesA1	This operation is used to get the values contained in a specified range in a workbook.
GetScaledImage	This operation is used to return a chart image.
GetSessionInformation	This operation is used to retrieve information about a session (2).
GetSheetNames	The operation returns information about the sheets in a workbook.
GetSlicerItemList	This operation is used to return the slicer items and formatting information for the slicer visual components that are part of a slicer.

Operation	Description
GetSparklines	This operation is used to return an image containing sparklines .
GetTimeSlicerFilterState	This operation is used to return the time slicer state and formatting information for the time slicer visual components that are part of a time slicer.
GetTimeSlicerStrings	This operation is used to return the strings for the time slicer visual components that are part of the time slicer.
GetWorkbook	This operation is used to retrieve a workbook file.
OpenWorkbook	This operation is used to create a new session (2) or to join an existing edit session.
ParseRange	This operation is used to parse a specified range in the workbook.
ProcessODataRequest	MUST NOT be used.
ProcessRestRequest	This operation performs different operations on the workbook depending on the type of the RestRequest object received and returns a corresponding RestResult .
Recalc	This operation is used to calculate a specified range in the workbook.
RecalcA1	This operation is used to calculate a specified range in the workbook.
RecalcAll	This operation is used to calculate the workbook.
Refresh	This operation is used to refresh connected data on a workbook.
RefreshAll	This operation is used to refresh all connected data on a workbook.
RemovePivotFilter	This operation is used to remove any PivotTable or PivotChart filters that are applied to a PivotTable field or PivotChart field.
ResizeRowsColumns	This operation is used to set the heights or widths of specified rows (2) or columns (2) in a workbook.
SaveWorkbook	This operation is used to save a workbook associated with an open edit session, to the same location from which it was opened.
SaveWorkbookAs	This operation is used to save a session (2) to a specified location, and in a specified format.
SetCalculationOptions	This operation is used to set the workbook calculation mode .
SetParameters	This operation is used to set values of workbook parameters in a workbook.
SetRange	This operation is used to set values to a range of worksheet cells on a workbook.
SetRangeA1	This operation is used to set values to a range of worksheet cells on a workbook.
SortFilterColumn	This operation is used to change the sort order (2) of a table or worksheet AutoFilter in the workbook.

Operation	Description
TogglePivotDrill	This operation is used to expand or collapse a PivotTable or PivotChart member.
UpdateSlicer	This operation is used to update the state of the slicer items that are part of a slicer.

3.1.4.1 ApplyItemFilter

This operation is used to change the filtering of a table or worksheet AutoFilter in the workbook.

```
<wsdl:operation name="ApplyItemFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyItemFilter"
    message="tns:ExcelServiceSoap_ApplyItemFilter_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyItemFilterResponse"
    message="tns:ExcelServiceSoap_ApplyItemFilter_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyItemFilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ApplyItemFilter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyItemFilter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyItemFilter_OutputMessage** response message, as follows:

- The protocol server sets the filter to the **clear all state** if the **values** element is not present, and the **autoFilterDateNodes** element is not present, and the **blanks** element value is false, and the **hideBlanks** element value is false, and the value of **CriteriaType** element of **AutoFilterOptions** (section [2.2.4.14](#)) is Nil, and the **Criteria** element of **AutoFilterOptions** is not present.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<10>](#) be one of the values specified in section [2.2.2.1](#).

This operation is a state changing operation on the protocol server.

3.1.4.1.1 Messages

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

Message	Description
ExcelServiceSoap_ApplyItemFilter_InputMessage	The request WSDL message for the ApplyItemFilter WSDL operation .

Message	Description
ExcelServiceSoap_ApplyItemFilter_OutputMessage	The response WSDL message for the ApplyItemFilter WSDL operation.

3.1.4.1.1.1 ExcelServiceSoap_ApplyItemFilter_InputMessage

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

The **SOAP action** value is:

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

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

3.1.4.1.1.2 ExcelServiceSoap_ApplyItemFilter_OutputMessage

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

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

3.1.4.1.2 Elements

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

Element	Description
ApplyItemFilter	The input data for the ApplyItemFilter WSDL operation.
ApplyItemFilterResponse	The result data for the ApplyItemFilter WSDL operation.

3.1.4.1.2.1 ApplyItemFilter

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

```
<xs:element name="ApplyItemFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="values" type="tns:ArrayOfString"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterDateNodes"
type="tns:ArrayOfAutoFilterDateNodeInfo"/>
      <xs:element minOccurs="1" maxOccurs="1" name="blanks" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="hideBlanks" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The AutoFilter options for filtering the AutoFilter column (2) as specified in section [2.2.4.14](#). MUST be present.

values: The filter values to use when filtering the AutoFilter column (2). Specifies the values used by the protocol server to filter the AutoFilter with. MUST NOT be present if the value of the **CriteriaType** element of **AutoFilterOptions** is not Nil. MUST NOT be present if the **Criteria** element of **AutoFilterOptions** is present. MUST be present if **autoFilterDateNode** element is present. If present, the count of elements MUST be greater than or equal to 0 and less than or equal to 1000. All **string** elements of **ArrayOfString** (section [2.2.4.11](#)) MUST have a value or be empty. The value of the **string** element of **ArrayOfString** MUST be equal to one of the **DisplayString** element values of **AutoFilterItem** (section [3.1.4.13.3.3](#)) in the **AutoFilterItemList** (section [3.1.4.13.3.1](#)) of the **GetAutoFilterItemList** response (section [3.1.4.13](#)).

autoFilterDateNodes: The filter date values to use when filtering the AutoFilter column (2). Specifies the filter date values used by the protocol server to filter the AutoFilter with, as specified in **AutoFilterDateNodeInfo** (section [2.2.4.13](#)). MUST NOT be present if the **values** element is not present. If present the count of elements MUST be greater than or equal to 0 and less than or equal to 1000. The value of the **NodeType** element of **AutoFilterDateNodeInfo** MUST NOT be Nil. If the value of the **NodeType** element of **AutoFilterDateNodeInfo** is "Year", the value of the **Month** and **Day** elements of **AutoFilterDateNodeInfo** MUST be 0. If the value of the **NodeType** element of **AutoFilterDateNodeInfo** is "Month", the value of the **Day** element of **AutoFilterDateNodeInfo** MUST be 0.

blanks: Specifies whether to include blank values in the filter. The value **true** specifies to include filter blank values in the filter. The value **false** specifies to exclude filter blank values in the filter.

hideBlanks: Specifies whether to hide blank values in the filter. Specifies filtering to include all values but blank values. The value **true** specifies to include all values but blank values in the filter. The value **false** MUST be ignored by the protocol server. The protocol client MUST NOT set this element value to **true** if the values element is present or the **Criteria** element of **AutoFilterOptions** is present or the value of **CriteriaType** element of **AutoFilterOptions** is not Nil.

3.1.4.1.2.2 ApplyItemFilterResponse

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

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

ApplyItemFilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.1.3 Complex Types

None.

3.1.4.1.4 Simple Types

None.

3.1.4.1.5 Attributes

None.

3.1.4.1.6 Groups

None.

3.1.4.1.7 Attribute Groups

None.

3.1.4.2 ApplyPivotFilter

This operation is used to apply a PivotTable custom filter or a PivotTable manual filter on a **PivotTable** field.

```
<wsdl:operation name="ApplyPivotFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotFilter"
    message="tns:ExcelServiceSoap_ApplyPivotFilter_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotFilterResponse"
    message="tns:ExcelServiceSoap_ApplyPivotFilter_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotFilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ApplyPivotFilter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyPivotFilter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotFilter_OutputMessage** response message, as follows:

1. The protocol client sends the PivotTable custom filter or PivotTable manual filter to be applied, and the information identifying the **PivotTable** field in the **pivotOperationOptions** element.
2. The protocol server applies the PivotTable custom filter or PivotTable manual filter to the **PivotTable** field.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<11>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**

- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

This operation is a state changing operation on the protocol server.

3.1.4.2.1 Messages

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

Message	Description
ExcelServiceSoap_ApplyPivotFilter_InputMessage	The request WSDL message for the ApplyPivotFilter WSDL operation.
ExcelServiceSoap_ApplyPivotFilter_OutputMessage	The response WSDL message for the ApplyPivotFilter WSDL operation.

3.1.4.2.1.1 ExcelServiceSoap_ApplyPivotFilter_InputMessage

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

The SOAP action value is:

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

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

3.1.4.2.1.2 ExcelServiceSoap_ApplyPivotFilter_OutputMessage

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

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

3.1.4.2.2 Elements

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

Element	Description
ApplyPivotFilter	The input data for the ApplyPivotFilter WSDL operation.
ApplyPivotFilterResponse	The result data for the ApplyPivotFilter WSDL operation.

3.1.4.2.2.1 ApplyPivotFilter

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

```
<xs:element name="ApplyPivotFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable field identification and information about the PivotTable custom filter or PivotTable manual filter to apply. MUST be present. The following MUST extend or override the standard behavior specified in **PivotOperationOptions** (section [2.2.4.28](#)):

- **FilterType:** MUST contain the value **Invalid** if a PivotTable manual filter is applied. Otherwise, it MUST contain one of the values used for PivotTable custom filter as specified in **PivotFilterType** (section [2.2.5.17](#)).
- **DataFieldId:** MUST NOT be present if **FilterType** is not used for PivotTable custom value filter as specified in **PivotFilterType**. Otherwise, MUST be present and equal to the **IdString** element of one of the **PivotField** elements nested under the **PivotDataFields** element of the **pivotMenu** element returned from the protocol server in the last call to **GetPivotMenu** (section [3.1.4.19](#)).
- **MemberPropertyId:** MUST NOT be present if **FilterType** has the value **Invalid**. Otherwise, it MUST be present and equal to the **IdString** element of one of the **PivotFiled** elements nested under the **MemberProperties** element of the **PivotField** element that is the PivotTable field on which the filter is being applied if this is a member properties PivotTable custom filter, and MUST NOT be present otherwise.
- **FilterValue1:** MUST NOT be present if **FilterType** has the value **Invalid**. Otherwise, it MUST NOT be present if **FilterType** supports zero PivotTable filter parameters as specified in **PivotFilterType**. Otherwise, it MUST be present and contain the value of the first PivotTable filter parameter.
- **FilterValue2:** MUST NOT be present if **FilterType** has the value **Invalid**. Otherwise, it MUST NOT be present if **FilterType** supports zero or one PivotTable filter parameters as specified in **PivotFilterType**. Otherwise, it MUST be present and contain the value of the second PivotTable filter parameter.

- **Items:** MUST be present if **FilterType** has the value **Invalid**. MUST contain one or more elements. MUST be equal to the **Id** element of one of the **PivotFilterItem** elements nested under the **itemList** element returned from the protocol server in the last call to **GetPivotFilterItemList** (section [3.1.4.18](#)). Otherwise, MUST NOT be present.

3.1.4.2.2 ApplyPivotFilterResponse

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

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

ApplyPivotFilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.2.3 Complex Types

None.

3.1.4.2.4 Simple Types

None.

3.1.4.2.5 Attributes

None.

3.1.4.2.6 Groups

None.

3.1.4.2.7 Attribute Groups

None.

3.1.4.3 ApplyPivotSort

This operation is used to change the sort order (2) of a PivotTable field or PivotChart elements in the workbook.

```
<wsdl:operation name="ApplyPivotSort" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSort"
message="tns:ExcelServiceSoap_ApplyPivotSort_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortResponse"/>
```

```

message="tns:ExcelServiceSoap_ApplyPivotSort_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotSort_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyPivotSort_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotSort_OutputMessage** response message, as follows:

- The protocol client sends information that identifies either the PivotTable field or the PivotChart elements in the **pivotOperationOptions** element.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<12>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.9](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.3.1 Messages

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

Message	Description
ExcelServiceSoap_ApplyPivotSort_InputMessage	The request WSDL message for the ApplyPivotSort WSDL operation.
ExcelServiceSoap_ApplyPivotSort_OutputMessage	The response WSDL message for the ApplyPivotSort WSDL operation.

3.1.4.3.1.1 ExcelServiceSoap_ApplyPivotSort_InputMessage

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

The SOAP action value is:

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

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

3.1.4.3.1.2 ExcelServiceSoap_ApplyPivotSort_OutputMessage

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

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

3.1.4.3.2 Elements

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

Element	Description
ApplyPivotSort	The input data for the ApplyPivotSort WSDL operation.
ApplyPivotSortResponse	The result data for the ApplyPivotSort WSDL operation.

3.1.4.3.2.1 ApplyPivotSort

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

```
<xs:element name="ApplyPivotSort" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"  
type="tns:PivotOperationOptions"/>  
      <xs:element minOccurs="1" maxOccurs="1" name="ascending" type="xs:boolean"/>  
    </xs:sequence>  
  </xs:complexType>
```

</xs:element>

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart field identification as specified in section [2.2.4.28](#). MUST be present. The following MUST extend or override the standard behavior specified in **PivotOperationOptions**:

- **SortByValue:** Specifies whether the operation is a sort by value operation. MUST be **true** when it is a sort by value operation. MUST be **false** otherwise.
- **DataFieldIndex:** Specified the index of PivotTable or PivotChart data field. MUST be ignored on receipt except when used in a sort by value operation.

ascending: The sort order (2) to apply to the PivotTable or PivotChart field. A **true** value specifies an ascending order, and a **false** value specifies a descending order.

3.1.4.3.2.2 ApplyPivotSortResponse

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

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

ApplyPivotSortResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.3.3 Complex Types

None.

3.1.4.3.4 Simple Types

None.

3.1.4.3.5 Attributes

None.

3.1.4.3.6 Groups

None.

3.1.4.3.7 Attribute Groups

None.

3.1.4.4 ApplyPivotTop10Filter

This operation is used to apply a top N filter or a bottom N filter on a PivotTable field.

```
<wsdl:operation name="ApplyPivotTop10Filter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotTop10Filter"
    message="tns:ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotTop10FilterResponse"
    message="tns:ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotTop10FilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ApplyPivotTop10Filter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage** response message, as follows:

1. The protocol client sends the top N filter or bottom N filter to be applied, and the information identifying the PivotTable field in the **pivotOperationOptions** element.
2. The protocol server applies the top N filter or bottom N filter to the **PivotTable** field.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<13>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**

- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.4.1 Messages

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

Message	Description
ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage	The request WSDL message for the ApplyPivotTop10Filter WSDL operation.
ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage	The response WSDL message for the ApplyPivotTop10Filter WSDL operation.

3.1.4.4.1.1 ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage

The request WSDL message for the **ApplyPivotTop10Filter** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivotTop10Filter
```

The SOAP body contains the **ApplyPivotTop10Filter** element.

3.1.4.4.1.2 ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage

The response WSDL message for the **ApplyPivotTop10Filter** WSDL operation.

The SOAP body contains the **ApplyPivotTop10FilterResponse** element.

3.1.4.4.2 Elements

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

Element	Description
ApplyPivotTop10Filter	The input data for the ApplyPivotTop10Filter WSDL operation.
ApplyPivotTop10FilterResponse	The result data for the ApplyPivotTop10Filter WSDL operation.

3.1.4.4.2.1 ApplyPivotTop10Filter

The input data for the **ApplyPivotTop10Filter** WSDL operation.

```
<xs:element name="ApplyPivotTop10Filter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="top" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="value" type="xs:double"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** field identification and information about the top N filter or bottom N filter to be applied. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.28](#):

- **DataFieldId** MUST be present and equal to the **IdString** element of one of the **PivotField** elements nested under the **PivotDataFields** element of the **pivotMenu** element returned from the protocol server in the last call to **GetPivotMenu** (section [3.1.4.19](#)).
- **FilterType** MUST be one of the following values, as specified in section [2.2.5.17](#): **FirstTop10**, **Percent**, or **Sum**.

top: Specifies whether a top N filter or a bottom N filter is performed. MUST be set to true to perform a top N filter, and MUST be set to false to perform a bottom N filter.

value: The **PivotTable** filter parameter. If the value of the **FilterType** element of the **pivotOperationOptions** element is **FirstTop10**, **value** MUST be greater than or equal to 0 and less than or equal to the value of the **Top10MaxItems** element of the **pivotMenu** element returned from the protocol server in the last call to **GetPivotMenu**. If the value of the **FilterType** element of the **pivotOperationOptions** element is **Percent**, **value** MUST be greater than or equal to 0 and less than or equal to 100. If the value of the **FilterType** element of the **pivotOperationOptions** element is **Sum**, **value** MUST be greater than or equal to 0.

3.1.4.4.2.2 ApplyPivotTop10FilterResponse

The result data for the **ApplyPivotTop10Filter** WSDL operation.

```
<xs:element name="ApplyPivotTop10FilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotTop10FilterResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyPivotTop10FilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.4.3 Complex Types

None.

3.1.4.4.4 Simple Types

None.

3.1.4.4.5 Attributes

None.

3.1.4.4.6 Groups

None.

3.1.4.4.7 Attribute Groups

None.

3.1.4.5 ApplySlicerSelection

This operation is used to update the state of the slicer items that are part of a slicer.

```
<wsdl:operation name="ApplySlicerSelection" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplySlicerSelection"
    message="tns:ExcelServiceSoap_ApplySlicerSelection_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplySlicerSelectionResponse"
    message="tns:ExcelServiceSoap_ApplySlicerSelection_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplySlicerSelectionExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ApplySlicerSelection_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplySlicerSelection_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplySlicerSelection_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the slicer in the **slicerOptions** element, and the slicer items that will be selected and unselected in **selectedRanges** and **unselectedRanges** elements respectively.
2. The protocol server updates the state of the slicer items in the slicer.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<14>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.5.1 Messages

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

Message	Description
ExcelServiceSoap_ApplySlicerSelection_InputMessage	The request WSDL message for the ApplySlicerSelection WSDL operation.
ExcelServiceSoap_ApplySlicerSelection_OutputMessage	The response WSDL message for the ApplySlicerSelection WSDL operation.

3.1.4.5.1.1 ExcelServiceSoap_ApplySlicerSelection_InputMessage

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

The SOAP action value is:

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

3.1.4.5.1.2 ExcelServiceSoap_ApplySlicerSelection_OutputMessage

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

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

3.1.4.5.2 Elements

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

Element	Description
ApplySlicerSelection	The input data for the ApplySlicerSelection WSDL operation.
ApplySlicerSelectionResponse	The result data for the ApplySlicerSelection WSDL operation.

3.1.4.5.2.1 ApplySlicerSelection

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

```
<xs:element name="ApplySlicerSelection" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions" type="tns:SlicerOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="selectedRanges"
type="tns:ArrayOfSlicerItemRange"/>
      <xs:element minOccurs="0" maxOccurs="1" name="unselectedRanges"
type="tns:ArrayOfSlicerItemRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The slicer identification. MUST be present. The following extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerItemsCount:** MUST be ignored.
- **SlicerClearItems:** When set to **true**, specifies unselecting all slicer items in the slicer before applying a selection. Otherwise, MUST be ignored by the protocol server.

selectedRanges: An **ArrayOfSlicerItemRange** with the ranges that will be selected during this operation.

unselectedRanges: An **ArrayOfSlicerItemRange** with the ranges that will be unselected during this operation. If **SlicerClearItems** attribute in **SlicerOptions** is true then this value MUST be ignored.

3.1.4.5.2 ApplySlicerSelectionResponse

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

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

ApplySlicerSelectionResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.5.3 Complex Types

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

Complex type	Description
ArrayOfSlicerItemRange	An ordered list of SlicerItemRange elements.
SlicerItemRange	Specifies a range of indices of slicer items.

3.1.4.5.3.1 ArrayOfSlicerItemRange

Namespace:

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

An ordered list of **SlicerItemRange** elements. These elements are sorted in **ascending order** according to the following rule:

- The value of the **End** element of a **SlicerItemRange** element MUST be less than or equal to the value of the **Start** element of the next **SlicerItemRange** element in the list.

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

SlicerItemRange: Element with a slicer item range as defined in **SlicerItemRange**.

3.1.4.5.3.2 SlicerItemRange

Namespace:

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

Specifies a range of indices of slicer items.

```

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

```

Start: The index to the first slicer item in the requested range. MUST be greater than or equal to 0.

End: The index to the last slicer item in the requested range. MUST be greater than or equal to **Start**. MUST be less than the total number of slicer items.

3.1.4.5.4 Simple Types

None.

3.1.4.5.5 Attributes

None.

3.1.4.5.6 Groups

None.

3.1.4.5.7 Attribute Groups

None.

3.1.4.6 ApplyTop10Filter

This operation is used to apply a top N filter or a bottom N filter on a column (2) in a worksheet or in a table.

```

<wsdl:operation name="ApplyTop10Filter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTop10Filter"
    message="tns:ExcelServiceSoap_ApplyTop10Filter_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTop10FilterResponse"
    message="tns:ExcelServiceSoap_ApplyTop10Filter_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTop10FilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ApplyTop10Filter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyTop10Filter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyTop10Filter_OutputMessage** response message, as follows:

- The protocol client MUST NOT call this operation on AutoFilters that have their **DataType** attribute in the **CT_AutoFilters** element (as specified in [MS-EXSPXML] section 2.2.20) present and with a value different from **Number**.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<15>](#) be one of the values specified in section 2.2.2.1.

3.1.4.6.1 Messages

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

Message	Description
ExcelServiceSoap_ApplyTop10Filter_InputMessage	The request WSDL message for the ApplyTop10Filter WSDL operation.
ExcelServiceSoap_ApplyTop10Filter_OutputMessage	The response WSDL message for the ApplyTop10Filter WSDL operation.

3.1.4.6.1.1 ExcelServiceSoap_ApplyTop10Filter_InputMessage

The request WSDL message for the **ApplyTop10Filter** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyTop10Filter
```

The SOAP body contains the **ApplyTop10Filter** element.

3.1.4.6.1.2 ExcelServiceSoap_ApplyTop10Filter_OutputMessage

The response WSDL message for the **ApplyTop10Filter** WSDL operation.

The SOAP body contains the **ApplyTop10FilterResponse** element.

3.1.4.6.2 Elements

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

Element	Description
ApplyTop10Filter	The input data for the ApplyTop10Filter WSDL operation.
ApplyTop10FilterResponse	The result data for the ApplyTop10Filter WSDL operation.

3.1.4.6.2.1 ApplyTop10Filter

The input data for the **ApplyTop10Filter** WSDL operation.


```

<xs:element name="ApplyTop10Filter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="top" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="percent" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="value" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The options to be used when filtering the AutoFilter column (2). See section [2.2.4.14](#). The **CriteriaType** element MUST have the value of Nil. The **Criteria** element MUST NOT be present.

top: Specifies whether to apply the top N filter or bottom N filter. If **true**, the protocol server MUST apply a top N filter on the specified column (2). If **false**, the protocol server MUST apply a bottom N filter on the specified column (2).

percent: Specifies whether the top N filter or bottom N filter is based on percentage of the total sum of values in the column (2) or not. If **true**, the protocol server applies a top N filter by percent or a bottom N filter by percent on the specified column (2). If **false**, the protocol server applies a top N filter by count or a bottom N filter by count on the specified column (2).

value: The value to be used when applying the top N filter or bottom N filter. If **percent** is **true**, the value of **value** MUST be greater than or equal to 0 and less than or equal to 100. If **percent** is **false**, the value of **value** MUST be greater than or equal to 1 and less than or equal to 500.

3.1.4.6.2.2 ApplyTop10FilterResponse

The result data for the **ApplyTop10Filter** WSDL operation.

```

<xs:element name="ApplyTop10FilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyTop10FilterResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyTop10FilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.6.3 Complex Types

None.

3.1.4.6.4 Simple Types

None.

3.1.4.6.5 Attributes

None.

3.1.4.6.6 Groups

None.

3.1.4.6.7 Attribute Groups

None.

3.1.4.7 CancelRequest

This operation is used to cancel all requests currently running on the protocol server against the session.

```
<wsdl:operation name="CancelRequest" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/CancelRequest"
    message="tns:ExcelServiceSoap_CancelRequest_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/CancelRequestResponse"
    message="tns:ExcelServiceSoap_CancelRequest_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/CancelRequestExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_CancelRequest_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_CancelRequest_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_CancelRequest_OutputMessage** response message, as follows:

- The protocol server tries to cancel all requests currently running on the protocol server against the session specified inside the **parameter** element as specified in section [3.1.4.7.1.1](#).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<16>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.7.1 Messages

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

Message	Description
ExcelServiceSoap_CancelRequest_InputMessage	The request WSDL message for the CancelRequest WSDL operation.

Message	Description
ExcelServiceSoap_CancelRequest_OutputMessage	The response WSDL message for the CancelRequest WSDL operation.

3.1.4.7.1.1 ExcelServiceSoap_CancelRequest_InputMessage

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

The SOAP action value is:

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

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

3.1.4.7.1.2 ExcelServiceSoap_CancelRequest_OutputMessage

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

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

3.1.4.7.2 Elements

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

Element	Description
CancelRequest	The input data for the CancelRequest WSDL operation.
CancelRequestResponse	The result data for the CancelRequest WSDL operation.

3.1.4.7.2.1 CancelRequest

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

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

parameter: Common operation parameters. MUST be present. The **WorkbookId** element of the **CommandParameter** complex type MUST be present. The **WorkOnBehalfRequest** element of the **CommandParameter** complex type MUST be as specified in section [2.2.4.20](#). The **RequestSiteId** element of the **CommandParameter** complex type MUST be present. All other elements MUST be ignored by the protocol server.

3.1.4.7.2 CancelRequestResponse

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

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

CancelRequestResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.7.3 Complex Types

None.

3.1.4.7.4 Simple Types

None.

3.1.4.7.5 Attributes

None.

3.1.4.7.6 Groups

None.

3.1.4.7.7 Attribute Groups

None.

3.1.4.8 CloseWorkbook

This operation is used to close a session (2) or leave an edit session on the protocol server.

```
<wsdl:operation name="CloseWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbook"
message="tns:ExcelServiceSoap_CloseWorkbook_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbookResponse"
message="tns:ExcelServiceSoap_CloseWorkbook_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_CloseWorkbook_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_CloseWorkbook_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_CloseWorkbook_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a soap fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<17>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.8.1 Messages

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

Message	Description
ExcelServiceSoap_CloseWorkbook_InputMessage	The request WSDL message for the CloseWorkbook WSDL operation.
ExcelServiceSoap_CloseWorkbook_OutputMessage	The response WSDL message for the CloseWorkbook WSDL operation.

3.1.4.8.1.1 ExcelServiceSoap_CloseWorkbook_InputMessage

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

The SOAP action value is:

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

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

3.1.4.8.1.2 ExcelServiceSoap_CloseWorkbook_OutputMessage

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

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

3.1.4.8.2 Elements

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

Element	Description
CloseWorkbook	The input data for the CloseWorkbook WSDL operation.
CloseWorkbookResponse	The result data for the CloseWorkbook WSDL operation.

3.1.4.8.2.1 CloseWorkbook

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

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

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    <xs:element minOccurs="1" maxOccurs="1" name="forceSync" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: Common operation parameters. MUST be present. The **WorkbookId** element of the **CommandParameter** complex type MUST be present. The **WorkOnBehalfRequest** element of the **CommandParameter** complex type MUST be as prescribed in section [2.2.4.20](#). All other elements MUST be ignored by the protocol server.

forceSync: Close and leave an edit session. When set to true, if the operation leaves the edit session with no participants, then specifies also closing the session (2). Otherwise or when set to false, specifies leaving the edit session. MUST be ignored by the protocol server if the session (2) is not an edit session.

3.1.4.8.2.2 CloseWorkbookResponse

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

```

<xs:element name="CloseWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CloseWorkbookResult"
        type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

CloseWorkbookResult: A result as specified in section [2.2.4.21](#). MUST be present.

3.1.4.8.3 Complex Types

None.

3.1.4.8.4 Simple Types

None.

3.1.4.8.5 Attributes

None.

3.1.4.8.6 Groups

None.

3.1.4.8.7 Attribute Groups

None.

3.1.4.9 ConnectAndGetPivotFilterItemList

This operation is used to return the PivotTable members that are part of a PivotTable manual filter hierarchy.

```
<wsdl:operation name="ConnectAndGetPivotFilterItemList"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemList"
message="tns:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListResponse"
message="tns:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_ExcelServerMessageFault_FaultM
essage" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the PivotTable manual filter in the **pivotOperationOptions** element.
2. The protocol server returns the hierarchy of PivotTable members in **itemList**, as follows:
 - The **PivotFilterItems** element of **itemList** MUST contain the list of all the PivotTable members at the top hierarchy level of the PivotTable manual filter if there are no more than 1000 such PivotTable members, and MUST contain the first 1000 such PivotTable members if there are more than 1000 such PivotTable members.
 - The **ItemListMaxExceeded** element of **itemList** MUST be set to **true** if there were more than 1000 PivotTable members at the top hierarchy level of the PivotTable manual filter and MUST be set to **false** otherwise.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<18>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.9.1 Messages

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

Message	Description
ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage	The request WSDL message for the

Message	Description
	ConnectAndGetPivotFilterItemList WSDL operation.
ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage	The response WSDL message for the ConnectAndGetPivotFilterItemList WSDL operation.

3.1.4.9.1.1 ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage

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

The SOAP action value is:

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

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

3.1.4.9.1.2 ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage

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

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

3.1.4.9.2 Elements

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

Element	Description
ConnectAndGetPivotFilterItemList	The input data for the ConnectAndGetPivotFilterItemList WSDL operation.
ConnectAndGetPivotFilterItemListResponse	The result data for the ConnectAndGetPivotFilterItemList WSDL operation.

3.1.4.9.2.1 ConnectAndGetPivotFilterItemList

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

```
<xs:element name="ConnectAndGetPivotFilterItemList"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: Contains the location of the manual filter of the PivotTable. MUST be present and MUST NOT have the attribute **xsi:nil** set. The following MUST extend or override the standard behavior specified in section [2.2.4.28](#):

- **ParentId:** MUST be -1.

3.1.4.9.2.2 ConnectAndGetPivotFilterItemListResponse

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

```
<xs:element name="ConnectAndGetPivotFilterItemListResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ConnectAndGetPivotFilterItemListResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList"
        type="tns:PivotFilterItemList"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ConnectAndGetPivotFilterItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

itemList: The list of PivotTable members at the top hierarchy level of the PivotTable manual filter. MUST be present.

3.1.4.9.3 Complex Types

None.

3.1.4.9.4 Simple Types

None.

3.1.4.9.5 Attributes

None.

3.1.4.9.6 Groups

None.

3.1.4.9.7 Attribute Groups

None.

3.1.4.10 ConnectAndGetSlicerItemList

This operation is used to return the slicer items and formatting information for the slicer visual components that are part of a slicer.

```
<wsdl:operation name="ConnectAndGetSlicerItemList"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
```

```

<wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemList"
message="tns:ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
<wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListResponse"
message="tns:ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
<wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ConnectAndGetSlicerItemList_ExcelServerMessageFault_FaultMessag
e" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the slicer in the **slicerOptions** element.
2. If the data source for the slicer is OLAP then the protocol server will connect to the **data source (1)** to obtain the requested slicer items. Otherwise the protocol server will behave the same as in **GetSlicerItemList** (section [3.1.4.27](#)).
3. The protocol server returns a **SlicerItemList** (section [2.2.4.40](#)) in **itemList**, as follows:
 - If the **SlicerItemsOffset** element of the **SlicersOptions** element is equal to -1 then the protocol server will determine the first slicer item in the resulting **itemList** in the following way:
 - If a call to **ApplySlicerSelection** was made in the current session, then the protocol server will use the value of the **SlicerItemsOffset** element of the **SlicerOptions** element of the last call to **ApplySlicerSelection**.
 - Otherwise, the protocol server will use the value in the **startItem** attribute in **CT_Slicer** ([\[MS-XLSX\]](#) section 2.6.68).
 - If **SlicerItemsCount** is equal to -1 then the lesser of total number of slicer items or 5 times the visible number of items is returned.
4. If **SlicerItemsOffset** is equal to -1, the protocol server returns a **SlicerFormatElementList** (section [2.2.4.38](#)) in **formatList** that MUST contain 10 elements as specified in section [2.2.4.9](#). Otherwise the protocol server MUST return a **formatList** with 0 elements.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<19>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**

- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.10.1 Messages

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

Message	Description
ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage	The request WSDL message for the ConnectAndGetSlicerItemList WSDL operation.
ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage	The response WSDL message for the ConnectAndGetSlicerItemList WSDL operation.

3.1.4.10.1.1 ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage

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

The SOAP action value is:

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

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

3.1.4.10.1.2 ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage

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

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

3.1.4.10.2 Elements

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

Element	Description
ConnectAndGetSlicerItemList	The input data for the ConnectAndGetSlicerItemList WSDL operation.
ConnectAndGetSlicerItemListResponse	The result data for the ConnectAndGetSlicerItemList WSDL operation.

3.1.4.10.2.1 ConnectAndGetSlicerItemList

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

```
<xs:element name="ConnectAndGetSlicerItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions" type="tns:SlicerOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The slicer identification. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerClearItems:** MUST be ignored.

3.1.4.10.2.2 ConnectAndGetSlicerItemListResponse

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

```
<xs:element name="ConnectAndGetSlicerItemListResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ConnectAndGetSlicerItemListResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList" type="tns:SlicerItemList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
        type="tns:SlicerFormatElementList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerView" type="tns:SlicerView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ConnectAndGetSlicerItemListResult: A **CommandResult** as specified in **CommandResult** (section [2.2.4.21](#)). MUST be present.

itemList: A **SlicerItemList** as specified in section [2.2.4.40](#). MUST be present.

formatList: A **SlicerFormatElementList** as specified in section [2.2.4.38](#). MUST be present.

slicerView: A **SlicerView** element as specified in section [2.2.4.42](#). MUST be present.

3.1.4.10.3 Complex Types

None.

3.1.4.10.4 Simple Types

None.

3.1.4.10.5 Attributes

None.

3.1.4.10.6 Groups

None.

3.1.4.10.7 Attribute Groups

None.

3.1.4.11 ExpandCollapseOutline

This operation is used to toggle the outline state in the workbook.

```
<wsdl:operation name="ExpandCollapseOutline" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ExpandCollapseOutline"
    message="tns:ExcelServiceSoap_ExpandCollapseOutline_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ExpandCollapseOutlineResponse"
    message="tns:ExcelServiceSoap_ExpandCollapseOutline_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ExpandCollapseOutlineExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ExpandCollapseOutline_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ExpandCollapseOutline_InputMessage** request message, and the protocol server responds with an

ExcelServiceSoap_ExpandCollapseOutline_OutputMessage response message, as follows:

- The protocol server expands the outline state if the outline is in a **collapsed outline state**. The protocol server collapses the outline state if the outline is in an **expanded outline state**.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<20>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.11.1 Messages

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

Message	Description
ExcelServiceSoap_ExpandCollapseOutline_InputMessage	The request WSDL message for the ExpandCollapseOutline WSDL operation.
ExcelServiceSoap_ExpandCollapseOutline_OutputMessage	The response WSDL message for the ExpandCollapseOutline WSDL operation.

3.1.4.11.1.1 ExcelServiceSoap_ExpandCollapseOutline_InputMessage

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

The SOAP action value is:

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

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

3.1.4.11.1.2 ExcelServiceSoap_ExpandCollapseOutline_OutputMessage

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

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

3.1.4.11.2 Elements

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

Element	Description
ExpandCollapseOutline	The input data for the ExpandCollapseOutline WSDL operation.
ExpandCollapseOutlineResponse	The result data for the ExpandCollapseOutline WSDL operation.

3.1.4.11.2.1 ExpandCollapseOutline

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

```
<xs:element name="ExpandCollapseOutline" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetOrNamedRange" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

<xs:element minOccurs="1" maxOccurs="1" name="namedRange" type="xs:boolean"/>
<xs:element minOccurs="1" maxOccurs="1" name="outlineLevel" type="xs:unsignedByte"/>
<xs:element minOccurs="1" maxOccurs="1" name="rowColumn" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="row" type="xs:boolean"/>
</xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sheetOrNamedRange: The name of the worksheet or named object containing the outline. MUST be present. MUST NOT be empty. If the value of **namedRange** element is true then MUST NOT be longer than 287 characters. If the value of **namedRange** element is false then MUST NOT be longer than 31 characters.

namedRange: When set to **true**, specifies that the value of the **sheetOrNamedRange** element is a named object name. Otherwise, when set to **false**, specifies a worksheet name.

outlineLevel: The **outline level (2)** to **outline expand** or **outline collapse**. MUST be greater than or equal to 1 and less than or equal to 8.

rowColumn: The zero-based column (2) or row (2) index of the location of the outline. MUST be greater than or equal to -1. If **row** element value is set to true, MUST be less than or equal to 1048575. If **row** element value is set to false, MUST be less than or equal to 16383. A value of -1 specifies that all outlines at the value of **outlineLevel** be outline expanded or outline collapsed by the protocol server. If **rowColumn** contains a positive value, the following apply:

- If the value of the **row** element is true, then the value of **outlineLevel** element MUST be the value specified for the **outlineLevel** attribute of the **CT_RowAxisItem** element ([\[MS-EXSPXML\]](#) section 2.2.42) that corresponds to row (2) index.
- If the value of the **row** element is false, then the value of **outlineLevel** element MUST be the value specified for the **outlineLevel** attribute of the **CT_ColumnAxisItem** element ([\[MS-EXSPXML\]](#) section 2.2.43) that corresponds to column (2) index.

row: The axis location of the outline specified by the **rowColumn** element. If **true**, the outline is located on a row (2). If **false**, the outline is located on a column (2).

3.1.4.11.2.2 ExpandCollapseOutlineResponse

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

```

<xs:element name="ExpandCollapseOutlineResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ExpandCollapseOutlineResult"
        type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ExpandCollapseOutlineResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.11.3 Complex Types

None.

3.1.4.11.4 Simple Types

None.

3.1.4.11.5 Attributes

None.

3.1.4.11.6 Groups

None.

3.1.4.11.7 Attribute Groups

None.

3.1.4.12 FindRange

This operation is used to find a string inside a workbook.

```
<wsdl:operation name="FindRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/FindRange" message="tns:ExcelServiceSoap_FindRange_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/FindRangeResponse"
    message="tns:ExcelServiceSoap_FindRange_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/FindRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_FindRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_FindRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_FindRange_OutputMessage** response message, as follows:

1. The protocol server searches for the string specified by **searchTerm**.
2. The search starts at the adjacent cell of the one specified by **searchAfterCell**, in the direction specified by **searchUp**.
3. If the **ObjectName** element in the **VisibleSheetRangeRequest** element in the **parameter** element is not present, the scope of the search is the worksheet specified by the **SheetName** element in the **searchAfterCell** element. Otherwise, the scope of the search is the named object specified by the **SheetName** element in the **searchAfterCell** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<21>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.12.1 Messages

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

Message	Description
ExcelServiceSoap_FindRange_InputMessage	The request WSDL message for the FindRange WSDL operation.
ExcelServiceSoap_FindRange_OutputMessage	The response WSDL message for the FindRange WSDL operation.

3.1.4.12.1.1 ExcelServiceSoap_FindRange_InputMessage

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

The SOAP action value is:

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

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

3.1.4.12.1.2 ExcelServiceSoap_FindRange_OutputMessage

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

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

3.1.4.12.2 Elements

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

Element	Description
FindRange	The input data for the FindRange WSDL operation.
FindRangeResponse	The result data for the FindRange WSDL operation.

3.1.4.12.2.1 FindRange

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

```
<xs:element name="FindRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="searchTerm" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

    <xs:element minOccurs="1" maxOccurs="1" name="searchUp" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="searchAfterCell" type="tns:SheetCell"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present. The **VisibleSheetRangeRequest** element MUST be present.

searchTerm: The string to search for in the workbook. MUST be present. MUST NOT be empty. MUST NOT be longer than 255 characters.

searchUp: Specifies the search direction. MUST be present. A value of **true** specifies to **search up**. A value of **false** specifies to **search down**.

searchAfterCell: Specifies the starting point of the search. The **SheetName** element of the **SheetCell** complex type MUST be present. MUST NOT be empty. If **SheetName** is the name of a worksheet, the following apply:

- It MUST NOT be longer than 31 characters.
- The value of the **SheetName** element of **VisibleSheetRange** element (section [2.2.4.44](#)) in **parameter**, MUST be equal to this value.

If **SheetName** is not the name of a worksheet, the following apply:

- If the value of the **SheetName** element is longer than 287 characters, then the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** MUST be **InternalError**.
- The value of the **ObjectName** element of **VisibleSheetRange** element in **parameter**, MUST be equal to this value.

3.1.4.12.2 FindRangeResponse

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

```

<xs:element name="FindRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="FindRangeResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="foundCell" type="tns:SheetCell"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

FindRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

foundCell: A worksheet cell that contains the term specified by the **searchTerm** element. MUST be present. The **SheetName** element of the **SheetCell** complex type MUST NOT be present.

3.1.4.12.3 Complex Types

None.

3.1.4.12.4 Simple Types

None.

3.1.4.12.5 Attributes

None.

3.1.4.12.6 Groups

None.

3.1.4.12.7 Attribute Groups

None.

3.1.4.13 GetAutoFilterItemList

This operation is used to retrieve the filter values and filter date values and their captions in the **AutoFilterItemList** (section [3.1.4.13.3.1](#)) in the operation response for an AutoFilter in the workbook.

```
<wsdl:operation name="GetAutoFilterItemList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetAutoFilterItemList"
    message="tns:ExcelServiceSoap_GetAutoFilterItemList_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetAutoFilterItemListResponse"
    message="tns:ExcelServiceSoap_GetAutoFilterItemList_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetAutoFilterItemListExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetAutoFilterItemList_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetAutoFilterItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetAutoFilterItemList_OutputMessage** response message, as follows:

1. The protocol server fills the **AutoFilterItems** and **AutoFilterDateNodes** elements with information about filtering as follows:
2. The protocol server adds the filter values that exist in the AutoFilter with their current **filtering state** as specified in section [3.1.4.13.3.3](#) and **AutoFilterItems**.
3. The protocol server adds the filter date values that exists in the AutoFilter with their current filtering state as specified in **AutoFilterDateNodeInfo** (section [2.2.4.13](#)) and **AutoFilterDateNodes**. The protocol server also adds the filter date value caption for the **Year**, **Month**, **Day**, **Hour**, **Minute**, and **Second** elements of the **AutoFilterDateNodeInfo** as follows:

4. Each unique value of the **Year** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **YearKeys** element as specified in **YearKeys** element. The protocol server also adds the corresponding caption to **YearValues** as specified in **YearValues** element.
5. Each unique value of the **Month** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **MonthKeys** element as specified in **MonthKeys** element. The protocol server also adds the corresponding caption to **MonthValues** as specified in **MonthValues** element.
6. Each unique value of the **Day** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **DayKeys** element as specified in **DayKeys** element. The protocol server also adds the corresponding caption to **DayValues** as specified in **DayValues** element.
7. Each unique value of the **Hour** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **HourKeys** element as specified in **HourKeys** element. The protocol server also adds the corresponding caption to **HourValues** as specified in **HourValues** element.
8. Each unique value of the **Minute** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **MinuteKeys** element as specified in **MinuteKeys** element. The protocol server also adds the corresponding caption to **MinuteValues** as specified in **MinuteValues** element.
9. Each unique value of the **Second** element in **AutoFilterDateNodeInfo** in the **AutoFilterDateNodes** element is added by the protocol server to **SecondKeys** element as specified in **SecondKeys** element. The protocol server also adds the corresponding caption to **SecondValues** as specified in **SecondValues** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<22>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.13.1 Messages

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

Message	Description
ExcelServiceSoap_GetAutoFilterItemList_InputMessage	The request WSDL message for the GetAutoFilterItemList WSDL operation.
ExcelServiceSoap_GetAutoFilterItemList_OutputMessage	The response WSDL message for the GetAutoFilterItemList WSDL operation.

3.1.4.13.1.1 ExcelServiceSoap_GetAutoFilterItemList_InputMessage

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

The SOAP action value is:

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

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

3.1.4.13.1.2 ExcelServiceSoap_GetAutoFilterItemList_OutputMessage

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

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

3.1.4.13.2 Elements

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

Element	Description
GetAutoFilterItemList	The input data for the GetAutoFilterItemList WSDL operation.
GetAutoFilterItemListResponse	The result data for the GetAutoFilterItemList WSDL operation.

3.1.4.13.2.1 GetAutoFilterItemList

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

```
<xs:element name="GetAutoFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The options to use when filtering the AutoFilter columns specified in section [2.2.4.14](#). MUST be present.

3.1.4.13.2.2 GetAutoFilterItemListResponse

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

```
<xs:element name="GetAutoFilterItemListResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetAutoFilterItemListResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterItemList"
type="tns:AutoFilterItemList"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetAutoFilterItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

autoFilterItemList: The filter values, filter date values and blank values filtering state of the AutoFilter as specified in section [3.1.4.13.3.1](#). MUST be present.

3.1.4.13.3 Complex Types

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

Complex type	Description
AutoFilterItemList	Specifies the filtering state of an AutoFilter.
ArrayOfAutoFilterItem	A list of filter values caption and filtering state.
AutoFilterItem	Specifies a filter value filtering state and its caption.

3.1.4.13.3.1 AutoFilterItemList

Namespace:

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

Specifies the filtering state of an AutoFilter on the protocol server in the **GetAutoFilterItemList** response (section [3.1.4.13.2.2](#)).

```
<xs:complexType name="AutoFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowTime" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemListMaxExceeded" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsBlanksSelected" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterDateNodes"
type="tns:ArrayOfAutoFilterDateNodeInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterItems"
type="tns:ArrayOfAutoFilterItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecondValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecondKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinuteValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinuteKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HourValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HourKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearKeys" type="tns:ArrayOfAnyType"/>
  </xs:sequence>
</xs:complexType>
```

ShowTime: Specifies whether the AutoFilter filtering includes hour, minute and seconds. If the value is **true**, the following apply:

- The protocol client MUST ignore the **Second**, **Hour**, and **Minute** elements of the **AutoFilterDateNodeInfo** elements (section [2.2.4.13](#)) contained in **AutoFilterDateNodes** element.

- The protocol client MUST ignore the **HourValues**, **HourKeys**, **MinuteValues**, **MinuteKeys**, **SecondValues**, and **SecondKeys** elements.

ItemListMaxExceeded: Specifies whether the number of filter values and filter date values in the **AutoFilter** is larger than 1000. The protocol server MUST set the value to **true** if it has more than 1000 elements for both the **AutoFilterDateNodes** and **AutoFilterItems** combined.

IsBlanksSelected: Specifies whether the **AutoFilter** is filtering blank values. The value set to **true** specifies that the **AutoFilter** filtering includes blank values, the value set to **false** specifies that **AutoFilter** filtering does not include filtering blank values. MUST be **false** if the value of **HasBlanks** element is **false**.

HasBlanks: Specifies whether the **AutoFilter** contains a blank value. The value **true** specifies that blank values exist. The value **false** specifies that there is no blank value.

AutoFilterDateNodes: A list of filter date values as specified in section [2.2.4.3](#). MUST be present. If the list contains 0 elements, the protocol client MUST ignore it. MUST NOT contain more than 1000 **AutoFilterDateNodeInfo** elements. If the value of **ShowTime** element is **false**, then for all elements in the **AutoFilterDateNodeInfo** element the filter date values for the **Hour**, **Minute**, and **Second** elements of the **AutoFilterDateNodeInfo** complex type MUST be set to 0. When the protocol client needs to determine the caption for the **Year**, **Month**, **Day**, **Hour**, **Minute** or **Second** elements of **AutoFilterDateNodeInfo**, it MUST do the following:

- For the **Year** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **YearKeys** element and then access the value at the determined index in the **YearValues** element.
- For the **Month** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **MonthKeys** element, and then access the value at the determined index in the **MonthValues** element.
- For the **Day** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **DayKeys** element and then access the value at the determined index in the **DayValues** element.
- For the **Hour** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **HourKeys** element and then access the value at the determined index in the **HourValues** element.
- For the **Minute** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **MinuteKeys** element and then access the value at the determined index in the **MinuteValues** element.
- For the **Second** element value in **AutoFilterDateNodeInfo**, determine the element index of a matching value in the **SecondKeys** element and then access the value at the determined index in the **SecondValues** element.

AutoFilterItems: A list of filter values as specified in **AutoFilterDateNodeInfo**. MUST be present. If the list contains 0 elements, the client protocol MUST ignore it. MUST NOT contain more than the subtraction of the count of **AutoFilterDateNodeInfo** in the **AutoFilterDateNode** element from 1000.

SecondValues: A list of captions corresponding to second filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session. MUST contain 0 elements if the value of **ShowTime** is **false**.

SecondKeys: A sorted list of number values that represent seconds. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **SecondValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **SecondValues** list.

MinuteValues: A list of captions corresponding to minute filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session. MUST contain 0 elements if the value of **ShowTime** is **false**.

MinuteKeys: A sorted list of number values that represent minutes. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **MinuteValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **MinuteValues** list.

HourValues: A list of captions corresponding to hour filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session. MUST contain 0 elements if the value of **ShowTime** is **false**.

HourKeys: A sorted list of number values that represent hours. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **HourValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **HourValues** list.

DayValues: A list of captions corresponding to day filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session.

DayKeys: A sorted list of number values that represent days. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **DayValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **DayValues** list.

MonthValues: A list of captions corresponding to month filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session.

MonthKeys: A sorted list of number values that represent months. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **MonthValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values.

The index of each contained element in the list MUST match the index of its corresponding display string value element in **MonthValues** list.

YearValues: A list of caption corresponding to year filter date values. MUST be present. The contained elements MUST be of type **s:string**. MUST be formatted in the data culture of the session.

YearKeys: A sorted list of number values that represent years. MUST be present. The contained elements MUST be of type **s:short**. MUST contain the same number of elements that **YearValues** list contains. The elements MUST be sorted by their values in ascending order. MUST NOT contain duplicate values. The index of each contained element in the list MUST match the index of its corresponding display string value element in **YearValues** list.

3.1.4.13.3.2 ArrayOfAutoFilterItem

Namespace:

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

A list of filter values caption and filtering state.

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

AutoFilterItem: A filter value, as specified in section [3.1.4.13.3.3](#).

3.1.4.13.3.3 AutoFilterItem

Namespace:

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

Specifies a filter value filtering state and its caption.

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

Selected: Specifies whether the filter value is included in the filter. A **true** value specifies that the filter value is included. A **false** value specifies that the filter value is excluded.

DisplayString: The caption of a filter value. MUST be present. The number of characters MUST be greater than or equal to 1 and less than or equal to 255.

3.1.4.13.4 Simple Types

None.

3.1.4.13.5 Attributes

None.

3.1.4.13.6 Groups

None.

3.1.4.13.7 Attribute Groups

None.

3.1.4.14 GetChart

This operation is used to return a chart image.

```
<wsdl:operation name="GetChart" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChart" message="tns:ExcelServiceSoap_GetChart_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartResponse"
    message="tns:ExcelServiceSoap_GetChart_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetChart_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetChart_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetChart_OutputMessage** response, message as follows:

- The protocol server MUST return a chart image as specified in the **getChartInformation** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<23>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.14.1 Messages

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

Message	Description
ExcelServiceSoap_GetChart_InputMessage	The request WSDL message for the GetChart WSDL operation.
ExcelServiceSoap_GetChart_OutputMessage	The response WSDL message for the GetChart WSDL operation.

3.1.4.14.1.1 ExcelServiceSoap_GetChart_InputMessage

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

The SOAP action value is:

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

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

3.1.4.14.1.2 ExcelServiceSoap_GetChart_OutputMessage

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

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

3.1.4.14.2 Elements

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

Element	Description
GetChart	The input data for the GetChart WSDL operation.
GetChartResponse	The result data for the GetChart WSDL operation.

3.1.4.14.2.1 GetChart

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

```
<xs:element name="GetChart" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="getChartInformation"
type="tns:GetChartInformation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

getChartInformation: Specifies which chart to return and its width and height, as specified in section [3.1.4.14.3.1](#). MUST be present.

3.1.4.14.2.2 GetChartResponse

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

```
<xs:element name="GetChartResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetChartResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binaryChartImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetChartResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

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

binaryChartImage: The image of the chart. MUST be present. MUST be in the format specified in [\[RFC2083\]](#).

3.1.4.14.3 Complex Types

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

Complex type	Description
GetChartInformation	Information about a GetChart operation.

3.1.4.14.3.1 GetChartInformation

Namespace:

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

Additional information about a **GetChart** operation.

```
<xs:complexType name="GetChartInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

Height: Specifies the height of the image to be returned. MUST be either -1 or an integer greater than or equal to 4 and less than or equal to 4096. If -1, then the original height of the chart will be used. MUST be -1 if **Width** is -1. MUST be present.

Width: Specifies the width of the image to be returned. MUST be either -1 or an integer greater than or equal to 4 and less than or equal to 4096. If -1, then the original width of the chart will be used. MUST be -1 if **Height** is -1. MUST be present.

Name: The string identifier for a chart. MUST be present. MUST be non-empty. MUST be the **Name** value specified in **CT_NamedObject** ([\[MS-EXSPXML\]](#) Section [2.2.4](#)).

3.1.4.14.4 Simple Types

None.

3.1.4.14.5 Attributes

None.

3.1.4.14.6 Groups

None.

3.1.4.14.7 Attribute Groups

None.

3.1.4.15 GetHealthScore

This operation is used to return information about the health of the protocol server.

```
<wsdl:operation name="GetHealthScore" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetHealthScore"
    message="tns:ExcelServiceSoap_GetHealthScore_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetHealthScoreResponse"
    message="tns:ExcelServiceSoap_GetHealthScore_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetHealthScoreExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetHealthScore_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetHealthScore_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetHealthScore_OutputMessage**, as follows:

- The **CommandResult** returned by the protocol server MUST contain **ServerHealthInformation** as specified in sections [2.2.4.21](#) and [2.2.4.34](#).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<24>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.15.1 Messages

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

Message	Description
ExcelServiceSoap_GetHealthScore_InputMessage	The request WSDL message for the GetHealthScore WSDL operation.
ExcelServiceSoap_GetHealthScore_OutputMessage	The response WSDL message for the GetHealthScore WSDL operation.

3.1.4.15.1.1 ExcelServiceSoap_GetHealthScore_InputMessage

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

The SOAP action value is:

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

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

3.1.4.15.1.2 ExcelServiceSoap_GetHealthScore_OutputMessage

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

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

3.1.4.15.2 Elements

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

Element	Description
GetHealthScore	The input data for the GetHealthScore WSDL operation.
GetHealthScoreResponse	The result data for the GetHealthScore WSDL operation.

3.1.4.15.2.1 GetHealthScore

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

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

3.1.4.15.2.2 GetHealthScoreResponse

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

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

GetHealthScoreResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.15.3 Complex Types

None.

3.1.4.15.4 Simple Types

None.

3.1.4.15.5 Attributes

None.

3.1.4.15.6 Groups

None.

3.1.4.15.7 Attribute Groups

None.

3.1.4.16 GetImage

This operation is used to return a chart image or embedded image.

```
<wsdl:operation name="GetImage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetImage" message="tns:ExcelServiceSoap_GetImage_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetImageResponse"
    message="tns:ExcelServiceSoap_GetImage_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetImageExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetImage_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetImage_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetImage_OutputMessage** response message, as follows:

- The protocol server MUST return a chart image or embedded image as specified in the **imageId** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<25>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.16.1 Messages

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

Message	Description
ExcelServiceSoap_GetImage_InputMessage	The request WSDL message for the GetImage WSDL operation.
ExcelServiceSoap_GetImage_OutputMessage	The response WSDL message for the GetImage WSDL operation.

3.1.4.16.1.1 ExcelServiceSoap_GetImage_InputMessage

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

The SOAP action value is:

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

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

3.1.4.16.1.2 ExcelServiceSoap_GetImage_OutputMessage

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

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

3.1.4.16.2 Elements

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

Element	Description
GetImage	The input data for the GetImage WSDL operation.
GetImageResponse	The result data for the GetImage WSDL operation.

3.1.4.16.2.1 GetImage

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

```
<xs:element name="GetImage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

imageId: The chart or image identifier. MUST be present. MUST NOT be empty. MUST be the value specified in **CT_Image** element ([\[MS-EXSPXML\]](#) section 2.2.33).

3.1.4.16.2.2 GetImageResponse

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

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



```

    <xs:element minOccurs="0" maxOccurs="1" name="GetImageResult"
type="tns:CommandResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="binaryChartImage"
type="xs:base64Binary"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

GetImageResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binaryChartImage** field. MUST be either the string "x-png" or the string "jpeg".

binaryChartImage: The image of the chart or embedded image. MUST be present. If **imageFormatType** is "x-png", MUST be in the format specified in [\[RFC2083\]](#). If **imageFormatType** is "jpeg", MUST be in the format specified in [\[JFIF\]](#).

3.1.4.16.3 Complex Types

None.

3.1.4.16.4 Simple Types

None.

3.1.4.16.5 Attributes

None.

3.1.4.16.6 Groups

None.

3.1.4.16.7 Attribute Groups

None.

3.1.4.17 GetObjectInformation

This operation returns the range of a published item in a workbook

```

<wsdl:operation name="GetObjectInformation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformation"
message="tns:ExcelServiceSoap_GetObjectInformation_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformationResponse"
message="tns:ExcelServiceSoap_GetObjectInformation_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformationExcelServerMessageFault"

```

```

name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetObjectInformation_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetObjectInformation_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetObjectInformation_OutputMessage**.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<26>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.17.1 Messages

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

Message	Description
ExcelServiceSoap_GetObjectInformation_InputMessage	The request WSDL message for the GetObjectInformation WSDL operation.
ExcelServiceSoap_GetObjectInformation_OutputMessage	The response WSDL message for the GetObjectInformation WSDL operation.

3.1.4.17.1.1 ExcelServiceSoap_GetObjectInformation_InputMessage

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

The SOAP action value is:

```

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

```

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

3.1.4.17.1.2 ExcelServiceSoap_GetObjectInformation_OutputMessage

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

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

3.1.4.17.2 Elements

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

Element	Description
GetObjectInformation	The input data for the GetObjectInformation WSDL operation.
GetObjectInformationResponse	The result data for the GetObjectInformation WSDL operation.

3.1.4.17.2.1 GetObjectInformation

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

```
<xs:element name="GetObjectInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="objectName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="objectType" type="tns:NamedObjectType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

objectName: The name of the requested published item. MUST be present.

objectType: The type of the published item as specified in section [2.2.5.16](#).

3.1.4.17.2.2 GetObjectInformationResponse

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

```
<xs:element name="GetObjectInformationResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetObjectInformationResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="objectInformation"
type="tns:ObjectInformation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetObjectInformationResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

objectInformation: Information about the requested published item as specified in section [3.1.4.17.3.1](#). MUST be present.

3.1.4.17.3 Complex Types

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

Complex type	Description
ObjectInformation	Specifies the range of a published item.

3.1.4.17.3.1 ObjectInformation

Namespace:

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

Specifies the range of a published item.

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

SheetRange: A range in the workbook, as specified in section [2.2.4.35](#). MUST be present.

3.1.4.17.4 Simple Types

None.

3.1.4.17.5 Attributes

None.

3.1.4.17.6 Groups

None.

3.1.4.17.7 Attribute Groups

None.

3.1.4.18 GetPivotFilterItemList

This operation is used to return child PivotTable members that are part of a PivotTable manual filter hierarchy, or child PivotChart members that are part of a PivotChart manual filter hierarchy. This operation is used after calling either the **ConnectAndGetPivotFilterItemList** operation (section [3.1.4.9](#)) or this operation for an ancestor in the hierarchy.

```
<wsdl:operation name="GetPivotFilterItemList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotFilterItemList"
    message="tns:ExcelServiceSoap_GetPivotFilterItemList_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotFilterItemListResponse"
    message="tns:ExcelServiceSoap_GetPivotFilterItemList_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotFilterItemListExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetPivotFilterItemList_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPivotFilterItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotFilterItemList_OutputMessage** response message, as follows:

1. The protocol client sends the following information in the **pivotOperationOptions** element:
 - The PivotTable or PivotChart manual filter.
 - The PivotTable or PivotChart member that is the common ancestor of all the PivotTable or PivotChart members in the hierarchy to be returned.
2. The protocol server returns the PivotTable members or PivotChart members in the **itemList** element as follows:
 - The **PivotFilterItems** element of **itemList** MUST contain a list of the PivotTable or PivotChart members that are child PivotTable members or child PivotChart members of a particular PivotTable or PivotChart—specifically, of the member that has an **Id** element equal to the **ParentId** element of **pivotOperationOptions**. If no more than 1000 such child members exist, the list MUST contain all those child members. If more than 1000 such child members exist, the list MUST contain the first 1000 such child members.
 - If the PivotTable or PivotChart member that has an **Id** element equal to the **ParentId** element of **pivotOperationOptions** has more than 1000 child PivotTable members or child PivotChart members, the **ItemListMaxExceeded** element of **itemList** MUST be set to **true**. Otherwise, the **ItemListMaxExceeded** element of **itemList** MUST be set to **false**.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<27>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.18.1 Messages

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

Message	Description
ExcelServiceSoap_GetPivotFilterItemList_InputMessage	The request WSDL message for the GetPivotFilterItemList WSDL operation.
ExcelServiceSoap_GetPivotFilterItemList_OutputMessage	The response WSDL message for the GetPivotFilterItemList WSDL operation.

3.1.4.18.1.1 ExcelServiceSoap_GetPivotFilterItemList_InputMessage

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

The SOAP action value is:

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

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

3.1.4.18.1.2 ExcelServiceSoap_GetPivotFilterItemList_OutputMessage

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

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

3.1.4.18.2 Elements

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

Element	Description
GetPivotFilterItemList	The input data for the GetPivotFilterItemList WSDL operation.
GetPivotFilterItemListResponse	The result data for the GetPivotFilterItemList WSDL operation.

3.1.4.18.2.1 GetPivotFilterItemList

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

```
<xs:element name="GetPivotFilterItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart manual filter location or anchor information. MUST be present. The following behavior MUST extend or override the standard behavior that is specified in section [2.2.4.28](#):

- **ParentId:** MUST be set to the **Id** element of the element whose child PivotTable members or child PivotChart members are to be returned. MUST be equal to the **Id** element of one of the nested **PivotFilterItem** elements returned in the **itemList** element in a previous call to the **ConnectAndGetPivotFilterItemList** (section [3.1.4.9](#)) operation or **GetPivotFilterItemList** (section [3.1.4.18](#)) operation for the same PivotTable or PivotChart manual filter.

3.1.4.18.2.2 GetPivotFilterItemListResponse

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

```
<xs:element name="GetPivotFilterItemListResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFilterItemListResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList"
type="tns:PivotFilterItemList"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotFilterItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

itemList: The list of child PivotTable members or child PivotChart members. MUST be present.

3.1.4.18.3 Complex Types

None.

3.1.4.18.4 Simple Types

None.

3.1.4.18.5 Attributes

None.

3.1.4.18.6 Groups

None.

3.1.4.18.7 Attribute Groups

None.

3.1.4.19 GetPivotMenu

This operation is used to return information about a PivotTable area.

```
<wsdl:operation name="GetPivotMenu" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotMenu"
    message="tns:ExcelServiceSoap_GetPivotMenu_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotMenuResponse"
    message="tns:ExcelServiceSoap_GetPivotMenu_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotMenuExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetPivotMenu_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPivotMenu_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotMenu_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the PivotTable area in the **pivotOperationOptions** element.
2. The protocol server returns the PivotTable area information in the **pivotMenu** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<28>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.19.1 Messages

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

Message	Description
ExcelServiceSoap_GetPivotMenu_InputMessage	The request WSDL message for the GetPivotMenu WSDL operation.
ExcelServiceSoap_GetPivotMenu_OutputMessage	The response WSDL message for the GetPivotMenu WSDL operation.

3.1.4.19.1.1 ExcelServiceSoap_GetPivotMenu_InputMessage

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

The SOAP action value is:

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

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

3.1.4.19.1.2 ExcelServiceSoap_GetPivotMenu_OutputMessage

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

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

3.1.4.19.2 Elements

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

Element	Description
GetPivotMenu	The input data for the GetPivotMenu WSDL operation.
GetPivotMenuResponse	The result data for the GetPivotMenu WSDL operation.

3.1.4.19.2.1 GetPivotMenu

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

```
<xs:element name="GetPivotMenu" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```


parameter: A **CommandParameter** as specified in section [2.2.4.20](#). This element MUST be present.

pivotOperationOptions: The PivotTable area location, the PivotTable anchor information, or the PivotChart anchor information. This element MUST be present. The following behavior MUST extend or override the standard behavior that is specified in section [2.2.4.28](#):

- The value of the **SourceIndex** element MUST be greater than or equal to 0.
- The **FieldId** element MUST NOT be present.

3.1.4.19.2.2 GetPivotMenuResponse

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

```
<xs:element name="GetPivotMenuResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotMenuResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotMenu" type="tns:PivotMenu"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotMenuResult: A **CommandResult** as specified in section [2.2.4.21](#). This element MUST be present.

pivotMenu: The information about the PivotTable or **PivotChart** anchor information as specified in section [3.1.4.19.3.1](#). This element MUST be present.

3.1.4.19.3 Complex Types

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

Complex type	Description
PivotMenu	Information about a PivotTable area.
ArrayOfPivotField	List of PivotField elements.
PivotField	Information about a PivotTable field.
ArrayOfPivotFilterParameter	List of PivotFilterParameter elements.
PivotFilterParameter	Specifies a PivotTable custom filter applied to a PivotTable field.
Top10FilterParameter	Contains information about the top N filter or bottom N filter that is applied to a PivotTable field.

3.1.4.19.3.1 PivotMenu

Namespace:

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

The **PivotMenu** type contains information about a PivotTable area that is returned by the protocol server.

```
<xs:complexType name="PivotMenu" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Top10MaxItems" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="AdvancedFiltering" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsPageFilter" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotDataItems"
type="tns:ArrayOfPivotField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotDataFields"
type="tns:ArrayOfPivotField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotFields" type="tns:ArrayOfPivotField"/>
  </xs:sequence>
</xs:complexType>
```

Top10MaxItems: The maximum value to be used when applying a top N filter or a bottom N filter as specified in section [3.1.4.6](#).

AdvancedFiltering: Specifies whether the protocol server implementation supports PivotTable custom filters for the current PivotTable. MUST be set to **true** if the protocol server implementation supports PivotTable custom filters for the PivotTable that contains the current PivotTable area, and MUST be set to **false** otherwise.

IsPageFilter: Specifies whether the PivotTable area is a PivotTable page field filter. MUST be true if the PivotTable area is a PivotTable page field filter. MUST be false if the PivotTable area is not a PivotTable page field filter.

PivotDataItems: The list of PivotTable data fields of the PivotTable. MUST be present. MUST contain the list of all the PivotTable data fields of the PivotTable that contains the PivotTable area, in the same order as they appear in the PivotTable.

PivotDataFields: If the data source (1) for the PivotTable is OLAP then MUST contain all **OLAP measures**. Otherwise, MUST contain the list of all the PivotTable data fields of the PivotTable that contains the PivotTable area, in the same order as they appear in the PivotTable. MUST be present.

PivotFields: The list of PivotTable fields of the PivotTable area. MUST be present. MUST contain the list of all the PivotTable fields in the PivotTable area as follows:

- The first **PivotField** element in the **ArrayOfPivotField** MUST be the first hierarchy PivotTable field.
- The **PivotField** elements following a **PivotField** element in the **ArrayOfPivotField** that is a hierarchy PivotTable field MUST be all the PivotTable fields that belong to that hierarchy PivotTable field, ordered from the highest level PivotTable field to the lowest level PivotTable field.
- The **PivotField** element following a **PivotField** element in the **ArrayOfPivotField** that is the lowest level PivotTable field that belongs to a hierarchy PivotTable field that is not the last hierarchy PivotTable field of the PivotTable area MUST be the next hierarchy PivotTable fields of the PivotTable area.

3.1.4.19.3.2 ArrayOfPivotField

Namespace:

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

The **ArrayOfPivotField** type contains a list of **PivotField** elements (section [3.1.4.19.3.3](#)).

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

PivotField: A **PivotField** element that is a **PivotTable** field.

3.1.4.19.3.3 PivotField

Namespace:

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

The **PivotField** type contains information about a **PivotTable** field.

```
<xs:complexType name="PivotField" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberProperties"
type="tns:ArrayOfPivotField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="PivotFilterParameters"
type="tns:ArrayOfPivotFilterParameter"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsWholeDays" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsEnabledWholeDays" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SortByValueIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsNonnumericCaptionFilteringEnabled"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsDateFilteringEnabled" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsCaptionFilteringEnabled"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsFilteringEnabled" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsDateField" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsDataField" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterParameter"
type="tns:Top10FilterParameter"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInRowArea" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInPageFilterArea"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSortedByValue" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSortedDescending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSortedAscending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasCustomFilter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasManualFilter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasTop10Filter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsHierarchy" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="IdString" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayString" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

MemberProperties: The list of member properties for this **PivotTable** field. MUST be present. If **IsDataField** is true, **MemberProperties** MUST contain zero **PivotField** elements. If **IsHierarchy** is true, **MemberProperties** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **MemberProperties** MUST contain zero

PivotField elements. Otherwise, **MemberProperties** MUST contain the list of all member properties associated with this **PivotTable** field.

PivotFilterParameters: The PivotTable custom filters applied to this PivotTable field. MUST be present. MUST have zero **PivotFilterParameter** elements if **HasCustomFilter** is **false**. MUST have one **PivotFilterParameter** elements if **HasCustomFilter** is **true**.

IsWholeDays: Specifies a PivotTable advanced filter criteria and MUST be **false** if the **FilterType** element does not indicate a filter operation on a PivotTable date field. If **true**, date comparisons MUST be based on the date only and the time MUST be ignored. If **false**, date comparisons MUST be based on both the date and the time.

IsEnabledWholeDays: Specifies whether date comparisons based on date only, ignoring time, are allowed. If date comparisons based on date only are allowed, MUST be **true**. Otherwise MUST be **false**. MUST be **false** for non-date fields when **IsDateField** is **false**.

SortByValueIndex: Specifies the index of a PivotTable data field contained in the **PivotDataItems** element which the PivotTable field is sorted by. If **IsSortedByValue** is **false**, **SortByValueIndex** MUST be ignored on receipt by the protocol client.

IsNonnumericCaptionFilteringEnabled: Specifies whether certain types of text PivotTable custom label filtering are allowed on this PivotTable field. If **IsDataField** is true, **IsNonnumericCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsNonnumericCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsNonnumericCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsNonnumericCaptionFilteringEnabled** MUST be set to true if the following values for **FilterType** are allowed when calling **ApplyPivotFilter** (section [3.1.4.2](#)) for this **PivotTable** field, and to **false** if they are not one of the following:

- CaptionBeginsWith
- CaptionDoesNotBeginWith
- CaptionEndsWith
- CaptionDoesNotEndWith
- CaptionContains
- CaptionDoesNotContain

IsDateFilteringEnabled: Specifies whether PivotTable custom label filters are allowed for dates on this **PivotTable** field. If **IsDataField** is true, **IsDateFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsDateFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsDateFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsDateFilteringEnabled** MUST be set to **true** if the following values for **FilterType** are allowed when calling **ApplyPivotFilter** for this **PivotTable** field, and to **false** if they are not one of the following:

- DateEquals
- DateOlderThan
- DateNewerThan

- DateBetween
- DateTomorrow
- DateToday
- DateYesterday
- DateNextWeek
- DateThisWeek
- DateLastWeek
- DateNextMonth
- DateThisMonth
- DateLastMonth
- DateNextQuarter
- DateThisQuarter
- DateLastQuarter
- DateNextYear
- DateThisYear
- DateLastYear
- DateYearToDate
- DateAllDatesInPeriodQuarter1
- DateAllDatesInPeriodQuarter2
- DateAllDatesInPeriodQuarter3
- DateAllDatesInPeriodQuarter4
- DateAllDatesInPeriodJanuary
- DateAllDatesInPeriodFebruary
- DateAllDatesInPeriodMarch
- DateAllDatesInPeriodApril
- DateAllDatesInPeriodMay
- DateAllDatesInPeriodJune
- DateAllDatesInPeriodJuly
- DateAllDatesInPeriodAugust
- DateAllDatesInPeriodSeptember

- DateAllDatesInPeriodOctober
- DateAllDatesInPeriodNovember
- DateAllDatesInPeriodDecember
- DateNotEqual
- DateOlderOrEqual
- DateNewerOrEqual
- DateNotBetween

IsCaptionFilteringEnabled: Specifies whether PivotTable custom label filters are allowed for this **PivotTable** field. If **IsDataField** is **true**, **IsCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsCaptionFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsCaptionFilteringEnabled** MUST be set to **true** if values of **PivotFilterType** that support PivotTable custom label filtering, as specified in **PivotFilterType** (section [2.2.5.17](#)), are allowed when calling **ApplyPivotFilter** for this **PivotTable** field, and to **false** if it is not allowed.

IsFilteringEnabled: Specifies whether PivotTable custom filters are allowed for this **PivotTable** field. If **IsDataField** is **true**, **IsFilteringEnabled** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsFilteringEnabled** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsFilteringEnabled** MUST be ignored on receipt by the protocol client. Otherwise, **IsFilteringEnabled** MUST be set to **true** if calls to **ApplyPivotFilter** are allowed for this PivotTable field, and it MUST be set to **false** otherwise.

IsDateField: Specifies whether this PivotTable field is a date. If **IsDataField** is **true**, **IsDateField** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsDateField** MUST be ignored on receipt by the protocol client. If this **PivotField** element is a sub-element of a **MemberProperties** element, **IsDateField** MUST be ignored on receipt by the protocol client. Otherwise, **IsDateField** MUST be set to **true** if the PivotTable field is a date PivotTable field, and to **false** otherwise.

IsDataField: Specifies whether this PivotTable field is a PivotTable data field. If this **PivotField** element is nested inside the **PivotDataFields** element of the **PivotMenu** (section [3.1.4.19.3.1](#)), **IsDataField** MUST be set to **true**. If this **PivotField** element is nested inside a **MemberProperties** element, **IsDataField** MUST be set to **false**. If this element is nested inside the **PivotFields** element of the **PivotMenu**, **IsDataField** MUST be set to **false**.

FilterParameter: The top N filter or bottom N filter for this PivotTable field. If **IsDataField** is **true**, **FilterParameter** MUST NOT be present. If **IsHierarchy** is **true**, **FilterParameter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **FilterParameter** MUST NOT be present. Otherwise, **FilterParameter** MUST NOT be present if **HasTop10Filter** is **false** and it MUST be present according to the specification in **Top10FilterParameter** (section [3.1.4.19.3.6](#)) if **HasTop10Filter** is **true**.

IsFieldInRowArea: Specifies whether this PivotTable field is in the rows area of the PivotTable. If this **PivotField** element is not nested inside the **PivotFields** element of the **PivotMenu** (section [3.1.4.19.3.1](#)), **IsFieldInRowArea** MUST be set to **false**.

IsFieldInPageFilterArea: Specifies whether this PivotTable field is in the PivotTable page field of the PivotTable. If this **PivotField** element is not nested inside the **PivotFields** element of the **PivotMenu** (section [3.1.4.19.3.1](#)), **IsFieldInPageFilterArea** MUST be set to **false**.

IsSortedByValue: Specifies whether this **PivotTable** field is sorted by value. If **IsDataField** is **false**, **IsSortedByValue** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **IsSortedByValue** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsSortedByValue** MUST be ignored on receipt by the protocol client. Otherwise, **IsSortedByValue** MUST be set to **true** if the PivotTable field is sorted by value, and it MUST be set to **false** if the PivotTable field is sorted by name or is not sorted.

IsSortedDescending: Specifies whether this PivotTable field is sorted in **descending order**. If **IsHierarchy** is **true**, **IsSortedDescending** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsSortedDescending** MUST be ignored on receipt by the protocol client. Otherwise, **IsSortedDescending** MUST be set to **true** if the PivotTable field is sorted in descending order, and it MUST be set to **false** if the **PivotTable** field is sorted in ascending order or is not sorted.

IsSortedAscending: Specifies whether this PivotTable field is sorted in ascending order. If **IsHierarchy** is **true**, **IsSortedAscending** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsSortedAscending** MUST be ignored on receipt by the protocol client. Otherwise, **IsSortedAscending** MUST be set to **true** if the PivotTable field is sorted in ascending order, and it MUST be set to **false** if the **PivotTable** field is sorted in descending order or is not sorted.

HasCustomFilter: Specifies whether there is a PivotTable custom filter applied to this **PivotTable** field. If **HasManualFilter** is **true** or **HasTop10Filter** is **true**, **HasCustomFilter** MUST be set to **false**. If **IsDataField** is **true**, **HasCustomFilter** MUST be **false**. If **IsHierarchy** is **true**, **HasCustomFilter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **HasCustomFilter** MUST be ignored on receipt by the protocol client. Otherwise, **HasCustomFilter** MUST be set to **true** if there is a PivotTable custom filter applied to this **PivotTable** field and it MUST be set to **false** if there is no PivotTable custom filter applied to this **PivotTable** field.

HasManualFilter: Specifies whether there is a PivotTable manual filter applied to this PivotTable field. If **HasCustomFilter** is **true** or **HasTop10Filter** is **true**, **HasManualFilter** MUST be set to **false**. If **IsDataField** is **true**, **HasManualFilter** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **HasManualFilter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **HasManualFilter** MUST be ignored on receipt by the protocol client. Otherwise, **HasManualFilter** MUST be set to **true** if there is a PivotTable manual filter applied to this **PivotTable** field, and it MUST be set to **false** if there is no PivotTable manual filter applied to this **PivotTable** field.

HasTop10Filter: Specifies whether there is a top N filter or a bottom N filter applied to this PivotTable field. If **HasCustomFilter** is **true** or **HasManualFilter** is **true**, **HasTop10Filter** MUST be set to **false**. If **IsDataField** is **true**, **HasTop10Filter** MUST be ignored on receipt by the protocol client. If **IsHierarchy** is **true**, **HasTop10Filter** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **HasTop10Filter** MUST be ignored on receipt by the protocol client. Otherwise, **HasTop10Filter** MUST be set to **true** if the PivotTable field has a top N filter or a bottom N filter set. MUST be set to **false** if the **PivotTable** field does not have a top N filter nor a bottom N filter set.

IsHierarchy: Specifies whether this PivotTable field is a hierarchy PivotTable field. If **IsDataField** is **true**, **IsHierarchy** MUST be ignored on receipt by the protocol client. If this **PivotField** element is nested inside a **MemberProperties** element, **IsHierarchy** MUST be set to **false**. Otherwise,

IsHierarchy MUST be set to **true** if the PivotTable field is a hierarchy **PivotTable** field, and it MUST be set to **false** otherwise.

IdString: An identifier for the PivotTable field. MUST be present. MUST NOT be empty. If **IsDataField** is true, **IdString** MUST have a unique value among all the **IdString** elements of all the **PivotField** elements of the **PivotDataFields** element of the **PivotMenu**. If this **PivotField** element is nested inside a **MemberProperties** element, **IdString** MUST have a unique value across all the **IdString** elements of all the **PivotField** elements of all the **MemberProperties** elements of all the **PivotField** elements of the **PivotFields** element. Otherwise, **IdString** MUST have a unique value among all the **IdString** elements of all the **PivotField** elements of the **PivotFields** element of the **PivotMenu** that have the same value in the **IsHierarchy** field as this element.

DisplayString: The **PivotTable** field caption. MUST be present.

3.1.4.19.3.4 ArrayOfPivotFilterParameter

Namespace:

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

The **ArrayOfPivotFilterParameter** type contains a list of **PivotFilterParameter** elements (section [3.1.4.19.3.5](#)).

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

PivotFilterParameter: A **PivotFilterParameter** in the list.

3.1.4.19.3.5 PivotFilterParameter

Namespace:

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

The **PivotFilterParameter** type specifies a PivotTable custom filter applied to a **PivotTable** field.

```
<xs:complexType name="PivotFilterParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterString2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterString1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberPropertyId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns:PivotFilterType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue2" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue1" type="xs:double"/>
  </xs:sequence>
</xs:complexType>
```

FilterString2: The second PivotTable filter parameter, if the filter type supports two PivotTable filter parameters and is used with a PivotTable custom label filter. MUST be present. MUST be empty and MUST be ignored on receipt by the protocol client when **FilterType** supports zero or one parameters, as specified in section [2.2.5.17](#). MUST be empty and MUST be ignored on receipt by the

protocol client when **FilterType** is used for PivotTable custom value filter as specified in **PivotFilterType**. Otherwise, it MUST contain the value of the second PivotTable filter parameter.

FilterString1: The first PivotTable filter parameter, if the filter type supports one or two PivotTable filter parameters and is used with a PivotTable custom label filter. MUST be present. MUST be empty and MUST be ignored on receipt by the protocol client when **FilterType** supports zero parameters, as specified in **PivotFilterType**. MUST be empty and MUST be ignored on receipt by the protocol client when **FilterType** is used for PivotTable custom value filter as specified in **PivotFilterType**. Otherwise, it MUST contain the value of the first PivotTable filter parameter.

MemberPropertyId: The identifier of the member property used with a PivotTable custom label filter on a member property. MUST be present. MUST be empty when **FilterType** is used for PivotTable custom value filter as specified in **PivotFilterType**. MUST be empty when **FilterType** is used for PivotTable custom label filter, as specified in **PivotFilterType**, but not on a member property. When **FilterType** is used with PivotTable custom label filter, as specified in **PivotFilterType** on a member property, **MemberPropertyId** MUST be equal to the **IdString** element of one of the **PivotField** elements of one of the **MemberProperties** elements one of the **PivotField** elements of the **PivotFields** element of the **PivotMenu**.

DataFieldId: The identifier of the PivotTable data field used with a PivotTable custom value filter. MUST be present. MUST be empty when **FilterType** is not used with PivotTable custom value filter as specified in **PivotFilterType**. When **FilterType** is used for PivotTable custom value filter, as specified in **PivotFilterType**, **DataFieldId** MUST be equal to the **IdString** element of one of the **PivotField** elements of the **PivotDataFields** element of the **PivotMenu**.

FilterType: The type of the filter applied as specified in **PivotFilterType**. MUST be used with PivotTable custom label filter or with PivotTable custom value filter as specified in **PivotFilterType**.

FilterValue2: The second PivotTable filter parameter, if the filter type supports two PivotTable filter parameters and is used for PivotTable custom value filter. MUST be ignored on receipt by the protocol client when **FilterType** supports zero or one parameters as specified in **PivotFilterType**. MUST be ignored on receipt by the protocol client when **FilterType** is used with PivotTable custom label filter as specified in **PivotFilterType**. Otherwise, it MUST contain the value of the second PivotTable filter parameter.

FilterValue1: The first PivotTable filter parameter, if the filter type supports one or two PivotTable filter parameters and is used for PivotTable custom value filter. MUST be ignored on receipt by the protocol client when **FilterType** supports zero parameters, as specified in **PivotFilterType**. MUST be ignored on receipt by the protocol client when **FilterType** is used with PivotTable custom label filter as specified in **PivotFilterType**. Otherwise, it MUST contain the value of the first PivotTable filter parameter.

3.1.4.19.3.6 Top10FilterParameter

Namespace:

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

The **Top10FilterParameter** type contains information about the top N filter or bottom N filter that is applied to a PivotTable field.

```
<xs:complexType name="Top10FilterParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns:Top10FilterType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsTopFilter" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

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

DataFieldId: The unique identifier of the PivotTable data field to which the top N filter or bottom N filter is applied. MUST be equal to the **IdString** element of one of the **PivotField** elements in the **PivotDataFields** element of the **PivotMenu**.

FilterType: The kind of the top N filter or bottom N filter as specified in section [3.1.4.19.4.1](#).

FilterValue: The value of the PivotTable filter parameter. If **FilterType** is **Count**, MUST be greater than or equal to 1 and less than or equal to 2147483647. If **FilterType** is **Percent**, MUST be greater than or equal to 0 and less than or equal to 100. If **FilterType** is **Sum**, MUST be greater than or equal to 0.

IsTopFilter: Specifies whether this is a top N filter or a bottom N filter. MUST be **true** if a top N filter is applied. MUST be **false** if a bottom N filter is applied.

3.1.4.19.4 Simple Types

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

Simple type	Description
Top10FilterType	An enumeration that specifies the type of top N filter or bottom N filter that is applied to a PivotTable field.

3.1.4.19.4.1 Top10FilterType

Namespace:

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

The **Top10FilterType** type is an enumeration that specifies the type of top N filter or bottom N filter that is applied to a PivotTable field.

```
<xs:simpleType name="Top10FilterType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Invalid"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Percent"/>
    <xs:enumeration value="Sum"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **Top10FilterType**.

Value	Meaning
Invalid	This value MUST NOT be used.
Count	A top N filter by count or a bottom N filter by count is applied.
Percent	A top N filter by percent or a bottom N filter by percent is applied.

Value	Meaning
Sum	A top N filter by sum or a bottom N filter by sum is applied.

3.1.4.19.5 Attributes

None.

3.1.4.19.6 Groups

None.

3.1.4.19.7 Attribute Groups

None.

3.1.4.20 GetPublishedObjects

This operation returns a list of the published items in a workbook.

```
<wsdl:operation name="GetPublishedObjects" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPublishedObjects"
    message="tns:ExcelServiceSoap_GetPublishedObjects_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPublishedObjectsResponse"
    message="tns:ExcelServiceSoap_GetPublishedObjects_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPublishedObjectsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetPublishedObjects_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPublishedObjects_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetPublishedObjects_OutputMessage**.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<29>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.20.1 Messages

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

Message	Description
ExcelServiceSoap_GetPublishedObjects_InputMessage	The request WSDL message for the GetPublishedObjects WSDL operation.

Message	Description
ExcelServiceSoap_GetPublishedObjects_OutputMessage	The response WSDL message for the GetPublishedObjects WSDL operation.

3.1.4.20.1.1 ExcelServiceSoap_GetPublishedObjects_InputMessage

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

The SOAP action value is:

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

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

3.1.4.20.1.2 ExcelServiceSoap_GetPublishedObjects_OutputMessage

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

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

3.1.4.20.2 Elements

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

Element	Description
GetPublishedObjects	The input data for the GetPublishedObjects WSDL operation.
GetPublishedObjectsResponse	The result data for the GetPublishedObjects WSDL operation.

3.1.4.20.2.1 GetPublishedObjects

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

```
<xs:element name="GetPublishedObjects" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="options"
        type="tns:GetPublishedObjectsOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

options: **GetPublishedObjectsOptions** as specified in section [3.1.4.20.4.1](#).

3.1.4.20.2.2 GetPublishedObjectsResponse

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

```

<xs:element name="GetPublishedObjectsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPublishedObjectsResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="publishedObjects"
type="tns:ArrayOfPublishedObjectName"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetPublishedObjectsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

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

3.1.4.20.3 Complex Types

None.

3.1.4.20.4 Simple Types

None.

3.1.4.20.5 Attributes

None.

3.1.4.20.6 Groups

None.

3.1.4.20.7 Attribute Groups

None.

3.1.4.21 GetRange

This operation returns information about the workbook as specified in [\[MS-EXSPXML\]](#).

```

<wsdl:operation name="GetRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRange" message="tns:ExcelServiceSoap_GetRange_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeResponse"
message="tns:ExcelServiceSoap_GetRange_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRange_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>

```

</wsdl:operation>

The protocol client sends an **ExcelServiceSoap_GetRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRange_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<30>](#) be one of the values specified in section 2.2.2.1 or any of the following values:

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.21.1 Messages

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

Message	Description
ExcelServiceSoap_GetRange_InputMessage	The request WSDL message for the GetRange WSDL operation.
ExcelServiceSoap_GetRange_OutputMessage	The response WSDL message for the GetRange WSDL operation.

3.1.4.21.1.1 ExcelServiceSoap_GetRange_InputMessage

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

The SOAP action value is:

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

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

3.1.4.21.1.2 ExcelServiceSoap_GetRange_OutputMessage

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

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

3.1.4.21.2 Elements

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

Element	Description
GetRange	The input data for the GetRange WSDL operation.
GetRangeResponse	The result data for the GetRange WSDL operation.

3.1.4.21.2.1 GetRange

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

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

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.21.2.2 GetRangeResponse

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

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

GetRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.21.3 Complex Types

None.

3.1.4.21.4 Simple Types

None.

3.1.4.21.5 Attributes

None.

3.1.4.21.6 Groups

None.

3.1.4.21.7 Attribute Groups

None.

3.1.4.22 GetRangeForClipboard

This operation is used to get the number formatted values of visible worksheet cells in a specified range in a workbook.

```
<wsdl:operation name="GetRangeForClipboard" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeForClipboard"
    message="tns:ExcelServiceSoap_GetRangeForClipboard_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeForClipboardResponse"
    message="tns:ExcelServiceSoap_GetRangeForClipboard_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeForClipboardExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetRangeForClipboard_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetRangeForClipboard_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeForClipboard_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the requested range in the **source** element. The protocol server trims the ending empty columns (2) and the ending empty rows (2) in the range.
2. The protocol server will not include trailing columns (2) that do not contain any values.
3. The protocol server will not include trailing rows (2) that do not contain any values.
4. Depending on security settings, the protocol server MAY [<31>](#) return a SOAP fault even if the requested range is present in the workbook.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<32>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.22.1 Messages

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

Message	Description
ExcelServiceSoap_GetRangeForClipboard_InputMessage	The request WSDL message for the GetRangeForClipboard WSDL operation.
ExcelServiceSoap_GetRangeForClipboard_OutputMessage	The response WSDL message for the GetRangeForClipboard WSDL operation.

3.1.4.22.1.1 ExcelServiceSoap_GetRangeForClipboard_InputMessage

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

The SOAP action value is:

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

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

3.1.4.22.1.2 ExcelServiceSoap_GetRangeForClipboard_OutputMessage

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

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

3.1.4.22.2 Elements

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

Element	Description
GetRangeForClipboard	The input data for the GetRangeForClipboard WSDL operation.
GetRangeForClipboardResponse	The result data for the GetRangeForClipboard WSDL operation.

3.1.4.22.2.1 GetRangeForClipboard

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

```
<xs:element name="GetRangeForClipboard" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="source" type="tns:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

source: The range that the protocol client requests data to be fetched from the protocol server. MUST be present.

3.1.4.22.2 GetRangeForClipboardResponse

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

```
<xs:element name="GetRangeForClipboardResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeForClipboardResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="clipboardString" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetRangeForClipboardResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

clipboardString: The string with the number formatted values for the requested worksheet cells in the workbook. MUST be present. For each visible cell the protocol server adds the number formatted value of the cell to the response in the **clipboardString** element. If the range contains more than one visible cell in a row (2), then the protocol server MUST include the tab (\t) character between each of the values for the cells in the response. If the range contains more than one visible row (2), then the protocol server MUST include the following string "\r\n" between each visible row (2) in response. The length of the value of **clipboardString** MUST be less than or equal to 102400 characters.

3.1.4.22.3 Complex Types

None.

3.1.4.22.4 Simple Types

None.

3.1.4.22.5 Attributes

None.

3.1.4.22.6 Groups

None.

3.1.4.22.7 Attribute Groups

None.

3.1.4.23 GetRangeValues

This operation is used to get the values contained in a specified range in a workbook.

```
<wsdl:operation name="GetRangeValues" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetRangeValues" />
```

```

message="tns:ExcelServiceSoap_GetRangeValues_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesResponse"
message="tns:ExcelServiceSoap_GetRangeValues_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRangeValues_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetRangeValues_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeValues_OutputMessage** response message, as follows:

1. Depending on security settings, the protocol server MAY [<33>](#) return a SOAP fault even if the requested range is present in the workbook.
2. Each element inside the **cellValues** element MUST be of type **ArrayOfAnyType** and is a row (2) of sheet (2) cells returned from the protocol server. The number of rows (2) returned MUST be equal to the number of rows (2) requested in the **SheetRange** element.
3. Each element inside each of the **ArrayOfAnyType** type nested inside **cellValues** MUST be a single workbook sheet (2) cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of columns (2) requested in the **sheetRange** element.
4. If **formatted** is **true**, all sheet (2) cells returned as part of the **cellValues** element MUST be of type **string** and MUST be number formatted according to how the sheet (2) cell is number formatted in the workbook.
5. If **formatted** is false, the following apply:
 - if the sheet (2) cells returned as part of the **cellValues** element is empty, the **xsi:nil** attribute MUST be set to true.
 - If a cell is not empty, then the type returned as part of **cellValues** element for this cell MUST be one of the following types: **boolean**, **double**, **string**, or **CellError** (section [2.2.5.5](#)).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<34>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.23.1 Messages

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

Message	Description
ExcelServiceSoap_GetRangeValues_InputMessage	The request WSDL message for the GetRangeValues WSDL operation.
ExcelServiceSoap_GetRangeValues_OutputMessage	The response WSDL message for the GetRangeValues WSDL operation.

3.1.4.23.1.1 ExcelServiceSoap_GetRangeValues_InputMessage

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

The SOAP action value is:

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

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

3.1.4.23.1.2 ExcelServiceSoap_GetRangeValues_OutputMessage

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

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

3.1.4.23.2 Elements

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

Element	Description
GetRangeValues	The input data for the GetRangeValues WSDL operation.
GetRangeValuesResponse	The result data for the GetRangeValues WSDL operation.

3.1.4.23.2.1 GetRangeValues

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

```
<xs:element name="GetRangeValues" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns:SheetRange"/>
      <xs:element minOccurs="1" maxOccurs="1" name="formatted" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sheetRange: The range that the protocol client requests data to be fetched from the protocol server. MUST be present.

formatted: Specifies whether or not the data retrieved is number formatted.

3.1.4.23.2 GetRangeValuesResponse

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

```
<xs:element name="GetRangeValuesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeValuesResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="cellValues" type="tns:ArrayOfAnyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetRangeValuesResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

cellValues: The values returned from the protocol server. MUST be present.

3.1.4.23.3 Complex Types

None.

3.1.4.23.4 Simple Types

None.

3.1.4.23.5 Attributes

None.

3.1.4.23.6 Groups

None.

3.1.4.23.7 Attribute Groups

None.

3.1.4.24 GetRangeValuesA1

This operation is used to get the values contained in a specified range in a workbook.

```
<wsdl:operation name="GetRangeValuesA1" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1"
message="tns:ExcelServiceSoap_GetRangeValuesA1_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
```

```

    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1Response"
message="tns:ExcelServiceSoap_GetRangeValuesA1_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1ExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRangeValuesA1_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetRangeValuesA1_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeValuesA1_OutputMessage** response message, as follows:

1. If **sheetName** is not present, the protocol server MUST return a SOAP fault. The **Id** element of the **ExcelServerMessage** MUST be **InternalError**.
2. Depending on security settings, the protocol server MAY [<35>](#) return a SOAP fault even if the requested range is present in the workbook.
3. Each element inside the **rangeRequests** element MUST be of type **RangeValuesA1** as specified in section [2.2.4.31](#). The number of elements MUST be equal to the number of named ranges that the protocol client tries to get values from.
4. For each named range, The protocol server determines the range to return in the following manner:
 - If **sheetName** is empty and the protocol server cannot determine the sheet (1) from the **rangeName** element, the protocol server MUST return the requested values from the range specified in **rangeName** on the first sheet (1).
 - If **sheetName** is empty and the protocol server can determine the sheet (1) from the **rangeName** element, the protocol server MUST return the requested values from the range specified in **rangeName** on the determined sheet (1).
 - If **sheetName** is not empty and exists in the workbook, the protocol MUST return the range specified in **rangeName** from the sheet (1) that is specified in **sheetName**.
 - If **sheetName** is not empty and does not reference an existing sheet (1) in the workbook, the protocol server MUST return a SOAP fault. The **Id** element of the **ExcelServerMessage** MUST be **InvalidSheetName**.
5. If **formatted** is **true**, all worksheet cells returned as part of the **Values** element in the **RangeValuesA1** element MUST be of type **string** and MUST be number formatted according to how the sheet cell is number formatted in the workbook.
6. If **formatted** is **false**, the following apply:
 - If the sheet (2) cells returned as part of the **Values** element in the **RangeValuesA1** element is empty, the **xsi:nil** attribute MUST be set to true.
 - If a cell is not empty, it MUST be one of the following types: **boolean**, **double**, **string**, or **CellError** (section [2.2.5.5](#)).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<36>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.24.1 Messages

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

Message	Description
ExcelServiceSoap_GetRangeValuesA1_InputMessage	The request WSDL message for the GetRangeValuesA1 WSDL operation.
ExcelServiceSoap_GetRangeValuesA1_OutputMessage	The response WSDL message for the GetRangeValuesA1 WSDL operation.

3.1.4.24.1.1 ExcelServiceSoap_GetRangeValuesA1_InputMessage

The request WSDL message for the **GetRangeValuesA1** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetRangeValuesA1
```

The SOAP body contains the **GetRangeValuesA1** element.

3.1.4.24.1.2 ExcelServiceSoap_GetRangeValuesA1_OutputMessage

The response WSDL message for the **GetRangeValuesA1** WSDL operation.

The SOAP body contains the **GetRangeValuesA1Response** element.

3.1.4.24.2 Elements

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

Element	Description
GetRangeValuesA1	The input data for the GetRangeValuesA1 WSDL operation.
GetRangeValuesA1Response	The result data for the GetRangeValuesA1 WSDL operation.

3.1.4.24.2.1 GetRangeValuesA1

The input data for the **GetRangeValuesA1** WSDL operation.

```
<xs:element name="GetRangeValuesA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeRequests"
type="tns:ArrayOfRangeValuesA1"/>
      <xs:element minOccurs="1" maxOccurs="1" name="formatting" type="tns:CellDataFormat"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

rangeRequests: An array of **RangeValuesA1** elements that specifies the named range that the protocol client requests data to be fetched from the protocol server. MUST be present

formatting: Specifies whether or not the data retrieved is number formatted. This element MUST be true if the values need to be **number formatted** and false if the values do not need to be number formatted.

3.1.4.24.2.2 GetRangeValuesA1Response

The result data for the **GetRangeValuesA1** WSDL operation.

```
<xs:element name="GetRangeValuesA1Response" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeValuesA1Result"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeRequests"
type="tns:ArrayOfRangeValuesA1"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetRangeValuesA1Result: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

rangeRequests: An array of **RangeValuesA1** elements that contains the values retrieved from the protocol server.

3.1.4.24.3 Complex Types

None.

3.1.4.24.4 Simple Types

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

Simple type	Description
CellDataFormat	Specifies a list of enumeration values where the retrieved cell values need to be number formatted.

3.1.4.24.4.1 CellDataFormat

Namespace:

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

Specifies a list of enumeration values where the retrieved cell values need to be number formatted. If the value **Compound** is used, the formatted element **MUST** also use both the values **Formatted** and **Unformatted**. If the value **Compound** is not used, the formatted element **MUST** use either the value **Formatted** or **Unformatted**.

```
<xs:simpleType name="CellDataFormat" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="Formatted"/>
        <xs:enumeration value="Unformatted"/>
        <xs:enumeration value="Compound"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

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

Value	Meaning
Formatted	Specifies that the retrieved cell values MUST be number formatted.
Unformatted	Specifies that the retrieved cell values MUST NOT be number formatted.
Compound	Specifies that the retrieved cell values MUST be of type CellCompoundValue as specified in section 2.2.4.16 .

3.1.4.24.5 Attributes

None.

3.1.4.24.6 Groups

None.

3.1.4.24.7 Attribute Groups

None.

3.1.4.25 GetSessionInformation

This operation is used to retrieve information about a session (2).

```

<wsdl:operation name="GetSessionInformation" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSessionInformation"
    message="tns:ExcelServiceSoap_GetSessionInformation_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSessionInformationResponse"
    message="tns:ExcelServiceSoap_GetSessionInformation_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSessionInformationExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetSessionInformation_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends a **ExcelServiceSoap_GetSessionInformation_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetSessionInformation_OutputMessage**, as follows:

- The protocol server MUST return the UI culture and the data culture for the specified session. These are the languages specified in the **OpenWorkbook** operation (section [3.1.4.30](#)) or the languages that the protocol server falls back to as specified in **OpenWorkbook**.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<37>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.25.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSessionInformation_InputMessage	The request WSDL message for the GetSessionInformation WSDL operation.
ExcelServiceSoap_GetSessionInformation_OutputMessage	The response WSDL message for the GetSessionInformation WSDL operation.

3.1.4.25.1.1 ExcelServiceSoap_GetSessionInformation_InputMessage

The request WSDL message for the **GetSessionInformation** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetSessionInformation

```

The SOAP body contains the **GetSessionInformation** element.

3.1.4.25.1.2 ExcelServiceSoap_GetSessionInformation_OutputMessage

The response WSDL message for the **GetSessionInformation** WSDL operation.

The SOAP body contains the **GetSessionInformationResponse** element.

3.1.4.25.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetSessionInformation	The input data for the GetSessionInformation WSDL operation.
GetSessionInformationResponse	The result data for the GetSessionInformation WSDL operation.

3.1.4.25.2.1 GetSessionInformation

The input data for the **GetSessionInformation** WSDL operation.

```
<xs:element name="GetSessionInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.20](#):

- **StateId** MUST be -1.
- **ProtocolClientId** value MUST be "ms-soap".

3.1.4.25.2.2 GetSessionInformationResponse

The result data for the **GetSessionInformation** WSDL operation.

```
<xs:element name="GetSessionInformationResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSessionInformationResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="serverVersion" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="uiCultureName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataCultureName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetSessionInformationResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

serverVersion: The version of the protocol server. MUST be present. MAY [38](#) contain any string value.

uiCultureName: The UI culture. MUST be present. MUST be a language tag as specified in [RFC1766](#) section 2.

dataCultureName: The data culture. MUST be present. MUST be a language tag, as specified in [RFC1766](#) section 2.

3.1.4.25.3 Complex Types

None.

3.1.4.25.4 Simple Types

None.

3.1.4.25.5 Attributes

None.

3.1.4.25.6 Groups

None.

3.1.4.25.7 Attribute Groups

None.

3.1.4.26 GetSheetNames

The operation returns information about the sheets in a workbook.

```
<wsdl:operation name="GetSheetNames" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSheetNames"
    message="tns:ExcelServiceSoap_GetSheetNames_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSheetNamesResponse"
    message="tns:ExcelServiceSoap_GetSheetNames_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSheetNamesExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetSheetNames_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetSheetNames_InputMessage**, and the protocol server responds with an **ExcelServiceSoap_GetSheetNames_OutputMessage**, as follows:

1. If the session (2) is a view session in view-only mode, the number of elements inside **GetSheetNamesResult** MUST be equal to the number of visible published sheets in the workbook.
2. If the session (2) is not a view session in view-only mode, the number of elements inside **GetSheetNamesResult** MUST be equal to the number of loaded sheets in the workbook.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<39>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.26.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSheetNames_InputMessage	The request WSDL message for the GetSheetNames WSDL operation.
ExcelServiceSoap_GetSheetNames_OutputMessage	The response WSDL message for the GetSheetNames WSDL operation.

3.1.4.26.1.1 ExcelServiceSoap_GetSheetNames_InputMessage

The request WSDL message for the **GetSheetNames** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSheetNames
```

The SOAP body contains the **GetSheetNames** element.

3.1.4.26.1.2 ExcelServiceSoap_GetSheetNames_OutputMessage

The response WSDL message for the **GetSheetNames** WSDL operation.

The SOAP body contains the **GetSheetNamesResponse** element.

3.1.4.26.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetSheetNames	The input data for the GetSheetNames WSDL operation.
GetSheetNamesResponse	The result data for the GetSheetNames WSDL operation.

3.1.4.26.2.1 GetSheetNames

The input data for the **GetSheetNames** WSDL operation.

```
<xs:element name="GetSheetNames" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.26.2.2 GetSheetNamesResponse

The result data for the **GetSheetNames** WSDL operation.

```
<xs:element name="GetSheetNamesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSheetNamesResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetNames" type="tns:ArrayOfSheetName"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetSheetNamesResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

sheetNames: An array of **SheetName** elements as specified in section [3.1.4.26.3.1](#). MUST be present.

3.1.4.26.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfSheetName	An array of SheetName elements.
SheetName	Specifies the name, type and visible condition of a sheet (1).

3.1.4.26.3.1 ArrayOfSheetName

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **SheetName** elements.

```
<xs:complexType name="ArrayOfSheetName" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
```

```
<xs:element minOccurs="0" maxOccurs="unbounded" name="SheetName" nillable="true"
type="tns:SheetName"/>
</xs:sequence>
</xs:complexType>
```

SheetName: A **SheetName** as specified in section [3.1.4.26.3.2](#).

3.1.4.26.3.2 SheetName

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the **name**, **type** and visible condition of a sheet (1).

```
<xs:complexType name="SheetName" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:SheetType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Visibility" type="tns:SheetVisibility"/>
  </xs:sequence>
</xs:complexType>
```

Name: The name of the sheet (1). MUST be present.

Type: The type of the sheet (1) as specified in section [3.1.4.26.4.1](#).

Visibility: The visible condition of a sheet (1) as specified in section [3.1.4.26.4.2](#).

3.1.4.26.4 Simple Types

None.

3.1.4.26.5 Attributes

None.

3.1.4.26.6 Groups

None.

3.1.4.26.7 Attribute Groups

None.

3.1.4.27 GetSlicerItemList

This operation is used to return the slicer items and formatting information for the slicer visual components that are part of a slicer.

```
<wsdl:operation name="GetSlicerItemList" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemList"
```

```

message="tns:ExcelServiceSoap_GetSlicerItemList_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemListResponse"
message="tns:ExcelServiceSoap_GetSlicerItemList_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetSlicerItemList_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetSlicerItemList_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetSlicerItemList_OutputMessage** response message, as follows:

- The protocol server returns a **SlicerItemList** (section [2.2.4.40](#)) in **itemList** with the following conditions.
 - If the **SlicerItemsCount** element in **SlicerOptions** (section [2.2.4.41](#)) is greater than or equal to 0 and less than or equal to the total number of slicer items, the **SlicerItems** element of **itemList** MUST contain a list with a number of **SlicerItem** elements (section [2.2.4.39](#)) equal to the **SlicerItemsCount** element in **SlicerOptions**.
 - If **SlicerItemsCount** element of **SlicerOptions** is greater than the total number of slicer items, then the **SlicerItems** element of **itemList** MUST contain a list with all slicer items starting at **SlicerItemsOffset**.
 - If **SlicerItemsOffset** is greater than or equal to 0 then the list of elements in **itemList** MUST begin at **SlicerItemsOffset**.
 - If **SlicerItemsOffset** is equal to -1 then the protocol server will determine the first slicer item in the resulting **itemList** in the following way:
 - If a call to **ApplySlicerSelection** was made in the current session, then the protocol server will use the value of the **SlicerItemsOffset** element of the **SlicerOptions** element of the last call to **ApplySlicerSelection**.
 - Otherwise, the protocol server will use the value in the **startItem** attribute in **CT_Slicer** ([\[MS-XLSX\]](#) section 2.6.68).
 - If the sum of **SlicerItemsOffset** and **SlicerItemsCount** is greater than the number of slicer items then **itemList** MUST be empty.
 - If **SlicerItemsCount** is equal to -1, the lesser of total number of items or 5 times the visible number of items is returned.
 - If **SlicerItemsOffset** is equal to -1, the protocol server returns a **SlicerFormatElementList** (section [2.2.4.38](#)) in **formatList** that MUST contain 10 elements as specified in section [2.2.4.9](#). Otherwise the protocol server MUST return a **formatList** with 0 elements.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<40>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.27.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSlicerItemList_InputMessage	The request WSDL message for the GetSlicerItemList WSDL operation.
ExcelServiceSoap_GetSlicerItemList_OutputMessage	The response WSDL message for the GetSlicerItemList WSDL operation.

3.1.4.27.1.1 ExcelServiceSoap_GetSlicerItemList_InputMessage

The request WSDL message for the **GetSlicerItemList** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetSlicerItemList
```

The SOAP body contains the **GetSlicerItemList** element.

3.1.4.27.1.2 ExcelServiceSoap_GetSlicerItemList_OutputMessage

The response WSDL message for the **GetSlicerItemList** WSDL operation.

The SOAP body contains the **GetSlicerItemListResponse** element.

3.1.4.27.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetSlicerItemList	The input data for the GetSlicerItemList WSDL operation.
GetSlicerItemListResponse	The result data for the GetSlicerItemList WSDL operation.

3.1.4.27.2.1 GetSlicerItemList

The input data for the **GetSlicerItemList** WSDL operation.

```
<xs:element name="GetSlicerItemList" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions" type="tns:SlicerOptions"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The slicer identification. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerClearItems:** MUST be ignored.

3.1.4.27.2 GetSlicerItemListResponse

The result data for the **GetSlicerItemList** WSDL operation.

```
<xs:element name="GetSlicerItemListResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSlicerItemListResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList" type="tns:SlicerItemList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns:SlicerFormatElementList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerView" type="tns:SlicerView"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetSlicerItemListResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

itemList: A **SlicerItemList** as specified in section [2.2.4.40](#). MUST be present.

formatList: A **SlicerFormatElementList** as specified in section [2.2.4.38](#). MUST be present.

slicerView: A **SlicerView** element as specified in section [2.2.4.42](#). MUST be present.

3.1.4.27.3 Complex Types

None.

3.1.4.27.4 Simple Types

None.

3.1.4.27.5 Attributes

None.

3.1.4.27.6 Groups

None.

3.1.4.27.7 Attribute Groups

None.

3.1.4.28 GetSparklines

This operation is used to return an image containing sparklines.

```

<wsdl:operation name="GetSparklines" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSparklines"
    message="tns:ExcelServiceSoap_GetSparklines_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSparklinesResponse"
    message="tns:ExcelServiceSoap_GetSparklines_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetSparklinesExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetSparklines_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetSparklines_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetSparklines_OutputMessage** response message, as follows:

- The protocol server MUST return an image containing all sparklines residing in the range specified in the **VisibleSheetRangeRequest** of the **parameter** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<41>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.28.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetSparklines_InputMessage	The request WSDL message for the GetSparklines WSDL operation.
ExcelServiceSoap_GetSparklines_OutputMessage	The response WSDL message for the GetSparklines WSDL operation.

3.1.4.28.1.1 ExcelServiceSoap_GetSparklines_InputMessage

The request WSDL message for the **GetSparklines** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetSparklines

```

The SOAP body contains the **GetSparklines** element.

3.1.4.28.1.2 ExcelServiceSoap_GetSparklines_OutputMessage

The response WSDL message for the **GetSparklines** WSDL operation.

The SOAP body contains the **GetSparklinesResponse** element.

3.1.4.28.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetSparklines	The input data for the GetSparklines WSDL operation.
GetSparklinesResponse	The result data for the GetSparklines WSDL operation.

3.1.4.28.2.1 GetSparklines

The input data for the **GetSparklines** WSDL operation.

```
<xs:element name="GetSparklines" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

- The **VisibleSheetRangeRequest** element MUST be present.

3.1.4.28.2.2 GetSparklinesResponse

The result data for the **GetSparklines** WSDL operation.

```
<xs:element name="GetSparklinesResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSparklinesResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binarySparklineImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetSparklinesResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binarySparklineImage** field. MUST be the string "x-png".

binarySparklineImage: The image of the sparklines. MUST be present. MUST be in the format specified in [\[RFC2083\]](#).

3.1.4.28.3 Complex Types

None.

3.1.4.28.4 Simple Types

None.

3.1.4.28.5 Attributes

None.

3.1.4.28.6 Groups

None.

3.1.4.28.7 Attribute Groups

None.

3.1.4.29 GetWorkbook

This operation is used to retrieve a workbook file.

```
<wsdl:operation name="GetWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbook" message="tns:ExcelServiceSoap_GetWorkbook_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbookResponse"
    message="tns:ExcelServiceSoap_GetWorkbook_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetWorkbook_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends a **ExcelServiceSoap_GetWorkbook_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_GetWorkbook_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<42>](#) be one of the values specified in section [2.2.2.1](#).

If **workbookType** is "FullWorkbook" or "FullSnapshot" and the user does not have Open Item permission, the protocol server returns an **ExcelServerMessage** with **Id** set to "EcsSnapshotAccessDenied".

3.1.4.29.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetWorkbook_InputMessage	The request WSDL message for the GetWorkbook WSDL operation.
ExcelServiceSoap_GetWorkbook_OutputMessage	The response WSDL message for the GetWorkbook WSDL operation.

3.1.4.29.1.1 ExcelServiceSoap_GetWorkbook_InputMessage

The request WSDL message for the **GetWorkbook** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetWorkbook
```

The SOAP body contains the **GetWorkbook** element.

3.1.4.29.1.2 ExcelServiceSoap_GetWorkbook_OutputMessage

The response WSDL message for the **GetWorkbook** WSDL operation.

The SOAP body contains the **GetWorkbookResponse** element.

3.1.4.29.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetWorkbook	The input data for the GetWorkbook WSDL operation.
GetWorkbookResponse	The result data for the GetWorkbook WSDL operation.

3.1.4.29.2.1 GetWorkbook

The input data for the **GetWorkbook** WSDL operation.

```
<xs:element name="GetWorkbook" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="workbookType" type="tns:WorkbookType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.20](#).

- **StateId** MUST be -1.

workbookType: The form of the requested workbook as specified in section [2.2.5.22](#).

3.1.4.29.2 GetWorkbookResponse

The result data for the **GetWorkbook** WSDL operation.

```
<xs:element name="GetWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetWorkbookResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bits" type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetWorkbookResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

bits: A workbook file. MUST be present.

3.1.4.29.3 Complex Types

None.

3.1.4.29.4 Simple Types

None.

3.1.4.29.5 Attributes

None.

3.1.4.29.6 Groups

None.

3.1.4.29.7 Attribute Groups

None.

3.1.4.30 OpenWorkbook

This operation is used to create a new session (2) or to join an existing edit session.

```
<wsdl:operation name="OpenWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbook"
message="tns:ExcelServiceSoap_OpenWorkbook_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
```

```

<wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbookResponse"
message="tns:ExcelServiceSoap_OpenWorkbook_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
<wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_OpenWorkbook_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_OpenWorkbook_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_OpenWorkbook_OutputMessage** response message, as follows:

1. If **flags** does not have any values set, a new view session will be created by the protocol server.
2. If **flags** does not contain the **NewWorkbook** value, the following apply:
 - The workbook file, specified by **url**, is specified as follows:
 - It SHOULD be in a format specified by [\[MS-XLSB\]](#), [\[MS-OFFMACRO2\]](#), [\[ISO/IEC-29500-1\]](#), or [\[ODF\]](#) but MAY be in any other format.
 - If it is in the [\[ISO/IEC-29500-1\]](#) or in the [\[MS-OFFMACRO2\]](#) formats:
 - It MAY [<43>](#) contain any valid SpreadsheetML records in that format.
 - If an **odcFile** attribute of a **connection** element ([\[ISO/IEC-29500-1\]](#), Part 4, Section 3.13.1) is present it SHOULD be the path of a file in the format specified by [\[MS-ODCFF\]](#).
 - If a **connection** attribute of **dbPr** element ([\[ISO/IEC-29500-1\]](#), Part 4, Section 3.13.3) is present it SHOULD be in the format specified by [\[MS-ODBCSTR\]](#) or [\[MS-OLEDBSTR\]](#).
 - If it is in the [\[MS-XLSB\]](#) format:
 - It MAY [<44>](#) contain any valid records in that format.
 - If a **brtBeginExternalConnection** record is present and it has the **stConnectionFile** field present, the **stConnectionFile** SHOULD be the path of a file in the format specified by [\[MS-ODCFF\]](#).
 - If a **BrtBeginECDBProps** record is present, its **stConn** field SHOULD be in the format specified by [\[MS-ODBCSTR\]](#) or [\[MS-OLEDBSTR\]](#).
 - If a file in [\[MS-ODCFF\]](#) is referenced by the workbook file:
 - **SourceFile** element of **OfficeDataConnection** ([\[MS-ODCFF\]](#) section 2.7.1.1) MUST NOT be present.
 - **Parameter** elements of **CT_Connection** ([\[MS-ODCFF\]](#) section 2.2.1) MUST be ignored.
3. If the operation succeeds, the protocol server MUST return the session identifier (2) of the newly created or joined session in the response message, to be used in any future operations against the newly created session.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<45>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **EcsInvalidNamedObject**
- **EditModeCannotAcquireLock**
- **EditModeCannotEditNonSharePointWorkbook**
- **EditModeWorkbookCheckedOutRequired**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **FileCorrupt**
- **FileOpenAccessDenied**
- **FileOpenNotFound**
- **FileOpenSecuritySettings**
- **GenericFileOpenError**
- **IncorrectAuthUsed**
- **InvalidSheetName**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **OpenWorkbookAccessDenied**
- **OpenWorkbookLocationNotTrusted**

- **OpenWorkbookTooLarge**
- **ParameterInvalid**
- **ParameterLimitExceeded**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**
- **UnattendedAccountNotConfigured**
- **WorkbookNotSupported**
- **WorkbookNotSupportedViewRight**

3.1.4.30.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_OpenWorkbook_InputMessage	The request WSDL message for the OpenWorkbook WSDL operation.
ExcelServiceSoap_OpenWorkbook_OutputMessage	The response WSDL message for the OpenWorkbook WSDL operation.

3.1.4.30.1.1 ExcelServiceSoap_OpenWorkbook_InputMessage

The request WSDL message for the **OpenWorkbook** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/OpenWorkbook
```

The SOAP body contains the **OpenWorkbook** element.

3.1.4.30.1.2 ExcelServiceSoap_OpenWorkbook_OutputMessage

The response WSDL message for the **OpenWorkbook** WSDL operation.

The SOAP body contains the **OpenWorkbookResponse** element.

3.1.4.30.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
OpenWorkbook	The input data for the OpenWorkbook WSDL operation.
OpenWorkbookResponse	The result data for the OpenWorkbook WSDL operation.

3.1.4.30.2.1 OpenWorkbook

The input data for the **OpenWorkbook** WSDL operation.

```
<xs:element name="OpenWorkbook" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="inParameters"
type="tns:OpenWorkbookInParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

inParameters: An **OpenWorkbookInParameters** as specified in section [2.2.4.52](#). MUST be present.

3.1.4.30.2.2 OpenWorkbookResponse

The result data for the **OpenWorkbook** WSDL operation.

```
<xs:element name="OpenWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="OpenWorkbookResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="workbookId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="outFlags"
type="tns:OpenWorkbookOutFlags"/>
      <xs:element minOccurs="0" maxOccurs="1" name="outParameters"
type="tns:OpenWorkbookOutParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

OpenWorkbookResult: A result as specified in section [2.2.4.21](#). MUST be present.

workbookId: The session identifier (2) of the newly created or joined session. MUST be present.

outFlags: Output flags, as specified in section [3.1.4.30.4.1](#). MUST be present.

outParameters: An **OpenWorkbookOutParameters** as specified in section [2.2.4.53](#). MUST be present.

3.1.4.30.3 Complex Types

None.

3.1.4.30.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
OpenWorkbookOutFlags	The output flags for OpenWorkbook .

3.1.4.30.4.1 OpenWorkbookOutFlags

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Output flags for **OpenWorkbook**.

```
<xs:simpleType name="OpenWorkbookOutFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ViewOnly"/>
        <xs:enumeration value="HasOpenItemPermission"/>
        <xs:enumeration value="HasEditItemPermission"/>
        <xs:enumeration value="RequiresCheckOut"/>
        <xs:enumeration value="Biff8Format"/>
        <xs:enumeration value="HasUnsupportedFeatures"/>
        <xs:enumeration value="SupportsEditing"/>
        <xs:enumeration value="StaticView"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for **OpenWorkbookOutFlags**.

Value	Meaning
ViewOnly	Specified if a view session in view-only mode was opened.
HasOpenItemPermission	Specified if the user has Open Item permission on the workbook file.
HasEditItemPermission	Specified if the user has permissions to edit the workbook file in the document library.
RequiresCheckOut	Specified if the user has to check out the workbook file in the document library to make changes to the file.
Biff8Format	MUST NOT be used.
HasUnsupportedFeatures	Specified if the workbook contains unsupported content.
SupportsEditing	Specified if making changes to the workbook file is supported in the document library.
StaticView	MUST NOT be used.

3.1.4.30.5 Attributes

None.

3.1.4.30.6 Groups

None.

3.1.4.30.7 Attribute Groups

None.

3.1.4.31 ParseRange

This operation is used to parse a specified range in the workbook.

```
<wsdl:operation name="ParseRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ParseRange" message="tns:ExcelServiceSoap_ParseRange_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ParseRangeResponse"
    message="tns:ExcelServiceSoap_ParseRange_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ParseRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ParseRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ParseRange_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ParseRange_OutputMessage** response message, as follows:

- The protocol server determines the **SheetRange** (section [2.2.4.35](#)) to return in the following manner:
 - If the protocol server cannot determine the worksheet from the **rangeToParse** element, the protocol server MUST return the range specified in **rangeToParse** on the first worksheet.
 - If the protocol server can determine the worksheet from the **rangeToParse** element, the protocol server MUST return the range specified in **rangeToParse** on the determined worksheet.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<46>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **RangeParseError**

3.1.4.31.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ParseRange_InputMessage	The request WSDL message for the ParseRange WSDL operation.
ExcelServiceSoap_ParseRange_OutputMessage	The response WSDL message for the ParseRange WSDL operation.

3.1.4.31.1.1 ExcelServiceSoap_ParseRange_InputMessage

The request WSDL message for the **ParseRange** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ParseRange
```

The SOAP body contains the **ParseRange** element.

3.1.4.31.1.2 ExcelServiceSoap_ParseRange_OutputMessage

The response WSDL message for the **ParseRange** WSDL operation.

The SOAP body contains the **ParseRangeResponse** element.

3.1.4.31.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ParseRange	The input data for the ParseRange WSDL operation.
ParseRangeResponse	The result data for the ParseRange WSDL operation.

3.1.4.31.2.1 ParseRange

The input data for the **ParseRange** WSDL operation.

```
<xs:element name="ParseRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeToParse" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

rangeToParse: A range, as specified in section [2.2.5.18](#), to be parsed. MUST be present.

3.1.4.31.2.2 ParseRangeResponse

The result data for the **ParseRange** WSDL operation.

```
<xs:element name="ParseRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ParseRangeResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ParseRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

sheetRange: The range, as specified in section [2.2.4.35](#), was parsed by the protocol server. MUST be present. **SheetName** MUST be present and MUST NOT be empty.

3.1.4.31.3 Complex Types

None.

3.1.4.31.4 Simple Types

None.

3.1.4.31.5 Attributes

None.

3.1.4.31.6 Groups

None.

3.1.4.31.7 Attribute Groups

None.

3.1.4.32 Recalc

This operation is used to calculate a specified range in the workbook.

```
<wsdl:operation name="Recalc" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/Recalc" message="tns:ExcelServiceSoap_Recalc_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcResponse" message="tns:ExcelServiceSoap_Recalc_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcExcelServerMessageFault" name="ExcelServerMessageFault"/>
```

```

message="tns:ExcelServiceSoap_Recalc_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_Recalc_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_Recalc_OutputMessage** response message.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <47> be one of the values specified in section 2.2.2.1 or any of the following values:

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.32.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_Recalc_InputMessage	The request WSDL message for the Recalc WSDL operation.
ExcelServiceSoap_Recalc_OutputMessage	The response WSDL message for the Recalc WSDL operation.

3.1.4.32.1.1 ExcelServiceSoap_Recalc_InputMessage

The request WSDL message for the **Recalc** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/Recalc

```

The SOAP body contains the **Recalc** element.

3.1.4.32.1.2 ExcelServiceSoap_Recalc_OutputMessage

The response WSDL message for the **Recalc** WSDL operation.

The SOAP body contains the **RecalcResponse** element.

3.1.4.32.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
Recalc	The input data for the Recalc WSDL operation.
RecalcResponse	The result data for the Recalc WSDL operation.

3.1.4.32.2.1 Recalc

The input data for the **Recalc** WSDL operation.

```
<xs:element name="Recalc" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sheetRange: A **SheetRange** (section [2.2.4.35](#)) to calculate in the workbook. MUST be present. **SheetName** MUST be present and MUST NOT be empty.

3.1.4.32.2.2 RecalcResponse

The result data for the **Recalc** WSDL operation.

```
<xs:element name="RecalcResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcResult" type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RecalcResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.32.3 Complex Types

None.

3.1.4.32.4 Simple Types

None.

3.1.4.32.5 Attributes

None.

3.1.4.32.6 Groups

None.

3.1.4.32.7 Attribute Groups

None.

3.1.4.33 RecalcA1

This operation is used to calculate a specified range in the workbook.

```
<wsdl:operation name="RecalcA1" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcA1" message="tns:ExcelServiceSoap_RecalcA1_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcA1Response"
    message="tns:ExcelServiceSoap_RecalcA1_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RecalcA1ExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_RecalcA1_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_RecalcA1_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RecalcA1_OutputMessage** response message, as follows:

1. If **rangeName** is empty, the protocol server calculates the whole sheet (2), which is specified in the **sheetName** element.
2. If **rangeName** is not empty, the protocol server calculates the specified range.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<48>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **EcsInvalidNamedObject**
- **InvalidSheetName**
- **RangeDefinitionError**
- **RangeParseError**
- **SheetRangeMismatch**

3.1.4.33.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RecalcA1_InputMessage	The request WSDL message for the RecalcA1 WSDL operation.
ExcelServiceSoap_RecalcA1_OutputMessage	The response WSDL message for the RecalcA1 WSDL operation.

3.1.4.33.1.1 ExcelServiceSoap_RecalcA1_InputMessage

The request WSDL message for the **RecalcA1** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RecalcA1
```

The SOAP body contains the **RecalcA1** element.

3.1.4.33.1.2 ExcelServiceSoap_RecalcA1_OutputMessage

The response WSDL message for the **RecalcA1** WSDL operation.

The SOAP body contains the **RecalcA1Response** element.

3.1.4.33.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
RecalcA1	The input data for the RecalcA1 WSDL operation.
RecalcA1Response	The result data for the RecalcA1 WSDL operation.

3.1.4.33.2.1 RecalcA1

The input data for the **RecalcA1** WSDL operation.

```
<xs:element name="RecalcA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter**, as specified in section [2.2.4.20](#). MUST be present.

sheetName: The name of the sheet (2) to calculate. MUST be present and MUST NOT be empty. MUST NOT be longer than 31 characters.

rangeName: The name of the range, as specified in section [2.2.5.18](#), to calculate. MUST be present.

3.1.4.33.2 RecalcA1Response

The result data for the **RecalcA1** WSDL operation.

```
<xs:element name="RecalcA1Response" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcA1Result"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RecalcA1Result: A **CommandResult**, as specified in section [2.2.4.21](#). MUST be present.

3.1.4.33.3 Complex Types

None.

3.1.4.33.4 Simple Types

None.

3.1.4.33.5 Attributes

None.

3.1.4.33.6 Groups

None.

3.1.4.33.7 Attribute Groups

None.

3.1.4.34 RecalcAll

This operation is used to calculate the workbook.

```
<wsdl:operation name="RecalcAll" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAll" message="tns:ExcelServiceSoap_RecalcAll_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllResponse"
message="tns:ExcelServiceSoap_RecalcAll_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllExcelServerMessageFault" name="ExcelServerMessageFault"/>
```

```

message="tns:ExcelServiceSoap_RecalcAll_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_RecalcAll_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RecalcAll_OutputMessage** response message.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<49>](#) be one of the values specified in section 2.2.2.1.

3.1.4.34.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RecalcAll_InputMessage	The request WSDL message for the RecalcAll WSDL operation.
ExcelServiceSoap_RecalcAll_OutputMessage	The response WSDL message for the RecalcAll WSDL operation.

3.1.4.34.1.1 ExcelServiceSoap_RecalcAll_InputMessage

The request WSDL message for the **RecalcAll** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RecalcAll

```

The SOAP body contains the **RecalcAll** element.

3.1.4.34.1.2 ExcelServiceSoap_RecalcAll_OutputMessage

The response WSDL message for the **RecalcAll** WSDL operation.

The SOAP body contains the **RecalcAllResponse** element.

3.1.4.34.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
RecalcAll	The input data for the RecalcAll WSDL operation.
RecalcAllResponse	The result data for the RecalcAll WSDL operation.

3.1.4.34.2.1 RecalcAll

The input data for the **RecalcAll** WSDL operation.

```
<xs:element name="RecalcAll" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="calculateType" type="tns:CalculateType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="recalcParams"
type="tns:RecalcParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter**, as specified in section [2.2.4.20](#). MUST be present.

calculateType: The type of calculation to be executed as specified in section [3.1.4.34.4.1](#).

recalcParams: Parameters for running the calculation as specified in [3.1.4.34.3.1](#).

3.1.4.34.2.2 RecalcAllResponse

The result data for the **RecalcAll** WSDL operation.

```
<xs:element name="RecalcAllResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcAllResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RecalcAllResult: A **CommandResult**, as specified in section [2.2.4.21](#). MUST be present.

3.1.4.34.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
RecalcParameters	Contains more optional parameters for the RecalcAll operation
ClientUdfResultInfo	Contains a list of results for client side UDF calculations done by the protocol client and that are needed by the protocol server to complete workbook calculation.
ArrayOfClientUdfResult	A list of ClientUdfResult elements
ClientUdfResult	A result of a client side UDF call requested by the protocol server from the protocol client.

3.1.4.34.3.1 RecalcParameters

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains more optional parameters for the RecalcAll operation.

```
<xs:complexType name="RecalcParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfResultInfo"
      type="tns:ClientUdfResultInfo"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstClientUdfRecalc" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfResultInfo: Results of client side UDFs that were calculated by the protocol client.

FirstClientUdfRecalc: MUST be ignored by the protocol server.

3.1.4.34.3.2 ClientUdfResultInfo

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Contains a list of results for client side UDF calculations done by the protocol client and that are needed by the protocol server to complete workbook calculation.

```
<xs:complexType name="ClientUdfResultInfo" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Results"
      type="tns:ArrayOfClientUdfResult"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Results: List of ClientUdfResult as described in section [3.1.4.34.3.4](#).

CalcVersion: The calculation version this result is in response for. MUST be a number previously received from the server as part of ClientUdfCallInfo as described in section [2.2.4.93](#).

3.1.4.34.3.3 ArrayOfClientUdfResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

A list of ClientUdfResult elements.

```
<xs:complexType name="ArrayOfClientUdfResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfResult" nillable="true"
      type="tns:ClientUdfResult"/>
  </xs:sequence>
</xs:complexType>
```

ClientUdfResult: A result of a client side UDF call as calculated on the protocol client.

3.1.4.34.3.4 ClientUdfResult

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

A result of a client side UDF call requested by the protocol server from the protocol client.

```
<xs:complexType name="ClientUdfResult" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Id" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Result"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ErrorResult" type="tns:CellError"/>
  </xs:sequence>
</xs:complexType>
```

Id: The opaque identifier of the call requested by the protocol server – received by the protocol client as described in section [2.2.4.92](#). MUST be present.

Result: The result of the client side UDF calculation. MUST be present if ErrorResult is not present. MUST NOT be present if ErrorResult is present. If present, MUST be of type xsi:string, xsi:decimal, xsi:bool or xsi:nil.

ErrorResult: If the protocol client had an error when calculating the client side UDF requested by the protocol server, this element will contain that error. MUST be present if **Result** is not present. MUST NOT be present if **Result** is present.

3.1.4.34.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
CalculateType	Specifies the type of calculation to be executed.

3.1.4.34.4.1 CalculateType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies the type of calculation to be executed.

```
<xs:simpleType name="CalculateType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Recalculate"/>
    <xs:enumeration value="CalculateFull"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **CalculateType**.

Value	Meaning
Recalculate	The protocol server calculates all formulas in the workbook that need to be calculated.

Value	Meaning
CalculateFull	The protocol server calculates all formulas in the workbook.

3.1.4.34.5 Attributes

None.

3.1.4.34.6 Groups

None.

3.1.4.34.7 Attribute Groups

None.

3.1.4.35 Refresh

This operation is used to refresh connected data on a workbook.

```
<wsdl:operation name="Refresh" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/Refresh" message="tns:ExcelServiceSoap_Refresh_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshResponse"
    message="tns:ExcelServiceSoap_Refresh_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_Refresh_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_Refresh_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_Refresh_OutputMessage** response message, as follows:

1. If **dataConnectionName** is present and is not empty, the protocol server refreshes the connected data as uniquely identified by the values of the **dataConnectionName** and **externalSourceIndex** elements.
2. For the lifetime of the session (2) the protocol server allows external data refresh.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<50>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**

- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.35.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_Refresh_InputMessage	The request WSDL message for the Refresh WSDL operation.
ExcelServiceSoap_Refresh_OutputMessage	The response WSDL message for the Refresh WSDL operation.

3.1.4.35.1.1 ExcelServiceSoap_Refresh_InputMessage

The request WSDL message for the **Refresh** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/Refresh
```

The SOAP body contains the **Refresh** element.

3.1.4.35.1.2 ExcelServiceSoap_Refresh_OutputMessage

The response WSDL message for the **Refresh** WSDL operation.

The SOAP body contains the **RefreshResponse** element.

3.1.4.35.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
Refresh	The input data for the Refresh WSDL operation.
RefreshResponse	The result data for the Refresh WSDL operation.

3.1.4.35.2.1 Refresh

The input data for the **Refresh** WSDL operation.

```
<xs:element name="Refresh" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataConnectionName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="externalSourceIndex" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

dataConnectionName: A data connection (2). MUST be present. MUST NOT be empty. MUST NOT be longer than 255 characters.

externalSourceIndex: The index of the connected data. MUST be equal to the value of the **ExternalSourceIndex** attribute of the **CT_PivotTable** element, as specified in [\[MS-EXSPXML\]](#) section [2.2.27](#), that is the PivotTable on which the operation is being performed.

3.1.4.35.2.2 RefreshResponse

The result data for the **Refresh** WSDL operation.

```
<xs:element name="RefreshResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RefreshResult" type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RefreshResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.35.3 Complex Types

None.

3.1.4.35.4 Simple Types

None.

3.1.4.35.5 Attributes

None.

3.1.4.35.6 Groups

None.

3.1.4.35.7 Attribute Groups

None.

3.1.4.36 RefreshAll

This operation is used to refresh all connected data on a workbook.

```
<wsdl:operation name="RefreshAll" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshAll" message="tns:ExcelServiceSoap_RefreshAll_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshAllResponse"
    message="tns:ExcelServiceSoap_RefreshAll_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RefreshAllExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_RefreshAll_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_RefreshAll_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RefreshAll_OutputMessage** response message, as follows:

- For the lifetime of the session (2) the protocol server allows external data refresh.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<51>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**

- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.36.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RefreshAll_InputMessage	The request WSDL message for the RefreshAll WSDL operation.
ExcelServiceSoap_RefreshAll_OutputMessage	The response WSDL message for the RefreshAll WSDL operation.

3.1.4.36.1.1 ExcelServiceSoap_RefreshAll_InputMessage

The request WSDL message for the **RefreshAll** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RefreshAll
```

The SOAP body contains the **RefreshAll** element.

3.1.4.36.1.2 ExcelServiceSoap_RefreshAll_OutputMessage

The response WSDL message for the **RefreshAll** WSDL operation.

The SOAP body contains the **RefreshAllResponse** element.

3.1.4.36.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
RefreshAll	The input data for the RefreshAll WSDL operation.
RefreshAllResponse	The result data for the RefreshAll WSDL operation.

3.1.4.36.2.1 RefreshAll

The input data for the **RefreshAll** WSDL operation.

```
<xs:element name="RefreshAll" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="periodic" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

periodic: Specifies whether to only refresh connected data that has expired. If set to **true**, specifies to refresh only connected data that has expired by the protocol server. If set to **false**, specifies to refresh all connected data by the protocol server on the workbook.

3.1.4.36.2.2 RefreshAllResponse

The result data for the **RefreshAll** WSDL operation.

```
<xs:element name="RefreshAllResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RefreshAllResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RefreshAllResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.36.3 Complex Types

None.

3.1.4.36.4 Simple Types

None.

3.1.4.36.5 Attributes

None.

3.1.4.36.6 Groups

None.

3.1.4.36.7 Attribute Groups

None.

3.1.4.37 RemovePivotFilter

This operation is used to remove any PivotTable or PivotChart filters that are applied to a PivotTable field or **PivotChart** field.

```
<wsdl:operation name="RemovePivotFilter" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RemovePivotFilter"
    message="tns:ExcelServiceSoap_RemovePivotFilter_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RemovePivotFilterResponse"
    message="tns:ExcelServiceSoap_RemovePivotFilter_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/RemovePivotFilterExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_RemovePivotFilter_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_RemovePivotFilter_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_RemovePivotFilter_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable field or the PivotChart field in the **pivotOperationOptions** element.
2. The protocol server removes any PivotTable or PivotChart filters that are applied to that PivotTable field or PivotChart field.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<52>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.9](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**

- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.37.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_RemovePivotFilter_InputMessage	The request WSDL message for the RemovePivotFilter WSDL operation.
ExcelServiceSoap_RemovePivotFilter_OutputMessage	The response WSDL message for the RemovePivotFilter WSDL operation.

3.1.4.37.1.1 ExcelServiceSoap_RemovePivotFilter_InputMessage

The request WSDL message for the **RemovePivotFilter** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/RemovePivotFilter
```

The SOAP body contains the **RemovePivotFilter** element.

3.1.4.37.1.2 ExcelServiceSoap_RemovePivotFilter_OutputMessage

The response WSDL message for the **RemovePivotFilter** WSDL operation.

The SOAP body contains the **RemovePivotFilterResponse** element.

3.1.4.37.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
RemovePivotFilter	The input data for the RemovePivotFilter WSDL operation.
RemovePivotFilterResponse	The result data for the RemovePivotFilter WSDL operation.

3.1.4.37.2.1 RemovePivotFilter

The input data for the **RemovePivotFilter** WSDL operation.

```
<xs:element name="RemovePivotFilter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart field identification as specified in section [2.2.4.28](#). MUST be present.

3.1.4.37.2.2 RemovePivotFilterResponse

The result data for the **RemovePivotFilter** WSDL operation.

```
<xs:element name="RemovePivotFilterResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RemovePivotFilterResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

RemovePivotFilterResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.37.3 Complex Types

None.

3.1.4.37.4 Simple Types

None.

3.1.4.37.5 Attributes

None.

3.1.4.37.6 Groups

None.

3.1.4.37.7 Attribute Groups

None.

3.1.4.38 ResizeRowsColumns

This operation is used to set the heights or widths of specified rows (2) or columns (2) in a workbook.

```
<wsdl:operation name="ResizeRowsColumns" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ResizeRowsColumns"
    message="tns:ExcelServiceSoap_ResizeRowsColumns_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ResizeRowsColumnsResponse"
    message="tns:ExcelServiceSoap_ResizeRowsColumns_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ResizeRowsColumnsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ResizeRowsColumns_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ResizeRowsColumns_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ResizeRowsColumns_OutputMessage** response message, as follows:

1. If the value of **ColumnWidth** element in **ResizeRowColumnRange** (section [3.1.4.38.3.1](#)) is equal to -1, the following apply:
2. The value of **RowHeight** element, as specified in **ResizeRowColumnRange**, MUST be larger than or equal to 0.
3. The protocol server sets the row (2) height to the value of **RowHeight** element as specified in **ResizeRowColumnRange**.
4. If the value of **RowHeight** element in **ResizeRowColumnRange** is equal to -1, the following apply:
 - The value of **ColumnWidth** element, as specified in **ResizeRowColumnRange**, MUST be larger than or equal to 0.
 - The protocol server sets the column (2) height to the value of **ColumnWidth** element as specified in **ResizeRowColumnRange**.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <53> be one of the values specified in section 2.2.2.1.

This operation is a state changing operation on the protocol server.

3.1.4.38.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ResizeRowsColumns_InputMessage	The request WSDL message for the ResizeRowsColumns WSDL operation.
ExcelServiceSoap_ResizeRowsColumns_OutputMessage	The response WSDL message for the ResizeRowsColumns WSDL operation.

3.1.4.38.1.1 ExcelServiceSoap_ResizeRowsColumns_InputMessage

The request WSDL message for the **ResizeRowsColumns** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ResizeRowsColumns
```

The SOAP body contains the **ResizeRowsColumns** element.

3.1.4.38.1.2 ExcelServiceSoap_ResizeRowsColumns_OutputMessage

The response WSDL message for the **ResizeRowsColumns** WSDL operation.

The SOAP body contains the **ResizeRowsColumnsResponse** element.

3.1.4.38.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ResizeRowsColumns	The input data for the ResizeRowsColumns WSDL operation.
ResizeRowsColumnsResponse	The result data for the ResizeRowsColumns WSDL operation.

3.1.4.38.2.1 ResizeRowsColumns

The input data for the **ResizeRowsColumns** WSDL operation.

```
<xs:element name="ResizeRowsColumns" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="resizeRowColumnRange"
type="tns:ResizeRowColumnRange"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

resizeRowColumnRange: The range of rows (2) and columns (2) to be resized and the new row (2) height and column (2) width as specified in section [3.1.4.38.3.1](#). MUST be present.

3.1.4.38.2.2 ResizeRowsColumnsResponse

The result data for the **ResizeRowsColumns** WSDL operation.

```

<xs:element name="ResizeRowsColumnsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ResizeRowsColumnsResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ResizeRowsColumnsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.38.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
ResizeRowColumnRange	The type specifies the height or width for the rows (2) or columns (2) to apply to a range as specified in section 2.2.4.35 .

3.1.4.38.3.1 ResizeRowColumnRange

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The type specifies the height or width for the rows (2) or columns (2) to apply to a range as specified in section [2.2.4.35](#).

```

<xs:complexType name="ResizeRowColumnRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SheetRange">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ColumnWidth" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RowHeight" type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```
</xs:complexContent>
</xs:complexType>
```

ColumnWidth: The new column (2) width in pixels. MUST be larger than or equal to -1.

RowHeight: The new row (2) height in pixels. MUST be larger than or equal to -1.

3.1.4.38.4 Simple Types

None.

3.1.4.38.5 Attributes

None.

3.1.4.38.6 Groups

None.

3.1.4.38.7 Attribute Groups

None.

3.1.4.39 SaveWorkbook

This operation is used to save a workbook associated with an open edit session, to the same location from which it was opened.

```
<wsdl:operation name="SaveWorkbook" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbook"
    message="tns:ExcelServiceSoap_SaveWorkbook_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbookResponse"
    message="tns:ExcelServiceSoap_SaveWorkbook_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SaveWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_SaveWorkbook_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends a **ExcelServiceSoap_SaveWorkbook_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_SaveWorkbook_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<54>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **SavingUnsupportedInViewMode**

- **SavingWorkbookAccessDenied**
- **SavingWorkbookLockedOrCheckedOut**

3.1.4.39.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SaveWorkbook_InputMessage	The request WSDL message for the SaveWorkbook WSDL operation.
ExcelServiceSoap_SaveWorkbook_OutputMessage	The response WSDL message for the SaveWorkbook WSDL operation.

3.1.4.39.1.1 ExcelServiceSoap_SaveWorkbook_InputMessage

The request WSDL message for the **SaveWorkbook** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SaveWorkbook
```

The SOAP body contains the **SaveWorkbook** element.

3.1.4.39.1.2 ExcelServiceSoap_SaveWorkbook_OutputMessage

The response WSDL message for the **SaveWorkbook** WSDL operation.

The SOAP body contains the **SaveWorkbookResponse** element.

3.1.4.39.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
SaveWorkbook	The input data for the SaveWorkbook WSDL operation.
SaveWorkbookResponse	The result data for the SaveWorkbook WSDL operation.

3.1.4.39.2.1 SaveWorkbook

The input data for the **SaveWorkbook** WSDL operation.

```
<xs:element name="SaveWorkbook" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.39.2 SaveWorkbookResponse

The result data for the **SaveWorkbook** WSDL operation.

```
<xs:element name="SaveWorkbookResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SaveWorkbookResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SaveWorkbookResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.39.3 Complex Types

None.

3.1.4.39.4 Simple Types

None.

3.1.4.39.5 Attributes

None.

3.1.4.39.6 Groups

None.

3.1.4.39.7 Attribute Groups

None.

3.1.4.40 SaveWorkbookAs

This operation is used to save a session (2) to a specified location, and in a specified format.

```
<wsdl:operation name="SaveWorkbookAs" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAs"
message="tns:ExcelServiceSoap_SaveWorkbookAs_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsResponse"/>
</wsdl:operation>
```

```

message="tns:ExcelServiceSoap_SaveWorkbookAs_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SaveWorkbookAs_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends a **ExcelServiceSoap_SaveWorkbookAs_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_SaveWorkbookAs_OutputMessage** response message, as follows:

1. If the following conditions are met, the session (2) specified in **parameter** is written to **location** in the format specified by **workbookType**:
 - **location** is valid.
 - The user has **rights** to write to **location**.
 - **location** does not correspond to an existing file, or **OverwriteExistingFile** is specified in **flags**.
2. If the previous conditions are not met, a SOAP fault is returned, as specified in section [2.2.2](#).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<55>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **SavingWorkbookAccessDenied**
- **SavingWorkbookFileNameExists**
- **SavingWorkbookInvalidFileName**
- **SavingWorkbookInvalidLocation**
- **SavingWorkbookInvalidPermissions**
- **SavingWorkbookLockedOrCheckedOut**
- **SavingWorkbookNotCheckedOut**
- **SavingWorkbookNotTrustedLocation**

3.1.4.40.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SaveWorkbookAs_InputMessage	The request WSDL message for the SaveWorkbookAs WSDL operation.
ExcelServiceSoap_SaveWorkbookAs_OutputMessage	The response WSDL message for the SaveWorkbookAs WSDL operation.

3.1.4.40.1.1 ExcelServiceSoap_SaveWorkbookAs_InputMessage

The request WSDL message for the **SaveWorkbookAs** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SaveWorkbookAs
```

The SOAP body contains the **SaveWorkbookAs** element.

3.1.4.40.1.2 ExcelServiceSoap_SaveWorkbookAs_OutputMessage

The response WSDL message for the **SaveWorkbookAs** WSDL operation.

The SOAP body contains the **SaveWorkbookAsResponse** element.

3.1.4.40.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
SaveWorkbookAs	The input data for the SaveWorkbookAs WSDL operation.
SaveWorkbookAsResponse	The result data for the SaveWorkbookAs WSDL operation.

3.1.4.40.2.1 SaveWorkbookAs

The input data for the **SaveWorkbookAs** WSDL operation.

```
<xs:element name="SaveWorkbookAs" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="location" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="workbookType" type="tns:WorkbookType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="flags" type="tns:SaveAsFlags"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

location: The location of the workbook file to write. MUST be present. If the specified value is not a URI as specified in [\[RFC2396\]](#), the protocol server MUST return an **ExcelServerMessage** as specified in the section [2.2.2](#) section, with the value of the **Id** element of the **ExcelServerMessage** set to **SavingWorkbookInvalidFileName**. The protocol server ignores the number sign (#) and fragment, as specified in [\[RFC3986\]](#).

workbookType: A **WorkbookType** as specified in section [2.2.5.22](#). MUST be present.

flags: A combination of 0 or more values of **SaveAsFlags** (section [3.1.4.40.4.1](#)). MUST be present.

3.1.4.40.2.2 SaveWorkbookAsResponse

The result data for the **SaveWorkbookAs** WSDL operation.

```
<xs:element name="SaveWorkbookAsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SaveWorkbookAsResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="savedWorkbookUri" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SaveWorkbookAsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

savedWorkbookUri: The location to which the workbook was written. MUST be present. MUST be a valid URI.

3.1.4.40.3 Complex Types

None.

3.1.4.40.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
SaveAsFlags	An enumeration of flags that can be specified for the SaveWorkbookAs operation.

3.1.4.40.4.1 SaveAsFlags

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An enumeration of flags that can be specified for the **SaveWorkbookAs** operation.

```
<xs:simpleType name="SaveAsFlags" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="OverwriteExistingFile"/>
        <xs:enumeration value="WarnWhenCrossingTrustedLocation"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
```

The following table specifies the allowable values for **SaveAsFlags**.

Value	Meaning
OverwriteExistingFile	If this flag is not set, then if the location specified in the SaveWorkbookAs operation corresponds to an existing file, the protocol server will not overwrite the existing file.
WarnWhenCrossingTrustedLocation	If the location specified in the SaveWorkbookAs operation is in a different trusted location (1) than the trusted location (1) from which the session (2) was opened, an alert (2) MUST be returned to the protocol client.

3.1.4.40.5 Attributes

None.

3.1.4.40.6 Groups

None.

3.1.4.40.7 Attribute Groups

None.

3.1.4.41 SetCalculationOptions

This operation is used to set the workbook calculation mode.

```
<wsdl:operation name="SetCalculationOptions" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetCalculationOptions"
    message="tns:ExcelServiceSoap_SetCalculationOptions_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetCalculationOptionsResponse"
    message="tns:ExcelServiceSoap_SetCalculationOptions_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetCalculationOptionsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_SetCalculationOptions_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SetCalculationOptions_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_SetCalculationOptions_OutputMessage** response message.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<56>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.41.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetCalculationOptions_InputMessage	The request WSDL message for the SetCalculationOptions WSDL operation.
ExcelServiceSoap_SetCalculationOptions_OutputMessage	The response WSDL message for the SetCalculationOptions WSDL operation.

3.1.4.41.1.1 ExcelServiceSoap_SetCalculationOptions_InputMessage

The request WSDL message for the **SetCalculationOptions** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetCalculationOptions
```

The SOAP body contains the **SetCalculationOptions** element.

3.1.4.41.1.2 ExcelServiceSoap_SetCalculationOptions_OutputMessage

The response WSDL message for the **SetCalculationOptions** WSDL operation.

The SOAP body contains the **SetCalculationOptionsResponse** element.

3.1.4.41.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
SetCalculationOptions	The input data for the SetCalculationOptions WSDL operation.
SetCalculationOptionsResponse	The result data for the SetCalculationOptions WSDL operation.

3.1.4.41.2.1 SetCalculationOptions

The input data for the **SetCalculationOptions** WSDL operation.

```
<xs:element name="SetCalculationOptions" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="calcType"
type="tns:WorkbookCalculation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

calcType: The calculation mode value as specified in section [3.1.4.41.4.1](#).

3.1.4.41.2.2 SetCalculationOptionsResponse

The result data for the **SetCalculationOptions** WSDL operation.

```
<xs:element name="SetCalculationOptionsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetCalculationOptionsResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetCalculationOptionsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.41.3 Complex Types

None.

3.1.4.41.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
WorkbookCalculation	An enumeration of a set of options that specify how the protocol server calculates the workbook.

3.1.4.41.4.1 WorkbookCalculation

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **WorkBookCalculation** type is an enumeration of a set of options that specify how the protocol server calculates the workbook.

```
<xs:simpleType name="WorkbookCalculation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Manual"/>
    <xs:enumeration value="Automatic"/>
    <xs:enumeration value="Semiautomatic"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **WorkbookCalculation**.

Value	Meaning
Manual	manual calculation mode.
Automatic	automatic calculation mode.
Semiautomatic	automatic calculation mode, except for data tables (1).

3.1.4.41.5 Attributes

None.

3.1.4.41.6 Groups

None.

3.1.4.41.7 Attribute Groups

None.

3.1.4.42 SetParameters

This operation is used to set values of workbook parameters in a workbook.

```
<wsdl:operation name="SetParameters" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetParameters"
    message="tns:ExcelServiceSoap_SetParameters_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetParametersResponse"
    message="tns:ExcelServiceSoap_SetParameters_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetParametersExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_SetParameters_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends a **ExcelServiceSoap_SetParameters_InputMessage** request message, and the protocol server responds with a **ExcelServiceSoap_SetParameters_OutputMessage** response message.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<57>](#) be one of the values specified in section 2.2.2.1 or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**

- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **FormulaEditingNotEnabled**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **ParameterDoesNotExist**
- **SetParameterFailure**
- **UnattendedAccountNotConfigured**

3.1.4.42.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetParameters_InputMessage	The request WSDL message for the SetParameters WSDL operation.
ExcelServiceSoap_SetParameters_OutputMessage	The response WSDL message for the SetParameters WSDL operation.

3.1.4.42.1.1 ExcelServiceSoap_SetParameters_InputMessage

The request WSDL message for the **SetParameters** WSDL operation.

The SOAP action value is:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetParameters>

The SOAP body contains the **SetParameters** element.

3.1.4.42.1.2 ExcelServiceSoap_SetParameters_OutputMessage

The response WSDL message for the **SetParameters** WSDL operation.

The SOAP body contains the **SetParametersResponse** element.

3.1.4.42.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
SetParameters	The input data for the SetParameters WSDL operation.
SetParametersResponse	The result data for the SetParameters WSDL operation.

3.1.4.42.2.1 SetParameters

The input data for the **SetParameters** WSDL operation.

```
<xs:element name="SetParameters" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="workbookParameters"
type="tns:ArrayOfWorkbookParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

workbookParameters: The workbook parameters to be set in the workbook as specified in section [3.1.4.42.3.1](#). MUST be present.

3.1.4.42.2.2 SetParametersResponse

The result data for the **SetParameters** WSDL operation.

```
<xs:element name="SetParametersResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetParametersResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetParametersResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.42.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
ArrayOfWorkbookParameter	An array of WorkbookParameter elements (section 3.1.4.42.3.2).
WorkbookParameter	Represent a value or a list of values to be set into workbook parameters in the workbook.

3.1.4.42.3.1 ArrayOfWorkbookParameter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfWorkbookParameter** complex type contains an array of **WorkbookParameter** elements (section [3.1.4.42.3.2](#)). The count of elements in the sequence MUST be less than or equal to 255.

```
<xs:complexType name="ArrayOfWorkbookParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="WorkbookParameter" nillable="true"
      type="tns:WorkbookParameter"/>
  </xs:sequence>
</xs:complexType>
```

WorkbookParameter: A workbook parameter as described in section [3.1.4.42.3.2](#).

3.1.4.42.3.2 WorkbookParameter

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **WorkbookParameter** complex type is used to represent a value or a list of values to be set into workbook parameters in the workbook.

```
<xs:complexType name="WorkbookParameter" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Comment" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsPivotPageField" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSlicer" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RequiresConnection" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>
```

Comment: The length of the string MUST be 0 characters.

IsPivotPageField: MUST be set to **false**.

IsSlicer: MUST be set to **false**.

Name: The name of the workbook parameter. MUST be present. MUST NOT be empty. MUST be a value of the **Name** attribute of **CT_Parameter** as specified in [\[MS-EXSPXML\]](#) section 2.2.2.

RequiresConnection: MUST be set to **false**.

Values: An array of string values to set in the workbook parameter as specified in section [2.2.4.11](#). The protocol server MUST ignore all the elements in **ArrayOfString**, if all the following conditions are satisfied:

- The **IsPivotPageField** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML\]](#) section 2.2.2, is not present or it is present and its value is false.
- The **IsSlicer** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML\]](#) section 2.2.2, is not present or it is present and its value is false.
- The **Values** element is not present or the number of elements in **ArrayOfString** is not equal to 1.

If the **IsPivotPageField** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML\]](#) section 2.2.2, is present and its value is set to **true**, the following apply:

1. If the **Values** element is not present, the protocol server will change the PivotTable manual filter in the workbook to the **default filter value**.
2. If the **Values** element is present and there are no elements in **ArrayOfString**, the protocol server will change the PivotTable manual filter in the workbook to the default filter value.
3. If the **Values** element is present and the number of elements in **ArrayOfString** is greater than or equal to 1, the protocol server will use the values as the PivotTable manual filter in the workbook.

If the **IsSlicer** attribute of the **CT_Parameter**, as specified in [\[MS-EXSPXML\]](#) section 2.2.2, is present and its value is set to **true**, the following apply:

- If the **Values** element is not present, the protocol server will change the slicer manual filter in the workbook to the default filter value.
- If the **Values** element is present and there are no elements in **ArrayOfString**, the protocol server will change the slicer manual filter in the workbook to the default filter value.
- If the **Values** element is present and the number of elements in **ArrayOfString** is greater than or equal to 1, the protocol server will use the values as the slicer manual filter in the workbook.

Each string element of **ArrayOfString** MUST NOT be longer than 1024 characters.

3.1.4.42.4 Simple Types

None.

3.1.4.42.5 Attributes

None.

3.1.4.42.6 Groups

None.

3.1.4.42.7 Attribute Groups

None.

3.1.4.43 SetRange

This operation is used to set values to a range of worksheet cells on a workbook.

```
<wsdl:operation name="SetRange" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRange" message="tns:ExcelServiceSoap_SetRange_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeResponse"
    message="tns:ExcelServiceSoap_SetRange_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_SetRange_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SetRange_InputMessage** request message and the protocol server responds with an **ExcelServiceSoap_SetRange_OutputMessage** response message as follows:

1. If **cellsArray** is not present, the protocol server MUST return an **ExcelServerMessage** as specified in the SOAP fault section. The **Id** element of the **ExcelServerMessage** MUST be **RangeDefinitionError**.
2. If the **SheetName** element inside **sheetRange** is empty, the protocol server MUST return an **ExcelServerMessage** as specified in the SOAP fault section. The **Id** element of the **ExcelServerMessage** MUST be **InvalidSheetName**.
3. If the user does not have the Open Item permission on the workbook, **cellsArray** SHOULD [<58>](#) contain only one item.
4. Each element inside the **cellsArray** element MUST be of type **ArrayOfAnyType** and be a row (2) of worksheet cells sent to the protocol server. The number of rows (2) in **cellsArray** MUST be equal to the number of rows (2) specified in the **sheetRange** element.
5. Each element inside each of the **ArrayOfAnyType** type nested inside **cellsArray** MUST be a single worksheet cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of columns (2) specified in the **sheetRange** element.
6. If the **values** element in the **cellsArray** contains formulas not recognized by the protocol server, then:
 - If the value of **ProtocolClientId** element in the **parameter** as defined in section [2.2.4.20](#) is set to "ms-ewa", the protocol server MUST set the text representation of the formulas into the cells.

- If the value of **ProtocolClientId** element in the **parameter** as defined in section [2.2.4.20](#) is set to "ms-soap", the protocol server MUST return a SOAP fault as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** MUST be **FormulaParseFailed**.
7. All worksheet cells in the **cellsArray** element MUST either be empty and with the xsi:nil attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**.
- If the value is of type **string**, it MUST NOT be longer than 32767 characters.
 - If the protocol server does not support the value, it MUST return a SOAP fault.
 - If the protocol server does not support setting a value in the specified location, it MUST return a SOAP fault.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<59>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **CannotEditPivotTable**
- **DimensionMismatch**
- **EcsInvalidNamedObject**
- **FormulaEditingNotEnabled**
- **InvalidSheetName**
- **ObjectTypeNotSupported**
- **RangeDefinitionError**
- **RangeParseError**
- **SetRangeFailure**
- **SheetRangeMismatch**

3.1.4.43.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetRange_InputMessage	The request WSDL message for the SetRange WSDL operation.
ExcelServiceSoap_SetRange_OutputMessage	The response WSDL message for the SetRange WSDL operation.

3.1.4.43.1.1 ExcelServiceSoap_SetRange_InputMessage

The request WSDL message for the **SetRange** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetRange
```

The SOAP body contains the **SetRange** element.

3.1.4.43.1.2 ExcelServiceSoap_SetRange_OutputMessage

The response WSDL message for the **SetRange** WSDL operation.

The SOAP body contains the **SetRangeResponse** element.

3.1.4.43.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
SetRange	The input data for the SetRange WSDL operation.
SetRangeResponse	The result data for the SetRange WSDL operation.

3.1.4.43.2.1 SetRange

The input data for the **SetRange** WSDL operation.

```
<xs:element name="SetRange" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="activeCell" type="tns:SheetCell"/>
      <xs:element minOccurs="0" maxOccurs="1" name="cellsArray"/>
      <xs:element minOccurs="0" maxOccurs="1" name="setCellRange" type="tns:SheetRange"/>
      <xs:element minOccurs="1" maxOccurs="1" name="comboKey" type="tns:ComboKeyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

activeCell: The **active cell** in the range to set. MUST be present. The **SheetName** element MUST be present and MUST NOT be empty.

cellsArray: The array of cell values to set. MUST be present.

setCellRange: The range to set. See section [2.2.4.35](#). MUST be present. The **SheetName** element MUST be present and MUST NOT be empty.

comboKey: The combination of keys associated with the operation.

3.1.4.43.2.2 SetRangeResponse

The result data for the **SetRange** WSDL operation.

```

<xs:element name="SetRangeResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetRangeResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

SetRangeResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.43.3 Complex Types

None.

3.1.4.43.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
ComboKeyType	A combination of keys.

3.1.4.43.4.1 ComboKeyType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

ComboKeyType is an enumeration of the different combinations of keys associated with setting values to a range of worksheet cells on a workbook.

```

<xs:simpleType name="ComboKeyType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="CTRL"/>
    <xs:enumeration value="CTRLSHIFT"/>
    <xs:enumeration value="COMBOKEYMAX"/>
  </xs:restriction>
</xs:simpleType>

```

The following table specifies the allowable values for **ComboKeyType**.

Value	Meaning
None	No keys are associated with the operation.
CTRL	The Control key is associated with the operation.
CTRLSHIFT	MUST NOT be used.
COMBOKEYMAX	MUST NOT be used.

3.1.4.43.5 Attributes

None.

3.1.4.43.6 Groups

None.

3.1.4.43.7 Attribute Groups

None.

3.1.4.44 SetRangeA1

This operation is used to set values to a range of worksheet cells on a workbook.

```
<wsdl:operation name="SetRangeA1" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeA1" message="tns:ExcelServiceSoap_SetRangeA1_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeA1Response"
    message="tns:ExcelServiceSoap_SetRangeA1_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SetRangeA1ExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_SetRangeA1_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_SetRangeA1_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_SetRangeA1_OutputMessage** response message, as follows:

1. Each element inside the **SetRangeRequest** MUST be of type **RangeValuesA1** as specified in section [2.2.4.31](#). The number of elements MUST be equal to the number of named ranges that the protocol client tries to set values to. Each **RangeValuesA1** element specifies the **rangeName**, **SheetName** and the **Values** to be set into the workbook, as follows:
 - If **rangeName** is empty, the protocol server MUST return an **ExcelServerMessage** as specified in the SOAP fault section. The **Id** element of the **ExcelServerMessage** MUST be **RangeParseError**.
 - If **sheetName** is empty, the protocol server MUST use the first worksheet on the workbook unless a worksheet can be determined from **rangeName**, in which case the worksheet, as determined from **rangeName**, MUST be used.
 - If a worksheet cannot be determined from **rangeName**, the protocol server MUST use range on the worksheet determined by **sheetName** to locate the range to set.
2. All worksheet cells in the **Values** element of **RangeValuesA1** MUST either be empty and with the **xsi:nil** attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**.

- If the value is of type **string**, then it MUST NOT be longer than 32,767 characters.
 - If the protocol server does not support the value it MUST return a SOAP fault.
 - If the protocol server does not support setting a value in the specified location it MUST return a SOAP fault.
3. If the **Values** element of **RangeValuesA1** contains formulas not recognized by the protocol server, the following apply:
- If the value of **ProtocolClientId** element in the **parameter** as defined in **CommandParameter** (section [2.2.4.20](#)) is set to "ms-ewa", the protocol server MUST set the text representation of the formulas into the cells.
 - If the value of **ProtocolClientId** element in the **parameter** as defined in **CommandParameter** is set to "ms-soap", the protocol server MUST return a SOAP fault as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** MUST be **FormulaParseFailed**.
4. If the user does not have Open Item permission on the workbook, the **Value** of **RangeValuesA1** SHOULD [<60>](#) contain only one worksheet cell.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<61>](#) be one of the values specified in [2.2.2.1](#) or any of the following values:

- **CannotEditPivotTable**
- **DimensionMismatch**
- **EcsInvalidNamedObject**
- **FormulaEditingNotEnabled**
- **InvalidSheetName**
- **ObjectTypeNotSupported**
- **RangeDefinitionError**
- **RangeParseError**
- **SetRangeFailure**
- **SheetRangeMismatch**

3.1.4.44.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SetRangeA1_InputMessage	The request WSDL message for the SetRangeA1 WSDL operation.

Message	Description
ExcelServiceSoap_SetRangeA1_OutputMessage	The response WSDL message for the SetRangeA1 WSDL operation.

3.1.4.44.1.1 ExcelServiceSoap_SetRangeA1_InputMessage

The request WSDL message for the **SetRangeA1** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SetRangeA1
```

The SOAP body contains the **SetRangeA1** element.

3.1.4.44.1.2 ExcelServiceSoap_SetRangeA1_OutputMessage

The response WSDL message for the **SetRangeA1** WSDL operation.

The SOAP body contains the **SetRangeA1Response** element.

3.1.4.44.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
SetRangeA1	The input data for the SetRangeA1 WSDL operation.
SetRangeA1Response	The result data for the SetRangeA1 WSDL operation.

3.1.4.44.2.1 SetRangeA1

The input data for the **SetRangeA1** WSDL operation.

```
<xs:element name="SetRangeA1" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="setRangeRequests"
type="tns:ArrayOfRangeValuesA1"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

setRangeRequests: An array of **RangeValuesA1** elements that contains the values to be set into the cells.

3.1.4.44.2.2 SetRangeA1Response

The result data for the **SetRangeA1** WSDL operation.

```
<xs:element name="SetRangeA1Response" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetRangeA1Result"
        type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SetRangeA1Result: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.44.3 Complex Types

None.

3.1.4.44.4 Simple Types

None.

3.1.4.44.5 Attributes

None.

3.1.4.44.6 Groups

None.

3.1.4.44.7 Attribute Groups

None.

3.1.4.45 SortFilterColumn

This operation is used to change the sort order (2) of a table or worksheet AutoFilter in the workbook.

```
<wsdl:operation name="SortFilterColumn" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input>
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SortFilterColumn"
    message="tns:ExcelServiceSoap_SortFilterColumn_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output>
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SortFilterColumnResponse"
    message="tns:ExcelServiceSoap_SortFilterColumn_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault>
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/SortFilterColumnExcelServerMessageFault"
    name="ExcelServerMessageFault"
```

```

message="tns:ExcelServiceSoap_SortFilterColumn_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_SortFilterColumn_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_SortFilterColumn_OutputMessage** response message.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<62>](#) be one of the values specified in section 2.2.2.1.

3.1.4.45.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_SortFilterColumn_InputMessage	The request WSDL message for the SortFilterColumn WSDL operation.
ExcelServiceSoap_SortFilterColumn_OutputMessage	The response WSDL message for the SortFilterColumn WSDL operation.

3.1.4.45.1.1 ExcelServiceSoap_SortFilterColumn_InputMessage

The request WSDL message for the **SortFilterColumn** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/SortFilterColumn

```

The SOAP body contains the **SortFilterColumn** element.

3.1.4.45.1.2 ExcelServiceSoap_SortFilterColumn_OutputMessage

The response WSDL message for the **SortFilterColumn** WSDL operation.

The SOAP body contains the **SortFilterColumnResponse** element.

3.1.4.45.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
SortFilterColumn	The input data for the SortFilterColumn WSDL operation.
SortFilterColumnResponse	The result data for the SortFilterColumn WSDL operation.

3.1.4.45.2.1 SortFilterColumn

The input data for the **SortFilterColumn** WSDL operation.

```
<xs:element name="SortFilterColumn" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="sortType" type="tns:SortType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

autoFilterOptions: The options to be used when sorting the AutoFilter column as specified in section [2.2.4.14](#). MUST be present. The **CriteriaType** element of AutoFilterOptions MUST be set to Nil, and the **Criteria** element MUST NOT be present.

sortType: The sort order (2) to apply to the AutoFilter, as specified in section [3.1.4.45.4.1](#).

3.1.4.45.2.2 SortFilterColumnResponse

The result data for the **SortFilterColumn** WSDL operation.

```
<xs:element name="SortFilterColumnResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SortFilterColumnResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

SortFilterColumnResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.45.3 Complex Types

None.

3.1.4.45.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
SortType	An enumeration of the different types of sort order (2) than can be applied to an AutoFilter column.

3.1.4.45.4.1 SortType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An enumeration of the different types of sort order (2) than can be applied to an AutoFilter column.

```
<xs:simpleType name="SortType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Ascending"/>
    <xs:enumeration value="Descending"/>
    <xs:enumeration value="Toggle"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **SortType**.

Value	Meaning
None	MUST NOT be used.
Ascending	Specifies an ascending order.
Descending	Specifies a descending order.
Toggle	If the current sort order (2) applied to the AutoFilter is ascending order, then this value specifies a descending order. Otherwise, it specifies an ascending order.

3.1.4.45.5 Attributes

None.

3.1.4.45.6 Groups

None.

3.1.4.45.7 Attribute Groups

None.

3.1.4.46 TogglePivotDrill

This operation is used to expand or collapse a PivotTable or PivotChart member.

```
<wsdl:operation name="TogglePivotDrill" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/TogglePivotDrill"
    message="tns:ExcelServiceSoap_TogglePivotDrill_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/TogglePivotDrillResponse"
    message="tns:ExcelServiceSoap_TogglePivotDrill_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
```

```

    <wsdl:fault
      wsam:Action="http://schemas.microsoft.com/office/Excel/Server/Webservices/ExcelServerInternal
      Service/ExcelServiceSoap/TogglePivotDrillExcelServerMessageFault"
      name="ExcelServerMessageFault"
      message="tns:ExcelServiceSoap_TogglePivotDrill_ExcelServerMessageFault_FaultMessage"
      xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
    </wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_TogglePivotDrill_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_TogglePivotDrill_OutputMessage** response message, as follows:

1. The protocol client sends the PivotTable member to be expanded or collapsed in the **pivotOperationOptions** element.
2. The protocol server expands the PivotTable member if it was collapsed. The protocol server collapses the PivotTable member if it was expanded.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<63>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.46.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_TogglePivotDrill_InputMessage	The request WSDL message for the TogglePivotDrill WSDL operation.
ExcelServiceSoap_TogglePivotDrill_OutputMessage	The response WSDL message for the TogglePivotDrill WSDL operation.

3.1.4.46.1.1 ExcelServiceSoap_TogglePivotDrill_InputMessage

The request WSDL message for the **TogglePivotDrill** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/TogglePivotDrill
```

The SOAP body contains the **TogglePivotDrill** element.

3.1.4.46.1.2 ExcelServiceSoap_TogglePivotDrill_OutputMessage

The response WSDL message for the **TogglePivotDrill** WSDL operation.

The SOAP body contains the **TogglePivotDrillResponse** element.

3.1.4.46.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
TogglePivotDrill	The input data for the TogglePivotDrill WSDL operation.
TogglePivotDrillResponse	The result data for the TogglePivotDrill WSDL operation.

3.1.4.46.2.1 TogglePivotDrill

The input data for the **TogglePivotDrill** WSDL operation.

```
<xs:element name="TogglePivotDrill" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart **member** to be expanded or collapsed. MUST be present. The following element definitions MUST extend or override the standard behavior that is defined for the same elements in section [2.2.4.28](#):

- **FieldId:** MUST be present and empty.
- **Column:** The column (2) of the PivotTable member. MUST be the zero-based column (2) number of a worksheet cell of the PivotTable that has the **Drillable** attribute of the **CT_Cell** element ([\[MS-EXSPXML\]](#) section 2.2.41) set to **true**. Valid only when the anchor is on a PivotTable.
- **Row:** The row (2) of the PivotTable member. MUST be the zero-based row (2) number of a worksheet cell of the PivotTable that has the **Drillable** attribute of the **CT_Cell** element ([\[MS-EXSPXML\]](#) section 2.2.41) set to **true**. Valid only when the anchor is on a PivotTable.

3.1.4.46.2.2 TogglePivotDrillResponse

The result data for the **TogglePivotDrill** WSDL operation.

```
<xs:element name="TogglePivotDrillResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="TogglePivotDrillResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

TogglePivotDrillResult: A **CommandResult** as defined in section [2.2.4.21](#). MUST be present.

3.1.4.46.3 Complex Types

None.

3.1.4.46.4 Simple Types

None.

3.1.4.46.5 Attributes

None.

3.1.4.46.6 Groups

None.

3.1.4.46.7 Attribute Groups

None.

3.1.4.47 ApplyPivot

This operation is used to modify a PivotTable or a PivotChart.


```

<wsdl:operation name="ApplyPivot" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivot" message="tns:ExcelServiceSoap_ApplyPivot_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotResponse"
message="tns:ExcelServiceSoap_ApplyPivot_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivot_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyPivot_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivot_OutputMessage** response message, as follows:

1. The protocol client sends both information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element and PivotTable field information (including how that PivotTable field is changing) in the **pivotFieldApplyData** element.
2. The protocol server applies the PivotTable field information to the PivotTable or PivotChart, and modifies it accordingly.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<64>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.9](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**

- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.47.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivot_InputMessage	The request WSDL message for the ApplyPivot WSDL operation.
ExcelServiceSoap_ApplyPivot_OutputMessage	The response WSDL message for the ApplyPivot WSDL operation.

3.1.4.47.1.1 ExcelServiceSoap_ApplyPivot_InputMessage

The request WSDL message for the **ApplyPivot** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivot
```

The SOAP body contains the **ApplyPivot** element.

3.1.4.47.1.2 ExcelServiceSoap_ApplyPivot_OutputMessage

The response WSDL message for the **ApplyPivot** WSDL operation.

The SOAP body contains the **ApplyPivotResponse** element.

3.1.4.47.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ApplyPivot	The input data for the ApplyPivot WSDL operation.
ApplyPivotResponse	The result data for the ApplyPivot WSDL operation.

3.1.4.47.2.1 ApplyPivot

The input data for the **ApplyPivot** WSDL operation.

```
<xs:element name="ApplyPivot" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldApplyData"
type="tns:PivotFieldApplyData"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

pivotFieldApplyData: The PivotTable field information (including how it is changing) as specified in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

3.1.4.47.2.2 ApplyPivotResponse

The result data for the **ApplyPivot** WSDL operation.

```

<xs:element name="ApplyPivotResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyPivotResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.47.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
PivotFieldApplyData	PivotTable field information to apply to a PivotTable or PivotChart .

3.1.4.47.3.1 PivotFieldApplyData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFieldApplyData** complex type specifies PivotTable field information (including how it is changing) to apply to a PivotTable or PivotChart.

```

<xs:complexType name="PivotFieldApplyData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListType" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

```

<xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="FieldWellVersion" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="SourceAxis" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="SourceAxisPosition" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="ItemType" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="ItemIndex" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="DestinationAxis" type="xs:int"/>
<xs:element minOccurs="1" maxOccurs="1" name="DestinationAxisPosition" type="xs:int"/>
</xs:sequence>
</xs:complexType>

```

FieldListType: The PivotTable field list type. MUST be one of the values specified in the following table.

Value	Meaning
1	Pivot (PivotTable or PivotChart)
4	BIX (BI Explorer)

FieldListVersion: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than -1. The protocol client MUST use one of the following values:

- -1, in which case the protocol server MUST bypass the version validation.
- The value obtained from the **FieldListVersion** element as specified in either the **PivotFieldListData** (section [3.1.4.52.3.1](#)) complex type or the **PivotFieldManagerData** section ([3.1.4.53.3.1](#)) complex type.

FieldWellVersion: A unique identifier for the state of the PivotTable or PivotChart on the protocol server. MUST be equal to or greater than -1. The protocol client MUST use one of the following values:

- -1, in which case the protocol server MUST bypass the version validation.
- The value obtained from the **FieldWellVersion** element as specified in the **PivotFieldManagerData** (section [3.1.4.53.3.1](#)) complex type.

SourceAxis: An identifier for the source axis of the PivotTable field. MUST be one of the values specified in the following table.

Value	Meaning
0	Null (adds the specified PivotTable field to the DestinationAxis)
1	Rows
2	Columns
4	Filter
8	Data

SourceAxisPosition: A zero-based index of the source axis position. MUST be present. If **SourceAxis** is **Null**, **SourceAxisPosition** MUST be ignored by the protocol server.

ItemType: The PivotTable field type as specified by the **TypeTag** element in the **PivotFieldListItem** (section [2.2.4.54](#)) complex type. MUST be present.

ItemIndex: A PivotTable field index. If **SourceAxis** is **Null** (0), **ItemIndex** MUST be the **PivotCacheIndex** element as specified in the **PivotFieldListItem** (section [2.2.4.54](#)) complex type. Otherwise, **ItemIndex** MUST be the **PivotTableIndex** element as specified in the **PivotFieldListItem** (section [2.2.4.54](#)) complex type.

DestinationAxis: An identifier for the destination axis of the PivotTable field. MUST be one of the values specified in the following table.

Value	Meaning
-1	Default
0	Null (removes the specified PivotTable field from the SourceAxis)
1	Rows
2	Columns
4	Filter
8	Data

DestinationAxisPosition: A zero-based index of the destination axis position before the source axis is removed and the item is added before the indexed item. MUST be present. If

DestinationAxis is **Default** or **Null**, **DestinationAxisPosition** MUST be ignored by the protocol server.

3.1.4.47.4 Simple Types

None.

3.1.4.47.5 Attributes

None.

3.1.4.47.6 Groups

None.

3.1.4.47.7 Attribute Groups

None.

3.1.4.48 ApplyPivotFieldManagerHiddenState

This operation is used to set the visibility of the PivotTable or PivotChart field list for the workbook.

```
<wsdl:operation name="ApplyPivotFieldManagerHiddenState"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input>
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenState"
```

```

message="tns:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateResponse"
message="tns:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_ExcelServerMessageFault_Fault
Message" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage** response message, as follows:

1. The protocol client sends visibility information for the PivotTable or PivotChart field list in the **hidden** element.
2. The protocol server applies the visibility information to the workbook.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<65>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.48.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage	The request WSDL message for the ApplyPivotFieldManagerHiddenState WSDL operation.
ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage	The response WSDL message for the ApplyPivotFieldManagerHiddenState WSDL operation.

3.1.4.48.1.1 ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage

The request WSDL message for the **ApplyPivotFieldManagerHiddenState** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/ApplyPivotFieldManagerHiddenState

```

The SOAP body contains the **ApplyPivotFieldManagerHiddenState** element.

3.1.4.48.1.2

ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage

The response WSDL message for the **ApplyPivotFieldManagerHiddenState** WSDL operation.

The SOAP body contains the **ApplyPivotFieldManagerHiddenStateResponse** element.

3.1.4.48.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ApplyPivotFieldManagerHiddenState	The input data for the ApplyPivotFieldManagerHiddenState WSDL operation.
ApplyPivotFieldManagerHiddenStateResponse	The result data for the ApplyPivotFieldManagerHiddenState WSDL operation.

3.1.4.48.2.1 ApplyPivotFieldManagerHiddenState

The input data for the **ApplyPivotFieldManagerHiddenState** WSDL operation.

```
<xs:element name="ApplyPivotFieldManagerHiddenState"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="hidden" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

hidden: MUST be set to **true** to hide the PivotTable or **PivotChart** field list, MUST be **false** otherwise.

3.1.4.48.2.2 ApplyPivotFieldManagerHiddenStateResponse

The result data for the **ApplyPivotFieldManagerHiddenState** WSDL operation.

```
<xs:element name="ApplyPivotFieldManagerHiddenStateResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotFieldManagerHiddenStateResult"
        type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyPivotFieldManagerHiddenStateResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.48.3 Complex Types

None.

3.1.4.48.4 Simple Types

None.

3.1.4.48.5 Attributes

None.

3.1.4.48.6 Groups

None.

3.1.4.48.7 Attribute Groups

None.

3.1.4.49 ExpandPivotFieldListLevels

This operation is used to expand the levels on a PivotTable or PivotChart.

```
<wsdl:operation name="ExpandPivotFieldListLevels"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevels"
message="tns:ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsResponse"
message="tns:ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ExpandPivotFieldListLevels_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, and it sends PivotTable or PivotChart type information in the **type** element.
2. The protocol server expands the levels on the PivotTable or PivotChart.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<66>](#) be one of the values specified in section 2.2.2.1 or any of the following values (see section 2.2.5.9).

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.49.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage	The request WSDL message for the ExpandPivotFieldListLevels WSDL operation.
ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage	The response WSDL message for the ExpandPivotFieldListLevels WSDL operation.

3.1.4.49.1.1 ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage

The request WSDL message for the **ExpandPivotFieldListLevels** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ExpandPivotFieldListLevels
```

The SOAP body contains the **ExpandPivotFieldListLevels** element.

3.1.4.49.1.2 ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage

The response WSDL message for the **ExpandPivotFieldListLevels** WSDL operation.

The SOAP body contains the **ExpandPivotFieldListLevelsResponse** element.

3.1.4.49.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ExpandPivotFieldListLevels	The input data for the ExpandPivotFieldListLevels WSDL operation.
ExpandPivotFieldListLevelsResponse	The result data for the ExpandPivotFieldListLevels WSDL operation.

3.1.4.49.2.1 ExpandPivotFieldListLevels

The input data for the **ExpandPivotFieldListLevels** WSDL operation.

```
<xs:element name="ExpandPivotFieldListLevels" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

type: The PivotTable field list type as specified by the **FieldListType** element in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

3.1.4.49.2.2 ExpandPivotFieldListLevelsResponse

The result data for the **ExpandPivotFieldListLevels** WSDL operation.

```

<xs:element name="ExpandPivotFieldListLevelsResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ExpandPivotFieldListLevelsResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ExpandPivotFieldListLevelsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.49.3 Complex Types

None.

3.1.4.49.4 Simple Types

None.

3.1.4.49.5 Attributes

None.

3.1.4.49.6 Groups

None.

3.1.4.49.7 Attribute Groups

None.

3.1.4.50 GenerateWorkbookFromHtml

This operation is used to create a new workbook session containing named objects based on the input parameters.

```

<wsdl:operation name="GenerateWorkbookFromHtml"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtml"
message="tns:ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtmlResponse"
message="tns:ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtmlExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GenerateWorkbookFromHtml_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>

```

</wsdl:operation>

The protocol client sends an **ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage** response, message as follows:

1. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input is not 0 and does not include **WorkbookGenerationItems.Table**, the protocol server MUST return a SOAP fault, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <67> be one of the values specified in section 2.2.2.1
2. Else, the protocol server will first obtain a new workbook session and insert a table into the session (2)
3. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input includes **WorkbookGenerationItems.Slicers**, or if the **GenerateItems** field is 0, then the protocol server MUST insert slicers for the table into the session (2).
4. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input includes **WorkbookGenerationItems.Chart**, or if the **GenerateItems** field is 0, then the protocol server SHOULD insert a chart into the session (2).
5. If the **GenerateItems** field of the **options** parameter in the **GenerateWorkbookFromHtml** input includes **WorkbookGenerationItems.ConditionalFormatting**, or if the **GenerateItems** field is 0, then the protocol server MUST provide additional formatting information for the previously inserted table in the session (2).

3.1.4.50.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage	The request WSDL message for the GenerateWorkbookFromHtml WSDL operation.
ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage	The response WSDL message for the GenerateWorkbookFromHtml WSDL operation.

3.1.4.50.1.1 ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage

The request WSDL message for the **GenerateWorkbookFromHtml** WSDL operation.

The SOAP action value is:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GenerateWorkbookFromHtml>

The SOAP body contains the **GenerateWorkbookFromHtml** element.

3.1.4.50.1.2 ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage

The response WSDL message for the **GenerateWorkbookFromHtml** WSDL operation.

The SOAP body contains the **GenerateWorkbookFromHtmlResponse** element.

3.1.4.50.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GenerateWorkbookFromHtml	The input data for the GenerateWorkbookFromHtml WSDL operation.
GenerateWorkbookFromHtmlResponse	The result data for the GenerateWorkbookFromHtml WSDL operation.

3.1.4.50.2.1 GenerateWorkbookFromHtml

The input data for the **GenerateWorkbookFromHtml** WSDL operation.

```
<xs:element name="GenerateWorkbookFromHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="html" type="tns:TableHtml"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns:WorkbookGenerationOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="subscriberId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="url" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present

html: A **TableHtml** as specified in section [3.1.4.50.3.1](#). MUST be present.

options: A **WorkbookGenerationOptions**, as specified in section [2.2.4.73](#), specifying which named objects created by the protocol server for the new workbook session, as well as other session-specific information. MUST be present.

subscriberId: The site identifier. MUST be equal to the value of **RequestSiteId** passed in **parameter**. MUST be present

url: The trusted location (1) of the new workbook session. MUST be present. If the specified value is not a Uniform Resource Identifier (URI), as specified in [\[RFC2396\]](#), or a Universal Naming Convention (UNC), the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.2](#), with the value of the **Id** element of the **ExcelServerMessage** set to "NewWorkbookInvalidLocation".

The protocol server ignores the number sign (#) and fragment, as specified in [\[RFC3986\]](#).

3.1.4.50.2.2 GenerateWorkbookFromHtmlResponse

The result data for the **GenerateWorkbookFromHtml** WSDL operation.

```
<xs:element name="GenerateWorkbookFromHtmlResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GenerateWorkbookFromHtmlResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="generateWorkbookResult"
type="tns:GenerateWorkbookFromHtmlResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GenerateWorkbookFromHtmlResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

generateWorkbookResult: A **GenerateWorkbookFromHtmlResult**, as specified in section [3.1.4.50.3.6](#), that contains the results of the operation. MUST be present

3.1.4.50.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
TableHtml	The TableHtml complex type is used to represent the contents of an HTML table.
ArrayOfRowHtml	The ArrayOfRowHtml type is an array of RowHtml elements, as specified in section 3.1.4.50.3.3
RowHtml	The RowHtml type represents one row of an HTML table
ArrayOfCellHtml	An array of CellHtml elements, as specified in section 3.1.4.50.3.5
CellHtml	The CellHtml type represents one cell of an HTML table
GenerateWorkbookFromHtmlResult	The GenerateWorkbookFromHtmlResult type represents the result of calling GenerateWorkbookFromHtml
ArrayOfGeneratedNamedObject	An array of GeneratedNamedObject elements, as specified in section 3.1.4.50.3.8
GeneratedNamedObject	The GeneratedNamedObject type represents a named object that has been created as part of GenerateWorkbookFromHtml in the new workbook session.

3.1.4.50.3.1 TableHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **TableHtml** complex type is used to represent the contents of an HTML table.

```

<xs:complexType name="TableHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Hd" type="tns:ArrayOfRowHtml"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Bd" type="tns:ArrayOfRowHtml"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Li" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

Hd: An **ArrayOfRowHtml**, as specified in section [3.1.4.50.3.2](#), that represents the header row(s) of the table. Can be null.

Bd: An **ArrayOfRowHtml**, as specified in section [3.1.4.50.3.2](#), that represents the body row(s) of the table. Can be null.

Li: MUST be ignored by the protocol server.

3.1.4.50.3.2 ArrayOfRowHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **ArrayOfRowHtml** type is an array of **RowHtml** elements, as specified in section [3.1.4.50.3.3](#)

```

<xs:complexType name="ArrayOfRowHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="RowHtml" nillable="true"
type="tns:RowHtml"/>
  </xs:sequence>
</xs:complexType>

```

RowHtml: A **RowHtml** element, as specified in section [3.1.4.50.3.3](#).

3.1.4.50.3.3 RowHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **RowHtml** type represents one row of an HTML table

```

<xs:complexType name="RowHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Cs" type="tns:ArrayOfCellHtml"/>
  </xs:sequence>
</xs:complexType>

```

Cs: An **ArrayOfCellHtml**, as specified in section [3.1.4.50.3.4](#) that represents the cells in the row.

3.1.4.50.3.4 ArrayOfCellHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **CellHtml** elements, as specified in section [3.1.4.50.3.5](#)

```

<xs:complexType name="ArrayOfCellHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="CellHtml" nillable="true"
type="tns:CellHtml"/>
  </xs:sequence>
</xs:complexType>

```

CellHtml: A **CellHtml** element, as specified in section [3.1.4.50.3.5](#).

3.1.4.50.3.5 CellHtml

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **CellHtml** type represents one cell of an HTML table

```

<xs:complexType name="CellHtml" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="C" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="R" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="I" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="H" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

C: The cell's column span.

R: The cell's row span.

I: The text of the cell. Can be null.

H: The **hyperlink** of the cell. Can be null.

3.1.4.50.3.6 GenerateWorkbookFromHtmlResult

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **GenerateWorkbookFromHtmlResult** type represents the result of calling **GenerateWorkbookFromHtml**

```

<xs:complexType name="GenerateWorkbookFromHtmlResult"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="GeneratedObjects"
type="tns:ArrayOfGeneratedNamedObject"/>
  </xs:sequence>
</xs:complexType>

```

WorkbookId: The session identifier (2) of the new workbook session.

GeneratedObjects: An **ArrayOfGeneratedNamedObject** as specified in section [3.1.4.50.3.7](#) that represents all of the named objects created in the new workbook session.

3.1.4.50.3.7 ArrayOfGeneratedNamedObject

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An array of **GeneratedNamedObject** elements, as specified in section [3.1.4.50.3.8](#)

```
<xs:complexType name="ArrayOfGeneratedNamedObject"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="GeneratedNamedObject"
      nillable="true" type="tns:GeneratedNamedObject"/>
  </xs:sequence>
</xs:complexType>
```

GeneratedNamedObject: A **GeneratedNamedObject** element, as specified in section [3.1.4.50.3.8](#)

3.1.4.50.3.8 GeneratedNamedObject

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **GeneratedNamedObject** type represents a named object that has been created as part of **GenerateWorkbookFromHtml** in the new workbook session.

```
<xs:complexType name="GeneratedNamedObject" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType"
      type="tns:NamedObjectType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Name: The name of the named object.

SheetName: The name of the sheet that the named object is on.

NamedObjectType: The type of named object, as specified in section [2.2.5.16](#).

Width: The width of the named object, in pixels, at 96DPI.

Height: The height of the named object, in pixels, at 96DPI.

3.1.4.50.4 Simple Types

None.

3.1.4.50.5 Attributes

None.

3.1.4.50.6 Groups

None.

3.1.4.50.7 Attribute Groups

None.

3.1.4.51 GetBixAnalysis

This operation is used to get the set of analysis operations that could be applied to a PivotTable or a PivotChart.

```
<wsdl:operation name="GetBixAnalysis" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetBixAnalysis"
    message="tns:ExcelServiceSoap_GetBixAnalysis_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetBixAnalysisResponse"
    message="tns:ExcelServiceSoap_GetBixAnalysis_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetBixAnalysisExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetBixAnalysis_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetBixAnalysis_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetBixAnalysis_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the PivotTable or PivotChart in the **pivotOperationOptions**.
2. The protocol server returns the **BixAnalysis** data associated with the PivotTable or PivotChart.

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<68>](#) be one of the values specified in section [2.2.2.1](#).

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**

- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriOrLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**
- **RetryOutOfSync**
- **UnexpectedPivotError**

3.1.4.51.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetBixAnalysis_InputMessage	The request WSDL message for the GetBixAnalysis WSDL operation.
ExcelServiceSoap_GetBixAnalysis_OutputMessage	The response WSDL message for the GetBixAnalysis WSDL operation.

3.1.4.51.1.1 ExcelServiceSoap_GetBixAnalysis_InputMessage

The request WSDL message for the **GetBixAnalysis** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetBixAnalysis
```

The SOAP body contains the **GetBixAnalysis** element.

3.1.4.51.1.2 ExcelServiceSoap_GetBixAnalysis_OutputMessage

The response WSDL message for the **GetBixAnalysis** WSDL operation.

The SOAP body contains the **GetBixAnalysisResponse** element.

3.1.4.51.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetBixAnalysis	The input data for the GetBixAnalysis WSDL operation.
GetBixAnalysisResponse	The result data for the GetBixAnalysis WSDL operation.

3.1.4.51.2.1 GetBixAnalysis

The input data for the **GetBixAnalysis** WSDL operation.

```
<xs:element name="GetBixAnalysis" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

options: The PivotTable or PivotChart identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present.

3.1.4.51.2.2 GetBixAnalysisResponse

The result data for the **GetBixAnalysis** WSDL operation.

```
<xs:element name="GetBixAnalysisResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetBixAnalysisResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="analysis" type="tns:BixAnalysis"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetBixAnalysisResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

analysis: The set of analysis operations, defined by the **PivotOperationOptions** (section [2.2.4.28](#)) that can be applied to a cell in the PivotTable. MUST be present.

3.1.4.51.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
BixAnalysis	Describes the set of possible analysis operations based on the selected cell in the PivotTable.
BixDrillContext	Describes the PivotTable drill-up and drill-down operation contexts.
BixDrillField	Describes a PivotCache level drill operation.
BixContext	Describes context information related to the selected cell in the PivotTable.

3.1.4.51.3.1 BixAnalysis

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **BixAnalysis** type is a container describing the set of possible analysis operations, based on the selected cell in the PivotTable.

```
<xs:complexType name="BixAnalysis" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillContext" type="tns:BixDrillContext"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcludeHierarchies" type="tns:ArrayOfInt"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Context" type="tns:BixContext"/>
  </xs:sequence>
</xs:complexType>
```

DrillContext: The **BixDrillContext** describes the set of drill analysis operations and context, as described in section (3.1.4.51.3.2)

ExcludeHierarchies: An array of PivotCache hierarchy identifiers which are excluded from the analysis operations.

Context: The **BixContext** describes context information related to the selected cell in the PivotTable, as described in section (3.1.4.51.3.4).

3.1.4.51.3.2 BixDrillContext

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **BixDrillContext** describes drill-up and drill-down operation contexts.

```
<xs:complexType name="BixDrillContext" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillDown" type="tns:BixDrillField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillUp" type="tns:BixDrillField"/>
  </xs:sequence>
</xs:complexType>
```

DrillDown: Defines the drill-down operation, as defined by the **BixDrillField** data type (section 3.1.4.51.3.3). When NULL, this drill operation is not defined.

DrillUp: Defines the drill-up operation, as defined by the **BixDrillField** data type (section 3.1.4.51.3.3). When NULL, this drill operation is not defined.

3.1.4.51.3.3 BixDrillField

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Describes a PivotCache level drill operation for the PivotCache hierarchy defined by the **BixContext** data type (section [3.1.4.51.3.4](#))

```
<xs:complexType name="BixDrillField" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Id" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Caption: The PivotCache level caption.

Id: The unique PivotCache level identifier associated with the **BixContext HierarchyId** property (section [3.1.4.51.3.4](#)).

3.1.4.51.3.4 BixContext

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

This complex type includes PivotCache properties associated with the cell in the PivotTable, defined by the **PivotOperationOptions** (section [2.2.4.28](#)).

```
<xs:complexType name="BixContext" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DimensionCaption" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HierarchyCaption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HierarchyId" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

DimensionCaption: The PivotCache dimension caption to which the hierarchy, identified by the **HierarchyId**, belongs.

HierarchyCaption: The PivotCache hierarchy caption.

HierarchyId: The PivotCache hierarchy identifier.

3.1.4.51.4 Simple Types

None.

3.1.4.51.5 Attributes

None.

3.1.4.51.6 Groups

None.

3.1.4.51.7 Attribute Groups

None.

3.1.4.52 GetPivotFieldListData

This operation is used to get the PivotTable fields that are associated with a PivotTable or PivotChart.

```
<wsdl:operation name="GetPivotFieldListData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotFieldListData"
    message="tns:ExcelServiceSoap_GetPivotFieldListData_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotFieldListDataResponse"
    message="tns:ExcelServiceSoap_GetPivotFieldListData_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotFieldListDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetPivotFieldListData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPivotFieldListData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotFieldListData_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, type information in the **type** element, version information in the **version** element, and measure group information in the **measureGroup** element.
2. The protocol server uses this information to get the PivotTable fields that are associated with the PivotTable or PivotChart.

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<69>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.52.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotFieldListData_InputMessage	The request WSDL message for the GetPivotFieldListData WSDL operation.
ExcelServiceSoap_GetPivotFieldListData_OutputMessage	The response WSDL message for the GetPivotFieldListData WSDL operation.

3.1.4.52.1.1 ExcelServiceSoap_GetPivotFieldListData_InputMessage

The request WSDL message for the **GetPivotFieldListData** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotFieldListData
```

The SOAP body contains the **GetPivotFieldListData** element.

3.1.4.52.1.2 ExcelServiceSoap_GetPivotFieldListData_OutputMessage

The response WSDL message for the **GetPivotFieldListData** WSDL operation.

The SOAP body contains the **GetPivotFieldListDataResponse** element.

3.1.4.52.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetPivotFieldListData	The input data for the GetPivotFieldListData WSDL operation.
GetPivotFieldListDataResponse	The result data for the GetPivotFieldListData WSDL operation.

3.1.4.52.2.1 GetPivotFieldListData

The input data for the **GetPivotFieldListData** WSDL operation.

```
<xs:element name="GetPivotFieldListData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="relatedGroup" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="selectedTab" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

type: The PivotTable field list type as specified by the **FieldListType** element in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

version: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than -1. For a value of -1, the protocol server MUST bypass the version validation. Initially, the protocol client MUST use one of the following values:

- -1
- Value obtained from the **FieldListVersion** element as specified in either the **PivotFieldListData** (section [3.1.4.52.3.1](#)) complex type or the **PivotFieldManagerData** (section [3.1.4.53.3.1](#)) complex type.

relatedGroup: The related group identifier as specified by the **GroupId** element in the **PivotFieldListRelatedGroup** (section [3.1.4.52.3.3](#)) complex type. MUST be present. Initially, the protocol client MUST use one of the following values:

- -1
- Value from the **GroupId** that MUST be obtained from the **RelatedGroups** element as specified in the **PivotFieldListData** (section [3.1.4.52.3.1](#)) complex type.

selectedTab: The selected tab for the PivotTable or PivotChart field list. MUST be one of the values specified in the following table.

Value	Meaning
-1	Default tab
0	All tab
1	Active tab

3.1.4.52.2.2 GetPivotFieldListDataResponse

The result data for the **GetPivotFieldListData** WSDL operation.

```
<xs:element name="GetPivotFieldListDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFieldListDataResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldListData"
type="tns:PivotFieldListData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotFieldListDataResult: A **CommandResult** as specified in section [2.2.4.2.1](#). MUST be present.

pivotFieldListData: The PivotTable field list information as specified in the **PivotFieldListData** section [3.1.4.52.3.1](#). MUST be present.

3.1.4.52.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
PivotFieldListData	A container for information about a PivotTable field list.
ArrayOfPivotFieldListRelatedGroup	An array of PivotFieldListRelatedGroup elements.
PivotFieldListRelatedGroup	A related group for use with a PivotTable or PivotChart.

3.1.4.52.3.1 PivotFieldListData

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **PivotFieldListData** type is a container for information about a PivotTable field list.

```
<xs:complexType name="PivotFieldListData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="RelatedGroups"
      type="tns:ArrayOfPivotFieldListRelatedGroup"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FieldListItems"
      type="tns:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListCacheId" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectedTab" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowRelatedGroups" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowTabs" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
```

RelatedGroups: A list of all the related groups for use with a PivotTable or **PivotChart** field list as specified in the **ArrayOfPivotFieldListRelatedGroup** section [3.1.4.52.3.2](#). MUST be present.

FieldListItems: A list of all the PivotTable fields as specified in the **ArrayOfPivotFieldListItem** section [2.2.4.47](#). MUST be present.

FieldListCacheId: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than 0.

FieldListVersion: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than 0.

SelectedTab: The selected tab for the PivotTable or **PivotChart** field list. MUST be one of the values specified in the following table.

Value	Meaning
0	All tab
1	Active tab

ShowRelatedGroups: MUST be set to **true** to visually show related groups for the PivotTable or **PivotChart** field list, MUST be **false** otherwise.

ShowTabs: MUST be set to **true** to visually show tabs for the PivotTable or **PivotChart** field list, MUST be **false** otherwise.

3.1.4.52.3.2 ArrayOfPivotFieldListRelatedGroup

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ArrayOfPivotFieldListRelatedGroup** type is an array of **PivotFieldListRelatedGroup** elements (section [3.1.4.52.3.3](#)).

```
<xs:complexType name="ArrayOfPivotFieldListRelatedGroup"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="PivotFieldListRelatedGroup"
nillable="true" type="tns:PivotFieldListRelatedGroup"/>
  </xs:sequence>
</xs:complexType>
```

PivotFieldListRelatedGroup: A **PivotFieldListRelatedGroup** element as specified in section [3.1.4.52.3.3](#).

3.1.4.52.3.3 PivotFieldListRelatedGroup

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **PivotFieldListRelatedGroup** is used to specify a related group for use with a PivotTable or **PivotChart**.

```
<xs:complexType name="PivotFieldListRelatedGroup"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="GroupId" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="GroupName" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

GroupId: A unique identifier for the PivotTable or **PivotChart** group name on the protocol server. MUST be equal to or greater than -1.

GroupName: The PivotTable or **PivotChart** group name. MUST be present. MUST NOT be empty.

3.1.4.52.4 Simple Types

None.

3.1.4.52.5 Attributes

None.

3.1.4.52.6 Groups

None.

3.1.4.52.7 Attribute Groups

None.

3.1.4.53 GetPivotFieldManagerData

This operation is used to get the PivotTable fields that are associated with a PivotTable or PivotChart query.

```
<wsdl:operation name="GetPivotFieldManagerData"
xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerData"
message="tns:ExcelServiceSoap_GetPivotFieldManagerData_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataResponse"
message="tns:ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetPivotFieldManagerData_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetPivotFieldManagerData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, type information in the **type** element, and version information in the **version** element.
2. The protocol server uses this information to get the PivotTable fields that are associated with the PivotTable or PivotChart query.

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<70>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.53.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotFieldManagerData_InputMessage	The request WSDL message for the GetPivotFieldManagerData WSDL operation.
ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage	The response WSDL message for the GetPivotFieldManagerData WSDL operation.

3.1.4.53.1.1 ExcelServiceSoap_GetPivotFieldManagerData_InputMessage

The request WSDL message for the **GetPivotFieldManagerData** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotFieldManagerData
```

The SOAP body contains the **GetPivotFieldManagerData** element.

3.1.4.53.1.2 ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage

The response WSDL message for the **GetPivotFieldManagerData** WSDL operation.

The SOAP body contains the **GetPivotFieldManagerDataResponse** element.

3.1.4.53.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetPivotFieldManagerData	The input data for the GetPivotFieldManagerData WSDL operation.
GetPivotFieldManagerDataResponse	The result data for the GetPivotFieldManagerData WSDL operation.

3.1.4.53.2.1 GetPivotFieldManagerData

The input data for the **GetPivotFieldManagerData** WSDL operation.

```
<xs:element name="GetPivotFieldManagerData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or PivotChart identification as specified in the **PivotOperationOptions** (section [2.2.4.28](#)) complex type. MUST be present.

type: The PivotTable field list type as specified by the **FieldListType** element in the **PivotFieldApplyData** (section [3.1.4.47.3.1](#)) complex type. MUST be present.

version: A unique identifier for the state of the PivotTable on the protocol server. MUST be equal to or greater than -1. For a value of -1, the protocol server MUST bypasses the version validation. Initially, the protocol client MUST use one of the following values:

- -1
- Value obtained from the **FieldWellVersion** element as specified in the **PivotFieldManagerData** (section [3.1.4.53.3.1](#)) complex type.

3.1.4.53.2.2 GetPivotFieldManagerDataResponse

The result data for the **GetPivotFieldManagerData** WSDL operation.

```
<xs:element name="GetPivotFieldManagerDataResponse"
  xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFieldManagerDataResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldManagerData"
        type="tns:PivotFieldManagerData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetPivotFieldManagerDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

pivotFieldManagerData: The PivotTable or **PivotChart** information as specified in the **PivotFieldManagerData** section [3.1.4.53.3.1](#). MUST be present.

3.1.4.53.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
PivotFieldManagerData	A container for information about a PivotTable or PivotChart .

3.1.4.53.3.1 PivotFieldManagerData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

The **PivotFieldManagerData** type is a container for information about a PivotTable or PivotChart.

```
<xs:complexType name="PivotFieldManagerData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DataAxis"
      type="tns:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FilterAxis"
      type="tns:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ColumnAxis"
      type="tns:ArrayOfPivotFieldListItem"/>
  </xs:sequence>
</xs:complexType>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="RowAxis"
type="tns:ArrayOfPivotFieldListItem"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldWellVersion" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

DataAxis: A list of all the PivotTable fields on the data axis as specified in the **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)) complex type. MUST be present.

FilterAxis: A list of all the PivotTable fields on the filter axis as specified in **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)). MUST be present.

ColumnAxis: A list of all the PivotTable fields on the column axis as specified in **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)). MUST be present.

RowAxis: A list of all the PivotTable fields on the row axis as specified in **ArrayOfPivotFieldListItem** (section [2.2.4.47](#)). MUST be present.

FieldWellVersion: A unique identifier for the state of the PivotTable or PivotChart on the protocol server. MUST be equal to or greater than 0.

FieldListVersion: A unique identifier for the state of the PivotTable fields on the protocol server. MUST be equal to or greater than 0.

3.1.4.53.4 Simple Types

None.

3.1.4.53.5 Attributes

None.

3.1.4.53.6 Groups

None.

3.1.4.53.7 Attribute Groups

None.

3.1.4.54 GetRangeImage

This operation is used to return an image of a worksheet range.

```

<wsdl:operation name="GetRangeImage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImage"
message="tns:ExcelServiceSoap_GetRangeImage_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImageResponse"
message="tns:ExcelServiceSoap_GetRangeImage_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>

```

```

<wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImageExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRangeImage_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetRangeImage_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetRangeImage_OutputMessage** response message, as follows:

- The protocol server MUST return a range image as specified in the **getRangeImageInformation** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<71>](#) be one of the values specified in section 2.2.2.1.

3.1.4.54.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetRangeImage_InputMessage	The request WSDL message for the GetRangeImage WSDL operation.
ExcelServiceSoap_GetRangeImage_OutputMessage	The response WSDL message for the GetRangeImage WSDL operation.

3.1.4.54.1.1 ExcelServiceSoap_GetRangeImage_InputMessage

The request WSDL message for the **GetRangeImage** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/GetRangeImage

```

The SOAP body contains the **GetRangeImage** element.

3.1.4.54.1.2 ExcelServiceSoap_GetRangeImage_OutputMessage

The response WSDL message for the **GetRangeImage** WSDL operation.

The SOAP body contains the **GetRangeImageResponse** element.

3.1.4.54.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetRangeImage	The input data for the GetRangeImage WSDL operation.
GetRangeImageResponse	The result data for the GetRangeImage WSDL operation.

3.1.4.54.2.1 GetRangeImage

The input data for the **GetRangeImage** WSDL operation.

```
<xs:element name="GetRangeImage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="getRangeImageInformation"
type="tns:GetRangeImageInformation"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

getRangeImageInformation: The information how the protocol server generates an image, as specified in the **GetRangeImageInformation** (section [3.1.4.54.3.1](#)). MUST be present.

3.1.4.54.2.2 GetRangeImageResponse

The result data for the **GetRangeImage** WSDL operation.

```
<xs:element name="GetRangeImageResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetRangeImageResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binaryRangeImage"
type="xs:base64Binary"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetRangeImageResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binaryRangeImage** field. MUST be the string "x-png".

binaryRangeImage: The image of the requested **range** content. MUST be present. MUST be in the format specified in [RFC2083](#).

3.1.4.54.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
GetRangeImageInformation	A container for information used to determine how the requested range image will be rendered.

3.1.4.54.3.1 GetRangeImageInformation

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **GetRangeImageInformation** type is a container for information used to determine how the requested worksheet range image renders.

```
<xs:complexType name="GetRangeImageInformation" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="RangeId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width100" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height100" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowHeaders" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

RangeId: If present the value is a worksheet range, a Table name, or a PivotTable name to generate an image for by protocol server.

Width: Width in pixels of the requested image. If the value is greater than zero, specifies a desired width in pixels for the requested range image. Provided this value is smaller than the expected width of the requested range it will be used to scale the resulting image smaller. When scaling the resulting image, the original aspect ratio will be maintained. If both **Width** and **Height** are greater than zero, the returned image will be scaled based on the axis to be resized the most.

Height: Height in pixels of the requested image. If the value is greater than zero, specifies a desired height in pixels for the requested range image. Provided this value is smaller than the expected height of the requested range it will be used to scale the resulting image smaller. When scaling the resulting image, the original aspect ratio will be maintained. If both **Width** and **Height** are greater than zero, the returned image will be scaled based on the axis to be resized the most.

Width100: The width in pixels used to limit the **LastColumn** of the range of the returned image. If the value is less than or equal to zero the protocol server ignores it. The cumulative pixel width of all visible columns (2) starting with **FirstColumn** thru **LastColumn** will be compared with **Width100**. If the cumulative width of a column (2) exceeds **Width100** then that column (2) will be treated as the **LastColumn**.

Height100: The height in pixels used to limit the **LastRow** of the range of the returned image. If the value is less than or equal to zero the protocol server ignores it. The cumulative pixel height of all visible rows (2) starting with **FirstRow** thru **LastRow** will be compared with **Height100**. If the cumulative height of a row (2) exceeds **Height100** then that row (2) will be treated as the **LastRow**.

ShowHeaders: MUST be 0.

SheetName: The name of the worksheet that the range is on as specified by the **FirstRow**, **LastRow**, **FirstColumn** and **LastColumn** elements contained in this type. MUST be present if **RangeId** is not present and MUST NOT be empty. MUST NOT be longer than 31 characters.

FirstRow: Specifies starting row (2) of the range to be returned as an image. MUST be present if **RangeId** is not present.

LastRow: Specifies ending row (2) of the range to be returned as an image. MUST be present if **RangeId** is not present.

FirstColumn: Specifies starting column (2) of the range to be returned as an image. MUST be present if **RangeId** is not present.

LastColumn: Specified ending column (2) of the range to be returned as an image. MUST be present if **RangeId** is not present.

3.1.4.54.4 Simple Types

None.

3.1.4.54.5 Attributes

None.

3.1.4.54.6 Groups

None.

3.1.4.54.7 Attribute Groups

None.

3.1.4.55 GetScaledImage

This operation is used to return a chart image.

```
<wsdl:operation name="GetScaledImage" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetScaledImage"
    message="tns:ExcelServiceSoap_GetScaledImage_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetScaledImageResponse"
    message="tns:ExcelServiceSoap_GetScaledImage_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetScaledImageExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetScaledImage_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetScaledImage_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetScaledImage_OutputMessage** response message, as follows:

- The protocol server MUST return a chart image as specified in the **imageId** element as follows:
 1. The chart image MUST have a width, in pixels, less than or equal to the value specified in the **width** element.
 2. The chart image MUST have a height, in pixels, less than or equal to the value specified in the **height** element.
 3. Either the height of the chart image, in pixels, MUST be equal to the value in the **height** element, or the width of the chart element, in pixels, MUST be equal to the value in the **width** element.
 4. If **keepAspectRatio** is **true**, the chart image MUST have the same aspect ratio as the chart image in the workbook. **keepAspectRatio** MUST be true.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<72>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.55.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetScaledImage_InputMessage	The request WSDL message for the GetScaledImage WSDL operation.
ExcelServiceSoap_GetScaledImage_OutputMessage	The response WSDL message for the GetScaledImage WSDL operation.

3.1.4.55.1.1 ExcelServiceSoap_GetScaledImage_InputMessage

The request WSDL message for the **GetScaledImage** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetScaledImage
```

The SOAP body contains the **GetScaledImage** element.

3.1.4.55.1.2 ExcelServiceSoap_GetScaledImage_OutputMessage

The response WSDL message for the **GetScaledImage** WSDL operation.

The SOAP body contains the **GetScaledImageResponse** element.

3.1.4.55.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetScaledImage	The input data for the GetScaledImage WSDL operation.
GetScaledImageResponse	The result data for the GetScaledImage WSDL operation.

3.1.4.55.2.1 GetScaledImage

The input data for the **GetScaledImage** WSDL operation.

```
<xs:element name="GetScaledImage" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="imageId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="width" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="height" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="keepAspectRatio" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="isThumbnail" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

imageId: The chart identifier. MUST be present. MUST NOT be empty. MUST be the value specified in **CT_Image** element ([\[MS-EXSPXML\]](#) section 2.2.33).

width: The maximum allowed width, in pixels, of the chart image. Either the height of the chart image, in pixels, MUST be equal to the value in the **height** element, or the width of the chart element, in pixels, MUST be equal to the value in the **width** element.

height: The maximum allowed height, in pixels, of the chart image. Either the height of the chart image, in pixels, MUST be equal to the value in the **height** element, or the width of the chart element, in pixels, MUST be equal to the value in the **width** element.

keepAspectRatio: Specifies whether the chart image returned by the protocol server ought to maintain the same aspect ratio as the chart image in the workbook, as identified by the **imageId** element. MUST be set to true.

isThumbnail: Specifies whether the chart image returned by the protocol server is used as thumbnail.

3.1.4.55.2.2 GetScaledImageResponse

The result data for the **GetScaledImage** WSDL operation.

```
<xs:element name="GetScaledImageResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="GetScaledImageResult"
type="tns:CommandResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="imageFormatType" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="binaryChartImage"
type="xs:base64Binary"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

GetScaledImageResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

imageFormatType: The image format type that is present in the **binaryChartImage** field. MUST be either the string "x-png" or the string "jpeg".

binaryChartImage: The image of the chart image. MUST be present. If **imageFormatType** is "x-png", MUST be in the format specified in [\[RFC2083\]](#). If **imageFormatType** is "jpeg", MUST be in the format specified in [\[JFIF\]](#).

3.1.4.55.3 Complex Types

None.

3.1.4.55.4 Simple Types

None.

3.1.4.55.5 Attributes

None.

3.1.4.55.6 Groups

None.

3.1.4.55.7 Attribute Groups

None.

3.1.4.56 ProcessODataRequest

MUST NOT be used.

```

<wsdl:operation name="ProcessODataRequest" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessODataRequest"
message="tns:ExcelServiceSoap_ProcessODataRequest_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessODataRequestResponse"
message="tns:ExcelServiceSoap_ProcessODataRequest_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessODataRequestExcelServerMessageFault"

```

```

name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ProcessODataRequest_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

3.1.4.56.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ProcessODataRequest_InputMessage	The request WSDL message for the ProcessODataRequest WSDL operation.
ExcelServiceSoap_ProcessODataRequest_OutputMessage	The response WSDL message for the ProcessODataRequest WSDL operation.

3.1.4.56.1.1 ExcelServiceSoap_ProcessODataRequest_InputMessage

The request WSDL message for the **ProcessODataRequest** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ProcessODataRequest

```

The SOAP body contains the **ProcessODataRequest** element.

3.1.4.56.1.2 ExcelServiceSoap_ProcessODataRequest_OutputMessage

The response WSDL message for the **ProcessODataRequest** WSDL operation.

The SOAP body contains the **ProcessODataRequestResponse** element.

3.1.4.56.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ProcessODataRequest	The input data for the ProcessODataRequest WSDL operation.
ProcessODataRequestResponse	The result data for the ProcessODataRequest WSDL operation.

3.1.4.56.2.1 ProcessODataRequest

The input data for the **ProcessODataRequest** WSDL operation.

```

<xs:element name="ProcessODataRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```
<xs:element minOccurs="0" maxOccurs="1" name="request" type="tns:RestODataRequest"/>
</xs:sequence>
</xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

request: A **RestODataRequest** as specified in section [2.2.4.58](#). MUST be present.

3.1.4.56.2.2 ProcessODataRequestResponse

The result data for the **ProcessODataRequest** WSDL operation.

```
<xs:element name="ProcessODataRequestResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ProcessODataRequestResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="responseHeaders"
type="tns:ArrayOfArrayOfString"/>
      <xs:element minOccurs="0" maxOccurs="1" name="responseBody" type="xs:base64Binary"/>
      <xs:element minOccurs="1" maxOccurs="1" name="responseStatusCode" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ProcessODataRequestResult: MUST NOT be used.

responseHeaders: MUST NOT be used.

responseBody: MUST NOT be used.

responseStatusCode: MUST NOT be used.

3.1.4.56.3 Complex Types

None.

3.1.4.56.4 Simple Types

None.

3.1.4.56.5 Attributes

None.

3.1.4.56.6 Groups

None.

3.1.4.56.7 Attribute Groups

None.

3.1.4.57 ProcessRestRequest

This operation performs different operations on the workbook depending on the type of the **RestRequest** object received and returns a corresponding **RestResult**.

```
<wsdl:operation name="ProcessRestRequest" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ProcessRestRequest"
    message="tns:ExcelServiceSoap_ProcessRestRequest_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ProcessRestRequestResponse"
    message="tns:ExcelServiceSoap_ProcessRestRequest_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ProcessRestRequestExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ProcessRestRequest_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ProcessRestRequest_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ProcessRestRequest_OutputMessage** response, message as follows:

The protocol server runs several operations as described as follows. For each of these, the **CommandParameter** (section [2.2.4.20](#)) input is constructed as follows:

- The **ProtocolClientId** field of the **CommandParameter** will be set to ms-rest.
- The **StateId** field of the **CommandParameter** will be set to -1.
- The **RequestSiteId** field of the **CommandParameter** will be set to the **RequestSiteId** property of the **request** parameter.
- The **WorkbookId** field of the **CommandParameter** will be set as follows:
 - For the **OpenWorkbook** operation (described in step 1.a), it will not be set.
 - For all other operations it will be set to the stored session identifier (2), which is obtained in step 1.
- The protocol server will first obtain a session identifier (2) as follows:
 1. If the **OpenWorkbookInParameters** field of the **request** parameter in the **ProcessRestRequest** input is specified:
 1. The protocol server will perform the **OpenWorkbook** operation as specified in section [3.1.4.30](#).
 2. The **inParameters** for the **OpenWorkbook** operation are specified by the **OpenWorkbookInParameters** of **request** parameter in the **ProcessRestRequest** input.

3. The **OpenWorkbookOutParameters** field of the **result** in the **ProcessRestRequestResponse** will be set to the **outParameters** field of the **OpenWorkbookResponse**.
 4. The **workbookId** field of the **OpenWorkbookResponse** will be used as the **WorkbookId** field of all **CommandParameter** objects used in the steps following this one.
2. If the **OpenWorkbookInParameters** field of the **request** parameter in the **ProcessRestRequest** input is not specified:
 - The **SessionId** field of the **request** parameter in the **ProcessRestRequest** input MUST be a valid session identifier (2). The protocol server will set the **WorkbookId** field of all **CommandParameter** objects used in the steps following this one to the value of the **SessionId** field of the **request** parameter in the **ProcessRestRequest** input.
 - If the **ListOfCellsToSet** field of the **request** parameter in the **ProcessRestRequest** input is specified and its length is not zero, the protocol server will then perform the **SetRangeA1** operation as specified in section [3.1.4.44](#) as follows:
 1. The **parameter** parameter of the **SetRangeA1** input will be prepared as described previously.
 2. The **setRangeRequests** parameter of the **SetRangeA1** input will be set specified as the **ListOfCellsToSet** field of the **request** parameter in the **ProcessRestRequest** input.
 - The protocol server will then perform a different operation depending on the type of the **request** parameter in the **ProcessRestRequest** input as follows:
 1. **RestRequest** (section [2.2.4.68](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestResult** (section [2.2.4.69](#)).
 2. The protocol server will not perform any additional operations in this step.
 2. **RestChartPngRequest** (section [2.2.4.56](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestChartPngResult** (section [2.2.4.57](#)).
 2. The protocol server will perform the **GetChart** operation as specified in section [3.1.4.14](#).
 3. The **parameter** parameter of the **GetChart** input will be prepared as described previously.
 4. The **getChartInformation** parameter of the **GetChart** input will be specified with **Height** as -1, **Width** as -1, and **Name** equal to the **ChartName** field of the **request** parameter in the **ProcessRestRequest** input.
 5. The **result** field of the **ProcessRestRequestResponse** will have the **ImageFormatType** field set to the **imageFormatType** field of the **GetChartResponse** and the **ImageData** field set to the **binaryChartImage** field of the **GetChartResponse**.
 3. **RestRangePngRequest** (section [2.2.4.63](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestPngResult** (section [2.2.4.60](#)).

2. The protocol server will perform the **GetRangeImage** operation as specified in section [3.1.4.54](#).
 3. The **parameter** parameter of the **GetRangeImage** input will be prepared as described previously.
 4. The **getRangeImageInformation** parameter of the **GetRangeImage** input will be specified with **RangeId** as the **RangeName** field in the **request** parameter in the **ProcessRestRequest** input. **ShowHeaders** will be set to 1 if the **Nov** field of the **request** parameter in the **ProcessRestRequest** input is true and 0 otherwise.
 5. The **result** field of the **ProcessRestRequestResponse** will have the **ImageFormatType** field set to the **imageFormatType** field of the **GetRangeImageResponse** and the **ImageData** field set to the **binaryRangeImage** field of the **GetRangeImageResponse**.
4. **RestPublishedObjectsRequest** (section [2.2.4.61](#)):
1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestPublishedObjectsResult** (section [2.2.4.62](#)).
 2. The protocol server will perform the **GetPublishedObjects** operation as specified in section [3.1.4.20](#).
 3. The **parameter** parameter of the **GetPublishedObjects** input will be prepared as described previously.
 4. The **options** parameter of the **GetPublishedObjects** input will be specified as the **Options** field in the **request** parameter in the **ProcessRestRequest** input.
 5. The **result** field of the **ProcessRestRequestResponse** will have the **PublishedObjects** field set to the **publishedObjects** field of the **GetPublishedObjectsResult**.
5. **RestRangeValuesRequest** (section [2.2.4.64](#)):
1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestRangeValuesResult** (section [2.2.4.65](#)).
 2. The protocol server will perform the **GetRangeValuesA1** operation as specified in section [3.1.4.24](#).
 3. The **parameter** parameter of the **GetRangeValuesA1** input will be prepared as described previously.
 4. The **rangeRequests** parameter of the **GetRangeValuesA1** input will be specified as an **ArrayOfRangeValuesA1** containing a single **RangeValuesA1** as follows:
 1. If the **NamedObjectType** field of the **request** parameter in the **ProcessRestRequest** input is specified, then the **RangeName** field of the **RangeValuesA1** object will be set to the **RangeReference** corresponding to the published item with the name given by the **Name** field of the **request** parameter in the **ProcessRestRequest** input.
 2. If the **NamedObjectType** field of the **request** parameter in the **ProcessRestRequest** input is not specified, then the **RangeName** field of the **RangeValuesA1** object will be set to the **Name** field of the **request** parameter in the **ProcessRestRequest** input. The **Name** field of the **request** parameter in the **ProcessRestRequest** input MUST follow the [RangeReference](#) specification, with the following exceptions: The protocol server MUST support the R1C1 notation. If the value is longer than 287 characters, then

the protocol server MUST return an **ExcelServerMessage** as specified in section [2.2.4.24](#), with the value of the **Id** element of the **ExcelServerMessage** set to **EcsInvalidNamedObject**.

5. The **formatting** parameter of the **GetRangeValuesA1** input will be specified as **CellDataFormat.Formatted**, **CellDataFormat.Unformatted**, and **CellDataFormat.Compound**.
6. The **result** field of the **ProcessRestRequestResponse** will have the **Values** field set to the **Values** field of the **RangeValuesA1** object constructed previously, once the operation has been processed.
6. **RestRangeXmlRequest** (section [2.2.4.66](#)):
 1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestRangeXmlResult** (section [2.2.4.67](#)).
 2. The protocol server will perform the **GetRange** operation as specified in section [3.1.4.21](#).
 3. The **parameter** parameter of the **GetRange** input will be prepared as described previously and modified as follows:
 1. The **RequestLimits** field of the **CommandParameter** will be set to a **RequestLimits** object with the **CellCount** field set to the protocol server setting for the maximum number of cells returned in a REST request.
 2. The **StateId** field of the **CommandParameter** will be set to the **StateId** field of the **request** parameter in the **ProcessRestRequest** input.
 3. The **VisibleSheetRangeRequest** field of the **CommandParameter** will be set as new **VisibleSheetRange** created as follows:
 1. The **FirstRow**, **FirstColumn**, **VisibleRowsRequested**, **VisibleColumnsRequested**, **VisibleFirstRowOffset**, and **VisibleFirstColumnOffset** fields will be set to 0.
 2. If the **NamedObjectView** field of the **request** parameter in the **ProcessRestRequest** input is true:

The **ObjectName** field of the **VisibleSheetRange** will be set to the **RangeName** field of the **request** parameter in the **ProcessRestRequest** input.
The **DisallowAutoNOV** field of the **VisibleSheetRange** will be set to **false**.
 1. If the **NamedObjectField** of the **request** parameter in the **ProcessRestRequest** input is false:

The **ExcelRange** field of the **VisibleSheetRange** will be set to the **RangeName** field of the **request** parameter in the **ProcessRestRequest** input.
The **DisallowAutoNOV** field of the **VisibleSheetRange** will be set to **true**.
 1. The **NeedAllBorderValues** field of the **VisibleSheetRange** will be set to **true**.
 4. The **result** field of the **ProcessRestRequestResponse** will have the **CommandResult** field set to the **result** field of the **GetRangeResponse** and the **IsChromeRtl** field set to **true** if the UI culture of the session (2) associated with the **ProcessRestRequest** operation defaults to right-to-left text ordering.

7. **RestWorkbookRequest** (section [2.2.4.70](#)):

1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestWorkbookResult** (section [2.2.4.71](#)).
2. The protocol server will perform the **GetWorkbook** operation as specified in section [3.1.4.29](#).
3. The **parameter** parameter of the **GetWorkbook** input will be prepared as described previously.
4. The **workbookType** parameter of the **GetWorkbook** input will be the **WorkbookType FullSnapshot** unless the **OpenWorkbook** operation was run in step 1.a and the **OpenWorkbookOutFlags** returned included **ViewOnly**, in which case the **WorkbookType PublishedItemsSnapshot** will be used.
5. The **result** field of the **ProcessRestRequestResponse** will have the **WorkbookBits** field set to the **bits** field of the **GetWorkbookResponse**.

8. **RestODataRequest**: (section [2.2.4.58](#))

- The **result** field of the **ProcessRestRequestResponse** will be of type **RestODataResult** (section [2.2.4.59](#)).

9. **RestOpenWorkbookRequest** (section [2.2.4.80](#)):

1. The **result** field of the **ProcessRestRequestResponse** will be of type **RestOpenWorkbookResult** (section [2.2.4.81](#)).
 2. The protocol server will not perform any additional operations in this step.
 3. The **result** field of the **ProcessRestRequestResponse** will have the **SessionId** field set to the session identifier (2) determined in step 1.
- If the **OpenWorkbook** operation was invoked in step 1.a and the type of the **request** parameter in the **ProcessRestRequest** input is not **RestOpenWorkbookRequest**, the protocol server will perform the **CloseWorkbook** operation as specified in section [3.1.4.8](#) as follows:
 1. The **parameter** parameter of the **CloseWorkbook** input will be prepared as described previously.
 2. The **forceSync** parameter of the **CloseWorkbook** input will be set to false.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<73>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values:

- **RestBiff8Unsupported**
- Any of the values supported by these operations:
 - **OpenWorkbook** (section [3.1.4.30](#))
 - **SetRangeA1** (section [3.1.4.44](#))
 - **GetChart** (section [3.1.4.14](#))
 - **GetRangeImage** (section [3.1.4.54](#))

- **GetPolishedObjects** (section [3.1.4.20](#))
- **GetRangeValuesA1** (section [3.1.4.24](#))
- **GetRange** (section [3.1.4.21](#))
- **GetWorkbook** (section [3.1.4.29](#))

3.1.4.57.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ProcessRestRequest_InputMessage	The request WSDL message for the ProcessRestRequest WSDL operation.
ExcelServiceSoap_ProcessRestRequest_OutputMessage	The response WSDL message for the ProcessRestRequest WSDL operation.

3.1.4.57.1.1 ExcelServiceSoap_ProcessRestRequest_InputMessage

The request WSDL message for the **ProcessRestRequest** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ProcessRestRequest
```

The SOAP body contains the **ProcessRestRequest** element.

3.1.4.57.1.2 ExcelServiceSoap_ProcessRestRequest_OutputMessage

The response WSDL message for the **ProcessRestRequest** WSDL operation.

The SOAP body contains the **ProcessRestRequestResponse** element.

3.1.4.57.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ProcessRestRequest	The input data for the ProcessRestRequest WSDL operation.
ProcessRestRequestResponse	The result data for the ProcessRestRequest WSDL operation.

3.1.4.57.2.1 ProcessRestRequest

The input data for the **ProcessRestRequest** WSDL operation.

```
<xs:element name="ProcessRestRequest" xmlns:xs="http://www.w3.org/2001/XMLSchema">
```

```

<xs:complexType>
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="request" type="tns:RestRequest"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

request: A **RestRequest** as specified in section [2.2.4.68](#). MUST be present.

3.1.4.57.2.2 ProcessRestRequestResponse

The result data for the **ProcessRestRequest** WSDL operation.

```

<xs:element name="ProcessRestRequestResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ProcessRestRequestResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="result" type="tns:RestResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ProcessRestRequestResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

result: A **RestResult** as specified in section [2.2.4.69](#). MUST be present.

3.1.4.57.3 Complex Types

None.

3.1.4.57.4 Simple Types

None.

3.1.4.57.5 Attributes

None.

3.1.4.57.6 Groups

None.

3.1.4.57.7 Attribute Groups

None.

3.1.4.58 AutoFit

This operation adjusts the heights of rows (2) or the widths of columns (2), in a workbook, if necessary, to fit the contents in those rows (2) or columns (2).

```
<wsdl:operation name="AutoFit" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/AutoFit" message="tns:ExcelServiceSoap_AutoFit_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/AutoFitResponse"
    message="tns:ExcelServiceSoap_AutoFit_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/AutoFitExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_AutoFit_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_AutoFit_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_AutoFit_OutputMessage** response message, as follows:

1. If the value of **isRow** is set to be true, the protocol server sets the heights of the rows (2), specified in **autoFitRange**, to fit the largest content in those rows (2).
2. If the value of **isRow** is set to be **false**, the protocol server sets the widths of the columns (2), specified in **autoFitRange**, to fit the largest content in those columns (2).

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<74>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.58.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_AutoFit_InputMessage	The request WSDL message for the AutoFit WSDL operation.
ExcelServiceSoap_AutoFit_OutputMessage	The response WSDL message for the AutoFit WSDL operation.

3.1.4.58.1.1 ExcelServiceSoap_AutoFit_InputMessage

The request WSDL message for the **AutoFit** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/AutoFit
```


The SOAP body contains the **AutoFit** element.

3.1.4.58.1.2 ExcelServiceSoap_AutoFit_OutputMessage

The response WSDL message for the **AutoFit** WSDL operation.

The SOAP body contains the **AutoFitResponse** element.

3.1.4.58.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
AutoFit	The input data for the AutoFit WSDL operation.
AutoFitResponse	The result data for the AutoFit WSDL operation.

3.1.4.58.2.1 AutoFit

The input data for the **AutoFit** WSDL operation.

```
<xs:element name="AutoFit" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="1" maxOccurs="1" name="isRow" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFitRange" type="tns:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

isRow: Specifies whether the operation is performed on rows (2) or columns (2).

autoFitRange: The range of rows (2) and columns (2) whose heights and widths respectively, need to be adjusted.

3.1.4.58.2.2 AutoFitResponse

The result data for the **AutoFit** WSDL operation.

```
<xs:element name="AutoFitResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="AutoFitResult" type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

AutoFitResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.58.3 Complex Types

None.

3.1.4.58.4 Simple Types

None.

3.1.4.58.5 Attributes

None.

3.1.4.58.6 Groups

None.

3.1.4.58.7 Attribute Groups

None.

3.1.4.59 BixDrill

Applies a drill operation to the PivotTable and displays PivotCache hierarchy members at the defined level. This will result in a query.

```
<wsdl:operation name="BixDrill" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/BixDrill" message="tns:ExcelServiceSoap_BixDrill_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/BixDrillResponse"
    message="tns:ExcelServiceSoap_BixDrill_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/BixDrillExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_BixDrill_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_BixDrill_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_BixDrill_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the PivotTable/PivotChart in the **pivotOperationOptions** element, and PivotTable field information (including how it is changing) in the **pivotFieldApplyData** element.
2. The protocol server applies the PivotTable field information to the PivotTable/PivotChart.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<75>](#) be one of the values specified in section [2.2.2.1](#).

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**
- **RetryOutOfSync**
- **UnexpectedPivotError**

3.1.4.59.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_BixDrill_InputMessage	The request WSDL message for the BixDrill WSDL operation.
ExcelServiceSoap_BixDrill_OutputMessage	The response WSDL message for the BixDrill WSDL operation.

3.1.4.59.1.1 ExcelServiceSoap_BixDrill_InputMessage

The request WSDL message for the **BixDrill** WSDL operation.

The SOAP action value is:

The SOAP body contains the **BixDrill** element.

3.1.4.59.1.2 ExcelServiceSoap_BixDrill_OutputMessage

The response WSDL message for the **BixDrill** WSDL operation.

The SOAP body contains the **BixDrillResponse** element.

3.1.4.59.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
BixDrill	The input data for the BixDrill WSDL operation.
BixDrillResponse	The result data for the BixDrill WSDL operation.

3.1.4.59.2.1 BixDrill

The input data for the **BixDrill** WSDL operation.

```
<xs:element name="BixDrill" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

options: The **PivotTable** or **PivotChart** identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present. The **HierarchyIndex** and **LevelIndex** options MUST be present.

3.1.4.59.2.2 BixDrillResponse

The result data for the **BixDrill** WSDL operation.

```
<xs:element name="BixDrillResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="BixDrillResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
```

</xs:element>

BixDrillResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.59.3 Complex Types

None.

3.1.4.59.4 Simple Types

None.

3.1.4.59.5 Attributes

None.

3.1.4.59.6 Groups

None.

3.1.4.59.7 Attribute Groups

None.

3.1.4.60 GetChartData

This operation returns information about the chart elements in a PivotChart.

```
<wsdl:operation name="GetChartData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartData"
    message="tns:ExcelServiceSoap_GetChartData_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartDataResponse"
    message="tns:ExcelServiceSoap_GetChartData_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetChartDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetChartData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetChartData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetChartData_OutputMessage** response message, as follows:

- The protocol server returns information about the chart elements in the PivotChart in **ChartData** (section [3.1.4.60.3.1](#)) in **ChartDataResult**. The PivotChart is uniquely identified by the combination of the **imageId** and the **versionId** sent by the protocol client.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD <76> be one of the values specified in section 2.2.2.1.

3.1.4.60.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetChartData_InputMessage	The request WSDL message for the GetChartData WSDL operation.
ExcelServiceSoap_GetChartData_OutputMessage	The response WSDL message for the GetChartData WSDL operation.

3.1.4.60.1.1 ExcelServiceSoap_GetChartData_InputMessage

The request WSDL message for the **GetChartData** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetChartData
```

The SOAP body contains the **GetChartData** element.

3.1.4.60.1.2 ExcelServiceSoap_GetChartData_OutputMessage

The response WSDL message for the **GetChartData** WSDL operation.

The SOAP body contains the **GetChartDataResponse** element.

3.1.4.60.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetChartData	The input data for the GetChartData WSDL operation.
GetChartDataResponse	The result data for the GetChartData WSDL operation.

3.1.4.60.2.1 GetChartData

The input data for the **GetChartData** WSDL operation.

```
<xs:element name="GetChartData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="ewaControlId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="imageId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="versionId" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

ewaControlId: MUST be ignored by the protocol server.

imageId: A unique identifier for the PivotChart. MUST be present. MUST NOT be empty. MUST be the value specified in **CT_Image** element ([\[MS-EXSPXML\]](#) section 2.2.33).

versionId: A unique identifier for the PivotChart version.

3.1.4.60.2.2 GetChartElementDataResponse

The result data for the **GetChartElementData** WSDL operation.

```

<xs:element name="GetChartElementDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetChartElementDataResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="chartElementDataResult"
        type="tns:ChartElementData"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

GetChartElementDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

chartElementDataResult: A **ChartElementData** (section [3.1.4.60.3.1](#)) that contains information about the elements in the PivotChart. MUST be present.

3.1.4.60.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
ChartElementData	A container for information about chart elements in the PivotChart.
ArrayOfChartElement	An array of ChartElement elements.
ChartElement	A container for information about a chart element.
ArrayOfCoordXY	An array of CoordXY elements.
CoordXY	The X and Y coordinates of single pixel on the outline of the chart element.

3.1.4.60.3.1 ChartElementData

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ChartElementData** type is a container for information about chart elements of a PivotChart.

```
<xs:complexType name="ChartElementData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ChartElementItems"
type="tns:ArrayOfChartElement"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ImageIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SheetIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ContentHTML" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ImagemapId" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
```

ChartElementItems: A list of all the chart elements as specified in the **ArrayOfChartElement** (section [3.1.4.60.3.2](#)). MUST be present.

ImageIndex: The index of the PivotChart in the worksheet.

SheetIndex: The index of the worksheet in the workbook.

Version: An identifier for the current version of the PivotChart.

ContentHTML: MUST NOT be used.

ImagemapId: MUST NOT be used.

3.1.4.60.3.2 ArrayOfChartElement

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An array of **ChartElement** elements (section [3.1.4.60.3.3](#))

```
<xs:complexType name="ArrayOfChartElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ChartElement" nillable="true"
type="tns:ChartElement"/>
  </xs:sequence>
</xs:complexType>
```

ChartElement: A **ChartElement** element (section [3.1.4.60.3.3](#)) which contains information about a chart element in the PivotChart.

3.1.4.60.3.3 ChartElement

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ChartElement** type is a container for information about a chart element.


```

<xs:complexType name="ChartElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:ChartElementType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CoordList" type="tns:ArrayOfCoordXY"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CategoryIndex" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SeriesIndex" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ValueString" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

Type: The type of chart element as specified in section [3.1.4.60.4.1](#). MUST be present.

CoordList: A list of coordinates as specified in the **ArrayOfCoordXY** (section [3.1.4.60.3.2](#)). Specifies the outline of the chart element. MUST be present.

CategoryIndex: The index of the category associated with this chart element.

SeriesIndex: The index of the series associated with this chart element.

ValueString: The caption of the **ChartElement** member. MUST be present.

3.1.4.60.3.4 ArrayOfCoordXY

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

An array of **CoordXY** elements (section [3.1.4.60.3.5](#)).

```

<xs:complexType name="ArrayOfCoordXY" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="CoordXY" nillable="true"
type="tns:CoordXY"/>
  </xs:sequence>
</xs:complexType>

```

CoordXY: A **CoordXY** element (section [3.1.4.60.3.5](#)).

3.1.4.60.3.5 CoordXY

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies the X and Y coordinates of one pixel on the outline of the chart element.

```

<xs:complexType name="CoordXY" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="X" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Y" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

X: The X coordinate in pixels.

Y: The Y coordinate in pixels.

3.1.4.60.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
ChartElementType	An enumeration of the different types of chart element.

3.1.4.60.4.1 ChartElementType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The **ChartElementType** simple type is an enumeration that is used to specify the type of chart element.

```
<xs:simpleType name="ChartElementType" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Unsupported"/>
    <xs:enumeration value="AxisLabel"/>
    <xs:enumeration value="Legend"/>
    <xs:enumeration value="DataPoint"/>
    <xs:enumeration value="ButtonPage"/>
    <xs:enumeration value="ButtonRow"/>
    <xs:enumeration value="ButtonCol"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **ChartElementType**.

Value	Meaning
Unsupported	MUST NOT be used.
AxisLabel	The chart element is an axis label.
Legend	The chart element is a legend label.
DataPoint	The chart element is a data point.
ButtonPage	The chart element is a filter button based on a hierarchy of an OLAP PivotChart, or a field of a native-mode PivotChart. For the linked PivotChart, the corresponding hierarchy or field MUST be in report filter area of a PivotTable.
ButtonRow	The chart element is a filter button based on a hierarchy of an OLAP PivotChart, or a field of a native-mode PivotChart, shown as a category of the chart. For the linked PivotChart, the corresponding hierarchy or field MUST be shown in row area of a PivotTable.
ButtonCol	The chart element is a filter button based on a hierarchy of an OLAP PivotChart, or a field of a native-mode PivotChart, shown as a series of the chart. For the linked PivotChart, the hierarchy or field MUST be shown in column area of a PivotTable.

3.1.4.60.5 Attributes

None.

3.1.4.60.6 Groups

None.

3.1.4.60.7 Attribute Groups

None.

3.1.4.61 GetTimeSlicerFilterState

This operation is used to return the time slicer state and formatting information for the time slicer visual components that are part of a time slicer.

```
<wsdl:operation name="GetTimeSlicerFilterState"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetTimeSlicerFilterState"
    message="tns:ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetTimeSlicerFilterStateResponse"
    message="tns:ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetTimeSlicerFilterStateExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetTimeSlicerFilterState_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage** response message, as follows:

The protocol server returns **timeSlicerView** (section [3.1.4.61.3.4](#)).

3.1.4.61.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage	The request WSDL message for the GetTimeSlicerFilterState WSDL operation.
ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage	The response WSDL message for the GetTimeSlicerFilterState WSDL operation.

3.1.4.61.1.1 ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage

The request WSDL message for the **GetTimeSlicerFilterState** WSDL operation.

The SOAP action value is:

The SOAP body contains the **GetTimeSlicerFilterState** element.

3.1.4.61.1.2 ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage

The response WSDL message for the **GetTimeSlicerFilterState** WSDL operation.

The SOAP body contains the **GetTimeSlicerFilterStateResponse** element.

3.1.4.61.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetTimeSlicerFilterState	The input data for the GetTimeSlicerFilterState WSDL operation.
GetTimeSlicerFilterStateResponse	The result data for the GetTimeSlicerFilterState WSDL operation.

3.1.4.61.2.1 GetTimeSlicerFilterState

The input data for the **GetTimeSlicerFilterState** WSDL operation.

```
<xs:element name="GetTimeSlicerFilterState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions" type="tns:SlicerOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The time slicer identification. MUST be present. The following MUST extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerClearItems:** MUST be ignored by the protocol server.

3.1.4.61.2.2 GetTimeSlicerFilterStateResponse

The result data for the **GetTimeSlicerFilterState** WSDL operation.

```
<xs:element name="GetTimeSlicerFilterStateResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerFilterStateResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns:TimeSlicerFormatElementList"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

        <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerView"
type="tns:TimeSlicerView"/>
    </xs:sequence>
</xs:complexType>
</xs:element>

```

GetTimeSlicerFilterStateResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

formatList: A **TimeSlicerFormatElementList** as specified in section [3.1.4.61.3.1](#). MUST be present.

timeSlicerView: A **TimeSlicerView** element as specified in section [3.1.4.61.3.4](#). MUST be present.

3.1.4.61.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
TimeSlicerFormatElementList	Contains ArrayOfTimeSlicerFormatElement element (section 3.1.4.61.3.2)
ArrayOfTimeSlicerFormatElement	An array of TimeSlicerFormatElement elements (section 3.1.4.61.3.3).
TimeSlicerFormatElement	A time slicer formatting specification.
TimeSlicerView	Specifies time slicer attributes such as display properties specific to the time slicer.
TimeDtr	Specifies the specific date for time slicer.

3.1.4.61.3.1 TimeSlicerFormatElementList

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A time slicer formatting specification.

```

<xs:complexType name="TimeSlicerFormatElementList"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="TimeSlicerFormatElements"
type="tns:ArrayOfTimeSlicerFormatElement"/>
    </xs:sequence>
</xs:complexType>

```

TimeSlicerFormatElements: An array of **TimeSlicerFormatElement** elements (section [3.1.4.61.3.3](#)).

3.1.4.61.3.2 ArrayOfTimeSlicerFormatElement

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

An array of **TimeSlicerFormatElement** elements (section 3.1.4.61.3.3). The position of the **TimeSlicerFormatElement** in the array indicates which time slicer visual component the **TimeSlicerFormatElement** is applied to. The array MUST have 9 elements. The following table lists the index in the array and the corresponding time visual component to which the **TimeSlicerFormatElement** at that index is applied.

Index	Slicer visual component
0	Equivalent to the meaning of TseType TSEWHOLETABLE specified in [MS-XLSB] section 2.5.149
1	Equivalent to the meaning of TseType TSEHEADERROW specified in [MS-XLSB] section 2.5.149
2	Equivalent to the meaning of TseType TSETIMELINESELECTIONLABEL specified in [MS-XLSB] section 2.5.149
3	Equivalent to the meaning of TseType TSETIMELINETIMELEVEL specified in [MS-XLSB] section 2.5.149
4	Equivalent to the meaning of TseType TSETIMELINEPERIODLABEL1 specified in [MS-XLSB] section 2.5.149
5	Equivalent to the meaning of TseType TSETIMELINEPERIODLABEL2 specified in [MS-XLSB] section 2.5.149
6	Equivalent to the meaning of TseType TSETIMELINESELECTEDTIMEBLOCK specified in [MS-XLSB] section 2.5.149
7	Equivalent to the meaning of TseType TSETIMELINEUNSELECTEDTIMEBLOCK specified in [MS-XLSB] section 2.5.149
8	Equivalent to the meaning of TseType TSETIMELINESELECTEDTIMEBLOCKSPACE specified in [MS-XLSB] section 2.5.149

```
<xs:complexType name="ArrayOfTimeSlicerFormatElement"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeSlicerFormatElement"
nillable="true" type="tns:TimeSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
```

TimeSlicerFormatElement: A **TimeSlicerFormatElement** element as specified in section 3.1.4.61.3.3.

3.1.4.61.3.3 TimeSlicerFormatElement

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

A time slicer formatting specification. Contains a **SlicerFormatElement** element (section 2.2.4.37) and a gradient fill angle.

```

<xs:complexType name="TimeSlicerFormatElement" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SlicerFormatElement">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="GradientAngle" type="xs:double"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

GradientAngle: Specific direction used to showing gradient color. MUST be present.

3.1.4.61.3.4 TimeSlicerView

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies time slicer attributes such as display properties specific to the time slicer.

```

<xs:complexType name="TimeSlicerView" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="SpaceWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DayWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MonthWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="QuarterWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="YearWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectionLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplaySettings" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns:PivotFilterType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionBegin" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayStart" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MaxDate" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinDate" type="tns:TimeDtr"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="OlapSourced" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>

```

SpaceWidth: Width in pixels for a space character.

DayWidth: Width in pixels for showing a day.

MonthWidth: Width in pixels for month name.

QuarterWidth: Width in pixels for a quarter name.

YearWidth: Width in pixels for a year name.

SelectionLevel: A time unit to for time slicer selection. All values, as specified in the following table, MUST be an element in the list exactly once.

Value	Meaning
1	Year
2	Quarter
3	Month
4	Day

DisplayLevel: A time unit to for each tile in time slicer. All values, as specified in the following table, MUST be an element in the list exactly once.

Value	Meaning
1	Year
2	Quarter
3	Month
4	Day

DisplaySettings: Properties for time slicer as in the following table.

Value	Meaning
0x01	Showing time slicer header
0x02	Showing selection description
0x04	Showing scroll bar

FilterType: A **PivotFilter** element (section [2.2.5.17](#)) specify a type of PivotTable filters.

SelectionEnd: A **TimeDtr** element (section [3.1.4.61.3.5](#)) specifies ending time of selection.

SelectionBegin: A **TimeDtr** element (section [3.1.4.61.3.5](#)) specifies the beging time of selection.

DisplayStart: A **TimeDtr** element (section [3.1.4.61.3.5](#)) specifies the beging time of display.

MaxDate: A **TimeDtr** element (section [3.1.4.61.3.5](#)) specifies the maximum date for time slicer.

MinDate: A **TimeDtr** element (section [3.1.4.61.3.5](#)) specifies the minimum date for time slicer.

Width: Time slicer width in pixels. MUST be equal to or greater than 0.

Height: Time slicer height in pixels. MUST be equal to or greater than 0.

Name: The name of the time slicer.

Caption: The caption of the slicer.

OlapSourced: MUST be **true** if the data source for the time slicer is Online Analytical Processing (OLAP). MUST be **false** otherwise.

3.1.4.61.3.5 TimeDtr

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specify a date.

```
<xs:complexType name="TimeDtr" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Year" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Day: Specify Day. MUST be greater than or equal to 1 and less than or equal to 31.

Month: Specify month. MUST be greater than or equal to 1 and less than or equal to 12.

Year: Specify year. MUST be greater than 0.

3.1.4.61.4 Simple Types

None.

3.1.4.61.5 Attributes

None.

3.1.4.61.6 Groups

None.

3.1.4.61.7 Attribute Groups

None.

3.1.4.62 ApplyPivotValueFieldSettings

This operation is used to modify a PivotTable or PivotChart by changing the aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts. The result is a query.

```
<wsdl:operation name="ApplyPivotValueFieldSettings"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotValueFieldSettings"
    message="tns:ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsResponse"
    message="tns:ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsExcelServerMessageFault"
```

```
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotValueFieldSettings_ExcelServerMessageFault_FaultMessage" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element, and it sends the PivotTable or PivotChart aggregation type in the **pivotValueFieldSettingsApplyData** element.
2. The protocol server applies the aggregation type to the PivotTable or PivotChart.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<77>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values (see section [2.2.5.9](#)):

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.62.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage	The request WSDL message for the ApplyPivotValueFieldSettings WSDL operation.
ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage	The response WSDL message for the ApplyPivotValueFieldSettings WSDL operation.

3.1.4.62.1.1 ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage

The request WSDL message for the **ApplyPivotValueFieldSettings** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyPivotValueFieldSettings
```

The SOAP body contains the **ApplyPivotValueFieldSettings** element.

3.1.4.62.1.2 ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage

The response WSDL message for the **ApplyPivotValueFieldSettings** WSDL operation.

The SOAP body contains the **ApplyPivotValueFieldSettingsResponse** element.

3.1.4.62.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ApplyPivotValueFieldSettings	The input data for the ApplyPivotValueFieldSettings WSDL operation.
ApplyPivotValueFieldSettingsResponse	The result data for the ApplyPivotValueFieldSettings WSDL operation.

3.1.4.62.2.1 ApplyPivotValueFieldSettings

The input data for the **ApplyPivotValueFieldSettings** WSDL operation.

```
<xs:element name="ApplyPivotValueFieldSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>  
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>  
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"  
        type="tns:PivotOperationOptions"/>  
    </xs:sequence>  
  </xs:complexType>  
</xs:element>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="pivotValueFieldSettingsApplyData"
type="tns:PivotValueFieldSettingsApplyData"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The PivotTable or **PivotChart** identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present.

pivotValueFieldSettingsApplyData: The PivotTable or **PivotChart** aggregation type as specified in the **PivotValueFieldSettingsApplyData** section [3.1.4.62.3.1](#). MUST be present.

3.1.4.62.2.2 ApplyPivotValueFieldSettingsResponse

The result data for the **ApplyPivotValueFieldSettings** WSDL operation.

```

<xs:element name="ApplyPivotValueFieldSettingsResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotValueFieldSettingsResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

ApplyPivotValueFieldSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.62.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
PivotValueFieldSettingsApplyData	Specifies a PivotTable or PivotChart aggregation type.

3.1.4.62.3.1 PivotValueFieldSettingsApplyData

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies a PivotTable or **PivotChart** aggregation type.

```

<xs:complexType name="PivotValueFieldSettingsApplyData"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Aggregation" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

Aggregation: A PivotTable or **PivotChart** aggregation type as specified by the **SelectedAggregation** parameter in the **PivotValueFieldSettingsInfo** section [3.1.4.64.3.1](#). MUST be present.

3.1.4.62.4 Simple Types

None.

3.1.4.62.5 Attributes

None.

3.1.4.62.6 Groups

None.

3.1.4.62.7 Attribute Groups

None.

3.1.4.63 ApplyTimeSlicerInteractivity

This operation is used to update the state of the time slicer.

```
<wsdl:operation name="ApplyTimeSlicerInteractivity"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTimeSlicerInteractivity"
    message="tns:ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityResponse"
    message="tns:ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_ApplyTimeSlicerInteractivity_ExcelServerMessageFault_FaultMessa
    ge" xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage** response message, as follows:

1. The protocol client specifies the following:
 1. Information identifying the time slicer in **slicerOptions** (section [2.2.4.41](#))
 2. The interactive type in **timeSlicerInteractivityType** (section [3.1.4.63.4.1](#))
 3. The time slicer setting in **sharedTimeSlicerSettings** (section [3.1.4.63.3.3](#))

4. The filter state in **sharedFilterState** (section [3.1.4.63.3.1](#)) that will be applied.
2. The protocol server updates the state of the time slicer based on this information specified by the protocol client.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<78>](#) be one of the values specified in section [2.2.2.1](#) or any of the following values.

- **DclNotTrusted**
- **ErrorAccessingSsoFromEcs**
- **ErrorAccessingSsofromWfe**
- **ErrorConnectingToDataSource**
- **ErrorConnectingToDataSourceReadOrViewOnly**
- **ExternalDataNotAllowedOnTL**
- **ExternalDataRefreshFailed**
- **ExternalDataRefreshFailed_Details**
- **ExternalDataRefreshFailedReadOrViewOnly**
- **ExternalDataRefreshFailedReal**
- **IncorrectAuthUsed**
- **InvalidUriorLocalConnectionPath**
- **InvalidUserNameOrPassword**
- **InvalidUserNameOrPasswordReadOrViewOnly**
- **NoAccessToOdcReadOrViewOnly**
- **OdcFileDoesNotExist**
- **UnattendedAccountNotConfigured**

3.1.4.63.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage	The request WSDL message for the ApplyTimeSlicerInteractivity WSDL operation.
ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage	The response WSDL message for the ApplyTimeSlicerInteractivity WSDL operation.

Message	Description
	operation.

3.1.4.63.1.1 ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage

The request WSDL message for the **ApplyTimeSlicerInteractivity** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/ApplyTimeSlicerInteractivity
```

The SOAP body contains the **ApplyTimeSlicerInteractivity** element.

3.1.4.63.1.2 ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage

The response WSDL message for the **ApplyTimeSlicerInteractivity** WSDL operation.

The SOAP body contains the **ApplyTimeSlicerInteractivityResponse** element.

3.1.4.63.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
ApplyTimeSlicerInteractivity	The input data for the ApplyTimeSlicerInteractivity WSDL operation.
ApplyTimeSlicerInteractivityResponse	The result data for the ApplyTimeSlicerInteractivity WSDL operation.

3.1.4.63.2.1 ApplyTimeSlicerInteractivity

The input data for the **ApplyTimeSlicerInteractivity** WSDL operation.

```
<xs:element name="ApplyTimeSlicerInteractivity" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedSlicerOptions"
type="tns:SlicerOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="timeSlicerInteractivityType"
type="tns:TimeSlicerInteractivityType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedFilterState"
type="tns:TimeSlicerFilterState"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedTimeSlicerSettings"
type="tns:TimeSlicerSettings"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

sharedSlicerOptions: The time slicer identification. MUST be present. The following extend or override the standard behavior specified in section [2.2.4.41](#):

- **SlicerItemsCount:** MUST be ignored.
- **SlicerClearItems:** When set to **true**, the protocol server MUST unselect all slicer items in the slicer before applying a selection. Otherwise, MUST be ignored by the protocol server

timeSlicerInteractivityType: The interactivity type to be applied on time slicer.

sharedFilterState: The filter state to be applied on time slicer. MUST be present.

sharedTimeSlicerSettings: Specifies the setting to be applied on time slicer. MUST be present.

3.1.4.63.2 ApplyTimeSlicerInteractivityResponse

The result data for the **ApplyTimeSlicerInteractivity** WSDL operation.

```
<xs:element name="ApplyTimeSlicerInteractivityResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ApplyTimeSlicerInteractivityResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

ApplyTimeSlicerInteractivityResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.63.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
TimeSlicerFilterState	Specify selection of time slicer.
DateTimeRecord	Specify a date.
TimeSlicerSettings	Specify a date and level used by time slicer.

3.1.4.63.3.1 TimeSlicerFilterState

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specify the selection of time slicer.

```
<xs:complexType name="TimeSlicerFilterState" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionBegin" type="tns:DateTimeRecord"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="tns:DateTimeRecord"/>
  </xs:sequence>
```


</xs:complexType>

SelectionBegin: The starting date of the time slicer selection.

SelectionEnd: The ending date of the time slicer selection.

3.1.4.63.3.2 DateTimeRecord

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies a date.

```
<xs:complexType name="DateTimeRecord" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Year" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

Year: Specifies a year. MUST be greater than 0.

Month: Specifies a month. MUST be greater than or equal to 1 and less than or equal to 12.

Day: Specifies a Day. MUST be greater than or equal to 1 and less than or equal to 31.

3.1.4.63.3.3 TimeSlicerSettings

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

Specifies a date and level used by time slicer.

```
<xs:complexType name="TimeSlicerSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayStart" type="tns:DateTimeRecord"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Level" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
```

DisplayStart: Specify the starting date showing on time slicer. MUST be present.

Level: A time unit used by the time slicer.

Value	Meaning
1	Year
2	Quarter
3	Month
4	Day

3.1.4.63.4 Simple Types

The following table summarizes the XML schema simple type definitions that are specific to this operation.

Simple type	Description
TimeSlicerInteractivityType	The interactivity type to be applied on time slicer.

3.1.4.63.4.1 TimeSlicerInteractivityType

Namespace:

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/

The interactivity type to be applied on time slicer.

```
<xs:simpleType name="TimeSlicerInteractivityType"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:restriction base="xs:string">
    <xs:enumeration value="UpdateSelection"/>
    <xs:enumeration value="UpdateDisplayLevel"/>
    <xs:enumeration value="UpdateScrollPosition"/>
  </xs:restriction>
</xs:simpleType>
```

The following table specifies the allowable values for **TimeSlicerInteractivityType**.

Value	Meaning
UpdateSelection	Specifies selection changed interactivity.
UpdateDisplayLevel	Specifies display level changed interactivity.
UpdateScrollPosition	Specifies scroll position changed interactivity.

3.1.4.63.5 Attributes

None.

3.1.4.63.6 Groups

None.

3.1.4.63.7 Attribute Groups

None.

3.1.4.64 GetPivotValueFieldSettings

This operation is used to get a list of the PivotTable or PivotChart aggregation types and the selected aggregation type. This operation is supported only for native-mode PivotTables and PivotCharts.

```

<wsdl:operation name="GetPivotValueFieldSettings"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotValueFieldSettings"
    message="tns:ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotValueFieldSettingsResponse"
    message="tns:ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/GetPivotValueFieldSettingsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetPivotValueFieldSettings_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage** response message, as follows:

1. The protocol client sends information that identifies the PivotTable or PivotChart in the **pivotOperationOptions** element.
2. The protocol server uses this information to get a list of PivotTable or PivotChart aggregation types and the selected type that is associated with the PivotTable or PivotChart query.

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<79>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.64.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage	The request WSDL message for the GetPivotValueFieldSettings WSDL operation.
ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage	The response WSDL message for the GetPivotValueFieldSettings WSDL operation.

3.1.4.64.1.1 ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage

The request WSDL message for the **GetPivotValueFieldSettings** WSDL operation.

The SOAP action value is:

The SOAP body contains the **GetPivotValueFieldSettings** element.

3.1.4.64.1.2 ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage

The response WSDL message for the **GetPivotValueFieldSettings** WSDL operation.

The SOAP body contains the **GetPivotValueFieldSettingsResponse** element.

3.1.4.64.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetPivotValueFieldSettings	The input data for the GetPivotValueFieldSettings WSDL operation.
GetPivotValueFieldSettingsResponse	The result data for the GetPivotValueFieldSettings WSDL operation.

3.1.4.64.2.1 GetPivotValueFieldSettings

The input data for the **GetPivotValueFieldSettings** WSDL operation.

```
<xs:element name="GetPivotValueFieldSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

pivotOperationOptions: The **PivotTable** or **PivotChart** identification as specified in the **PivotOperationOptions** section [2.2.4.28](#). MUST be present.

3.1.4.64.2.2 GetPivotValueFieldSettingsResponse

The result data for the **GetPivotValueFieldSettings** WSDL operation.

```
<xs:element name="GetPivotValueFieldSettingsResponse"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetPivotValueFieldSettingsResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="pivotValueFieldSettingsInfo"
type="tns:PivotValueFieldSettingsInfo"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

GetPivotValueFieldSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

pivotValueFieldSettingsInfo: Contains a list of the PivotTable or **PivotChart** aggregation types and the selected aggregation type as specified in the **PivotValueFieldSettingsInfo** section [3.1.4.64.3.1](#). MUST be present.

3.1.4.64.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
PivotValueFieldSettingsInfo	Specifies a list of the PivotTable or PivotChart aggregation types and the selected aggregation type.

3.1.4.64.3.1 PivotValueFieldSettingsInfo

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

Specifies a list of the PivotTable or **PivotChart** aggregation types and the selected aggregation type.

```

<xs:complexType name="PivotValueFieldSettingsInfo"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AggregationTypes" type="tns:ArrayOfInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectedAggregation" type="xs:int"/>
  </xs:sequence>
</xs:complexType>

```

AggregationTypes: A list of the PivotTable or **PivotChart** aggregation types. All values, as specified in the following table, MUST be an element in the list exactly once.

Value	Meaning
0	Sum
1	Count
2	Average
3	Max
4	Min
5	Product

Value	Meaning
6	Count numbers
7	Standard deviation
8	Standard deviation percentage
9	Variant
10	Variant percentage

SelectedAggregation: The selected PivotTable or **PivotChart** aggregation type. MUST be one of the values specified in the following table.

Value	Meaning
-1	None*
0	Sum
1	Count
2	Average
3	Max
4	Min
5	Product
6	Count numbers
7	Standard deviation
8	Standard deviation percentage
9	Variant
10	Variant percentage

* A **SelectedAggregation** value of **None** (0) specifies no selection.

3.1.4.64.4 Simple Types

None.

3.1.4.64.5 Attributes

None.

3.1.4.64.6 Groups

None.

3.1.4.64.7 Attribute Groups

None.

3.1.4.65 GetTimeSlicerStrings

This operation is used to return the strings for the time slicer visual components that are part of the time slicer.

```
<wsdl:operation name="GetTimeSlicerStrings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetTimeSlicerStrings"
    message="tns:ExcelServiceSoap_GetTimeSlicerStrings_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetTimeSlicerStringsResponse"
    message="tns:ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetTimeSlicerStringsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_GetTimeSlicerStrings_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_GetTimeSlicerStrings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage** response message, as follows:

- The protocol server returns a **TimeSlicerStringTemplate** (section [3.1.4.66.3](#)) in the **timeSlicerStrings** element.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<80>](#) be one of the values specified in section [2.2.2.1](#).

3.1.4.65.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_GetTimeSlicerStrings_InputMessage	The request WSDL message for the GetTimeSlicerStrings WSDL operation.
ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage	The response WSDL message for the GetTimeSlicerStrings WSDL operation.

3.1.4.65.1.1 ExcelServiceSoap_GetTimeSlicerStrings_InputMessage

The request WSDL message for the **GetTimeSlicerStrings** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetTimeSlicerStrings
```

The SOAP body contains the **GetTimeSlicerStrings** element.

3.1.4.65.1.2 ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage

The response WSDL message for the **GetTimeSlicerStrings** WSDL operation.

The SOAP body contains the **GetTimeSlicerStringsResponse** element.

3.1.4.65.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
GetTimeSlicerStrings	The input data for the GetTimeSlicerStrings WSDL operation.
GetTimeSlicerStringsResponse	The result data for the GetTimeSlicerStrings WSDL operation.

3.1.4.65.2.1 GetTimeSlicerStrings

The input data for the **GetTimeSlicerStrings** WSDL operation.

```
<xs:element name="GetTimeSlicerStrings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

3.1.4.65.2.2 GetTimeSlicerStringsResponse

The result data for the **GetTimeSlicerStrings** WSDL operation.

```
<xs:element name="GetTimeSlicerStringsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerStringsResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerStrings"
type="tns:TimeSlicerStringTemplates"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

GetTimeSlicerStringsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

timeSlicerStrings: A **timeSlicerStringTemplate** as specified in section [3.1.4.66.3](#). MUST be present.

3.1.4.65.3 Complex Types

The following table summarizes the XML schema complex type definitions that are specific to this operation.

Complex type	Description
TimeSlicerStringTemplates	A container for string information related to a time slicer.

3.1.4.65.3.1 TimeSlicerStringTemplates

Namespace:

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/>

A container for string information related to a time slicer.

```
<xs:complexType name="TimeSlicerStringTemplates" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DayToDayYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayToDayMonth" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthYearToMonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthToMonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterYearToQuarterYear"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterToQuarterYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterToYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearToYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AllDatesIn" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayYearToDayYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="NotBetween" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Day" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="NotEqual" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AllPeriods" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelDay" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelMonth" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelQuarter" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LevelYear" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="QuarterNames" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthNamesShort" type="tns:ArrayOfString"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthNames" type="tns:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>
```

DayToDayYear: Description of a time period template that begins in a specific month and day, and ends in a specific month and day in the same year. The template MUST have 5 place holders in the form of {0}, {1}, {2}, {3} and {4}. {0} is a place holder for the starting month. {1} is a place holder for the starting day. {2} is a place holder for the ending month. {3} is a place holder for the ending day. {4} is a place holder for the year.

DayToDayMonth: Description of a time period template that begins in a specific month and day, and ends in a specific day in the same month and year. The template MUST have 4 place holders in the form of {0}, {1}, {2} and {3}. {0} is a place holder for the starting month. {1} is a place holder for the starting day. {2} is a place holder for the ending day. {3} is a place holder for the year.

MonthYearToMonthYear: Description of a time period template that begins in a specific month and year, and ends in a specific month and year. The template MUST have 4 place holders in the form of {0}, {1}, {2} and {3}. {0} is a place holder for the starting month. {1} is a place holder for starting year. {2} is a place holder for the ending month. {3} is a place holder for the ending year.

MonthToMonthYear: Description of a time period template that that begins in a specific month, and ends in a specific month in the same year. The template MUST have 3 place holders in the form of {0}, {1} and {2}. {0} is a place holder for the starting month. {1} is a place holder for the ending month. {2} is a place holder for the year.

MonthYear: Description of a time period template for a specific month and year. The template MUST have 2 place holders in the form of {0} and {1}. {0} is a place holder for the month. {1} is a place holder for the year.

QuarterYearToQuarterYear: Description of a time period template that begins in a specific quarter and year, and ends in specific quarter and year. The template MUST have 4 place holders in the form of {0}, {1}, {2} and {3}. {0} is a place holder for the starting quarter. {1} is a place holder for starting year. {2} is a place holder for the ending quarter. {3} is a place holder for the ending year.

QuarterToQuarterYear: Description of a time period template that begins in a specific quarter, and ends in a specific quarter in the same year. The template MUST have 3 place holders in the form of {0}, {1} and {2}. {0} is a place holder for the starting quarter. {1} is a place holder for the ending quarter. {2} is a place holder for the year.

QuarterToYear: Description of a time period template for a specific quarter and year. The template MUST have 2 place holders in the form of {0} and {1}. {0} is a place holder for the quarter. {1} is a place holder for the year.

YearToYear: Description of a time period template between the begins in a specific year and end in a specific year. The template MUST have 2 place holders in the form of {0} and {1}. {0} is a place holder for the starting year. {1} is a place holder for the ending year.

AllDatesIn: Description of a time period template for all dates in a specific date range. The template MUST have 1 place holder in the form of {0} which specifies that date range.

DayYearToDayYear: Description of a time period template that begins in a specific month, day and year, and ends in a specific month, day and year. The template MUST have 6 place holders in the form of {0}, {1}, {2}, {3}, {4} and {5}. {0} is a place holder for the starting month. {1} is a place holder for the starting day. {2} is a place holder for the starting year. {3} is a place holder for the ending month. {4} is a place holder for the ending day. {5} is a place holder for the ending year.

NotBetween: Description of a time period template for a date that is not between a specific date range. The template MUST have 1 place holder in the form of {0} which specifies that date range.

Day: Description of a time period template for specific month, day and year. The template MUST have 3 place holders in the form of {0}, {1} and {2}. {0} is a place holder for the month. {1} is a place holder for the day. {2} is a place holder for the year.

NotEqual: Description of time period template for a date that is not equal to a specific date. The template MUST have 1 place holder in the form of {0} which specifies that date.

AllPeriods: Description of all date periods.

LevelDay: Description for the day level selection.

LevelMonth: Description for the month level selection.

LevelQuarter: Description for the quarter level selection.

LevelYear: Description for the year level selection.

QuarterNames: An array of the names of the quarters in the year .

MonthNamesShort: An array of the short names of the months in the year.

MonthNames: An array of the names of the months in the year.

3.1.4.65.4 Simple Types

None.

3.1.4.65.5 Attributes

None.

3.1.4.65.6 Groups

None.

3.1.4.65.7 Attribute Groups

None.

3.1.4.66 UpdateSlicer

This operation is used to update the state of the slicer items that are part of a slicer.

```
<wsdl:operation name="UpdateSlicer" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/UpdateSlicer"
    message="tns:ExcelServiceSoap_UpdateSlicer_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/UpdateSlicerResponse"
    message="tns:ExcelServiceSoap_UpdateSlicer_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/UpdateSlicerExcelServerMessageFault" name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_UpdateSlicer_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_UpdateSlicer_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_UpdateSlicer_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the slicer in the **slicerOptions** element.
2. The protocol server updates the state of the slicer items in the slicer.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section 2.2.2. The **Id** element of the **ExcelServerMessage** SHOULD [<81>](#) be one of the values specified in section 2.2.2.1.

3.1.4.66.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_UpdateSlicer_InputMessage	The request WSDL message for the UpdateSlicer WSDL operation.
ExcelServiceSoap_UpdateSlicer_OutputMessage	The response WSDL message for the UpdateSlicer WSDL operation.

3.1.4.66.1.1 ExcelServiceSoap_UpdateSlicer_InputMessage

The request WSDL message for the **UpdateSlicer** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/UpdateSlicer
```

The SOAP body contains the **UpdateSlicer** element.

3.1.4.66.1.2 ExcelServiceSoap_UpdateSlicer_OutputMessage

The response WSDL message for the **UpdateSlicer** WSDL operation.

The SOAP body contains the **UpdateSlicerResponse** element.

3.1.4.66.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
UpdateSlicer	The input data for the UpdateSlicer WSDL operation.
UpdateSlicerResponse	The result data for the UpdateSlicer WSDL operation.

3.1.4.66.2.1 UpdateSlicer

The input data for the **UpdateSlicer** WSDL operation.

```
<xs:element name="UpdateSlicer" xmlns:xs="http://www.w3.org/2001/XMLSchema">  
  <xs:complexType>  
    <xs:sequence>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions" type="tns:SlicerOptions"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

slicerOptions: The slicer identification as specified in section [2.2.4.41](#). MUST be present.

3.1.4.66.2 UpdateSlicerResponse

The result data for the **UpdateSlicer** WSDL operation.

```

<xs:element name="UpdateSlicerResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="UpdateSlicerResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

UpdateSlicerResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.66.3 Complex Types

None.

3.1.4.66.4 Simple Types

None.

3.1.4.66.5 Attributes

None.

3.1.4.66.6 Groups

None.

3.1.4.66.7 Attribute Groups

None.

3.1.4.67 DdaAddBinding

Adds a new or modifies an existing Office Web Extension binding.

```

<wsdl:operation name="DdaAddBinding" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBinding"

```

```

message="tns:ExcelServiceSoap_DdaAddBinding_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBindingResponse"
message="tns:ExcelServiceSoap_DdaAddBinding_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBindingExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaAddBinding_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaAddBinding_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaAddBinding_OutputMessage** response message, as follows:

1. The protocol client sends binding information for the new or existing binding.
2. The protocol server adds a binding if it does not exist or, if it does, updates the binding information and returns the new binding information.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<82>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.67.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaAddBinding_InputMessage	The request WSDL message for the DdaAddBinding WSDL operation.
ExcelServiceSoap_DdaAddBinding_OutputMessage	The response WSDL message for the DdaAddBinding WSDL operation.

3.1.4.67.1.1 ExcelServiceSoap_DdaAddBinding_InputMessage

The request WSDL message for the **DdaAddBinding** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/DdaAddBinding

```

The SOAP body contains the **DdaAddBinding** element.

3.1.4.67.1.2 ExcelServiceSoap_DdaAddBinding_OutputMessage

The response WSDL message for the **DdaAddBinding** WSDL operation.

The SOAP body contains the **DdaAddBindingResponse** element.

3.1.4.67.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaAddBinding	The input data for the DdaAddBinding WSDL operation.
DdaAddBindingResponse	The result data for the DdaAddBinding WSDL operation.

3.1.4.67.2.1 DdaAddBinding

The input data for the **DdaAddBinding** WSDL operation.

```
<xs:element name="DdaAddBinding" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="bindingType" type="tns:DdaBindingType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

bindingId: String that specifies the Office Web Extension defined name for a binding.

bindingType: **DdaBindingType** for the type of binding to add or modify.

formula: A range, as specified in section [2.2.5.18](#), which describes the binding's cells.

3.1.4.67.2.2 DdaAddBindingResponse

The result data for the **DdaAddBinding** WSDL operation.

```
<xs:element name="DdaAddBindingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaAddBindingResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binding" type="tns:BindingMetadata"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaAddBindingResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

binding: A **BindingMetadata** item that represents the new or modified binding.

3.1.4.67.3 Complex Types

None.

3.1.4.67.4 Simple Types

None.

3.1.4.67.5 Attributes

None.

3.1.4.67.6 Groups

None.

3.1.4.67.7 Attribute Groups

None.

3.1.4.68 DdaGetAllBindings

Returns a list of **BindingMetadata** items associated with the given Office Web Extension.

```
<wsdl:operation name="DdaGetAllBindings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetAllBindings"
    message="tns:ExcelServiceSoap_DdaGetAllBindings_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetAllBindingsResponse"
    message="tns:ExcelServiceSoap_DdaGetAllBindings_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetAllBindingsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_DdaGetAllBindings_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaGetAllBindings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetAllBindings_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the Office Web Extension.
2. The protocol server returns all of the binding information associated with the Office Web Extension.

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<83>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.68.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetAllBindings_InputMessage	The request WSDL message for the DdaGetAllBindings WSDL operation.
ExcelServiceSoap_DdaGetAllBindings_OutputMessage	The response WSDL message for the DdaGetAllBindings WSDL operation.

3.1.4.68.1.1 ExcelServiceSoap_DdaGetAllBindings_InputMessage

The request WSDL message for the **DdaGetAllBindings** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaGetAllBindings
```

The SOAP body contains the **DdaGetAllBindings** element.

3.1.4.68.1.2 ExcelServiceSoap_DdaGetAllBindings_OutputMessage

The response WSDL message for the **DdaGetAllBindings** WSDL operation.

The SOAP body contains the **DdaGetAllBindingsResponse** element.

3.1.4.68.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaGetAllBindings	The input data for the DdaGetAllBindings WSDL operation.
DdaGetAllBindingsResponse	The result data for the DdaGetAllBindings WSDL operation.

3.1.4.68.2.1 DdaGetAllBindings

The input data for the **DdaGetAllBindings** WSDL operation.

```
<xs:element name="DdaGetAllBindings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:sequence>
</xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

3.1.4.68.2.2 DdaGetAllBindingsResponse

The result data for the **DdaGetAllBindings** WSDL operation.

```
<xs:element name="DdaGetAllBindingsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetAllBindingsResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindings"
        type="tns:ArrayOfBindingMetadata"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaGetAllBindingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

bindings: Unordered list of **BindingMetadata** items.

3.1.4.68.3 Complex Types

None.

3.1.4.68.4 Simple Types

None.

3.1.4.68.5 Attributes

None.

3.1.4.68.6 Groups

None.

3.1.4.68.7 Attribute Groups

None.

3.1.4.69 DdaGetBinding

Returns **BindingMetadata** for a single binding associated with an Office Web Extension.

```
<wsdl:operation name="DdaGetBinding" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
```

```

Service/ExcelServiceSoap/DdaGetBinding"
message="tns:ExcelServiceSoap_DdaGetBinding_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingResponse"
message="tns:ExcelServiceSoap_DdaGetBinding_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaGetBinding_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaGetBinding_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetBinding_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the Office Web Extension and a single binding name.
2. The protocol server returns the binding information with the given name if one is associated with the Office Web Extension.

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<84>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.69.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetBinding_InputMessage	The request WSDL message for the DdaGetBinding WSDL operation.
ExcelServiceSoap_DdaGetBinding_OutputMessage	The response WSDL message for the DdaGetBinding WSDL operation.

3.1.4.69.1.1 ExcelServiceSoap_DdaGetBinding_InputMessage

The request WSDL message for the **DdaGetBinding** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/DdaGetBinding

```

The SOAP body contains the **DdaGetBinding** element.

3.1.4.69.1.2 ExcelServiceSoap_DdaGetBinding_OutputMessage

The response WSDL message for the **DdaGetBinding** WSDL operation.

The SOAP body contains the **DdaGetBindingResponse** element.

3.1.4.69.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaGetBinding	The input data for the DdaGetBinding WSDL operation.
DdaGetBindingResponse	The result data for the DdaGetBinding WSDL operation.

3.1.4.69.2.1 DdaGetBinding

The input data for the **DdaGetBinding** WSDL operation.

```
<xs:element name="DdaGetBinding" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

bindingId: String that specifies the Office Web Extension defined name for a binding.

3.1.4.69.2.2 DdaGetBindingResponse

The result data for the **DdaGetBinding** WSDL operation.

```
<xs:element name="DdaGetBindingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetBindingResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="binding" type="tns:BindingMetadata"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaGetBindingResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

binding: A **BindingMetadata** item. MUST be present.

3.1.4.69.3 Complex Types

None.

3.1.4.69.4 Simple Types

None.

3.1.4.69.5 Attributes

None.

3.1.4.69.6 Groups

None.

3.1.4.69.7 Attribute Groups

None.

3.1.4.70 DdaGetBindingData

Returns worksheet cell contents associated with a binding and Office Web Extension.

```
<wsdl:operation name="DdaGetBindingData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetBindingData"
    message="tns:ExcelServiceSoap_DdaGetBindingData_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetBindingDataResponse"
    message="tns:ExcelServiceSoap_DdaGetBindingData_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetBindingDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_DdaGetBindingData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaGetBindingData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetindingData_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension, a binding name and an optional sub-range.
2. The protocol server returns cell contents for the binding within the given sub-range. The sub-range **MUST** be fully contained within the binding range. Each element inside the **bindingData** element **MUST** be of type **ArrayOfAnyType** and is a row of cell contents returned from the protocol server. The number of rows **MUST** be less than or equal to the number of rows requested.

3. The result can be filtered to omit values from hidden cells depending on **filterType** in the request. If **filterType** is **DdaFilterType.OnlyVisible** and the requested range contains hidden cells then those rows and columns MUST NOT be in the result.
4. The result MUST contain either all formatted values or unformatted cell values depending on **valueFormat** in the request. If **valueFormat** is **DdaValueType.Formatted** then all values returned in **bindingData** MUST be of type string. If **valueFormat** is **DdaValueType.Unformatted** then values returned in **bindingData** MUST be one of the following types: **boolean**, **double**, **string** or **CellError** (section [2.2.5.5](#)).

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<85>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.70.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetBindingData_InputMessage	The request WSDL message for the DdaGetBindingData WSDL operation.
ExcelServiceSoap_DdaGetBindingData_OutputMessage	The response WSDL message for the DdaGetBindingData WSDL operation.

3.1.4.70.1.1 ExcelServiceSoap_DdaGetBindingData_InputMessage

The request WSDL message for the **DdaGetBindingData** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaGetBindingData
```

The SOAP body contains the **DdaGetBindingData** element.

3.1.4.70.1.2 ExcelServiceSoap_DdaGetBindingData_OutputMessage

The response WSDL message for the **DdaGetBindingData** WSDL operation.

The SOAP body contains the **DdaGetBindingDataResponse** element.

3.1.4.70.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaGetBindingData	The input data for the DdaGetBindingData WSDL operation.

Element	Description
DdaGetBindingDataResponse	The result data for the DdaGetBindingData WSDL operation.

3.1.4.70.2.1 DdaGetBindingData

The input data for the **DdaGetBindingData** WSDL operation.

```
<xs:element name="DdaGetBindingData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="coerceType" type="tns:DdaCoerceType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns:DdaValueType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns:DdaFilterType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startRow" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startCol" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="rowCount" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="colCount" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

bindingId: String that specifies the Office Web Extension defined name for a binding.

coerceType: **DdaCoerceType** to apply to the result.

valueFormat: **DdaValueFormat** to specify which type of format to fetch from all cells.

filterType: **DdaFilterType** to specify from which cells data MUST be fetched.

startRow: Optional, start row of sub-range to set within the binding.

startCol: Optional, start column of sub-range to set within the binding.

rowCount: Optional, count of rows in sub-range to set within the binding.

colCount: Optional, count of columns in sub-range to set within the binding.

3.1.4.70.2.2 DdaGetBindingDataResponse

The result data for the **DdaGetBindingData** WSDL operation.

```
<xs:element name="DdaGetBindingDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetBindingDataResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingData" type="tns:ArrayOfAnyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:complexType>
</xs:element>
```

DdaGetBindingDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

bindingData: The worksheet cell contents returned from the protocol server. MUST be present.

3.1.4.70.3 Complex Types

None.

3.1.4.70.4 Simple Types

None.

3.1.4.70.5 Attributes

None.

3.1.4.70.6 Groups

None.

3.1.4.70.7 Attribute Groups

None.

3.1.4.71 DdaGetSelectedData

Returns worksheet cell contents associated with the given range.

```
<wsdl:operation name="DdaGetSelectedData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetSelectedData"
    message="tns:ExcelServiceSoap_DdaGetSelectedData_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetSelectedDataResponse"
    message="tns:ExcelServiceSoap_DdaGetSelectedData_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaGetSelectedDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_DdaGetSelectedData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaGetSelectedData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaGetSelectedData_OutputMessage** response message, as follows:

1. The protocol client sends the identifying the Office Web Extension, a range string that describes the selected range, a filter and value format options.
2. The protocol server will parse the range string to a range on a worksheet and return the cell contents in that range. Each element inside the **selectedData** element MUST be of type **ArrayOfAnyType** and is a row of cell returned from the protocol server. The number of rows MUST be less than or equal to the number of rows requested.
3. The result can be filtered to omit values from hidden cells depending on **filterType** in the request. If **filterType** is **DdaFilterType.OnlyVisible** and the requested range contains hidden cells then those rows and columns MUST NOT be in the result.
4. The result MUST contain either all formatted values or unformatted cell contents depending on **valueFormat** in the request. If **valueFormat** is **DdaValueType.Formatted** then all values returned in **selectedData** MUST be of type string. If **valueFormat** is **DdaValueType.Unformatted** then values returned in **selectedData** MUST be one of the following types: **boolean**, **double**, **string** or **CellError** (section [2.2.5.5](#)).

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<86>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.71.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaGetSelectedData_InputMessage	The request WSDL message for the DdaGetSelectedData WSDL operation.
ExcelServiceSoap_DdaGetSelectedData_OutputMessage	The response WSDL message for the DdaGetSelectedData WSDL operation.

3.1.4.71.1.1 ExcelServiceSoap_DdaGetSelectedData_InputMessage

The request WSDL message for the **DdaGetSelectedData** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaGetSelectedData
```

The SOAP body contains the **DdaGetSelectedData** element.

3.1.4.71.1.2 ExcelServiceSoap_DdaGetSelectedData_OutputMessage

The response WSDL message for the **DdaGetSelectedData** WSDL operation.

The SOAP body contains the **DdaGetSelectedDataResponse** element.

3.1.4.71.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaGetSelectedData	The input data for the DdaGetSelectedData WSDL operation.
DdaGetSelectedDataResponse	The result data for the DdaGetSelectedData WSDL operation.

3.1.4.71.2.1 DdaGetSelectedData

The input data for the **DdaGetSelectedData** WSDL operation.

```
<xs:element name="DdaGetSelectedData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="coerceType" type="tns:DdaCoerceType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns:DdaValueType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns:DdaFilterType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

coerceType: **DdaCoerceType** to apply to the result.

valueFormat: **DdaValueFormat** to specify which type of format to fetch from all cells.

filterType: **DdaFilterType** to specify from which cell contents MUST be fetched.

formula: A range, as specified in section [2.2.5.18](#), from which the cell contents MUST be fetched.

3.1.4.71.2.2 DdaGetSelectedDataResponse

The result data for the **DdaGetSelectedData** WSDL operation.

```
<xs:element name="DdaGetSelectedDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaGetSelectedDataResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="selectedData" type="tns:ArrayOfAnyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaGetSelectedDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

selectedData: The worksheet cell contents returned from the protocol server. MUST be present.

3.1.4.71.3 Complex Types

None.

3.1.4.71.4 Simple Types

None.

3.1.4.71.5 Attributes

None.

3.1.4.71.6 Groups

None.

3.1.4.71.7 Attribute Groups

None.

3.1.4.72 DdaLoadSettings

Returns settings associated with the given Office Web Extension.

```
<wsdl:operation name="DdaLoadSettings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaLoadSettings"
    message="tns:ExcelServiceSoap_DdaLoadSettings_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaLoadSettingsResponse"
    message="tns:ExcelServiceSoap_DdaLoadSettings_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaLoadSettingsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_DdaLoadSettings_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaLoadSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaLoadSettings_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension.
2. The protocol server returns the full list of settings associated with the Office Web Extension.

This operation is not a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<87>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.72.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaLoadSettings_InputMessage	The request WSDL message for the DdaLoadSettings WSDL operation.
ExcelServiceSoap_DdaLoadSettings_OutputMessage	The response WSDL message for the DdaLoadSettings WSDL operation.

3.1.4.72.1.1 ExcelServiceSoap_DdaLoadSettings_InputMessage

The request WSDL message for the **DdaLoadSettings** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaLoadSettings
```

The SOAP body contains the **DdaLoadSettings** element.

3.1.4.72.1.2 ExcelServiceSoap_DdaLoadSettings_OutputMessage

The response WSDL message for the **DdaLoadSettings** WSDL operation.

The SOAP body contains the **DdaLoadSettingsResponse** element.

3.1.4.72.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaLoadSettings	The input data for the DdaLoadSettings WSDL operation.
DdaLoadSettingsResponse	The result data for the DdaLoadSettings WSDL operation.

3.1.4.72.2.1 DdaLoadSettings

The input data for the **DdaLoadSettings** WSDL operation.

```
<xs:element name="DdaLoadSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```
</xs:sequence>
</xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

3.1.4.72.2 DdaLoadSettingsResponse

The result data for the **DdaLoadSettings** WSDL operation.

```
<xs:element name="DdaLoadSettingsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaLoadSettingsResult"
        type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="settings" type="tns:DdaSettings"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaLoadSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

settings: List of strings in key/value pairs associated with the given Office Web Extension.

3.1.4.72.3 Complex Types

None.

3.1.4.72.4 Simple Types

None.

3.1.4.72.5 Attributes

None.

3.1.4.72.6 Groups

None.

3.1.4.72.7 Attribute Groups

None.

3.1.4.73 DdaReleaseBinding

Removes the binding specified by name from the given Office Web Extension.

```
<wsdl:operation name="DdaReleaseBinding" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaReleaseBinding"
  >
```

```

message="tns:ExcelServiceSoap_DdaReleaseBinding_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaReleaseBindingResponse"
message="tns:ExcelServiceSoap_DdaReleaseBinding_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaReleaseBindingExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaReleaseBinding_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaReleaseBinding_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaReleaseBinding_OutputMessage** response message, as follows:

1. The protocol client sends the information identifying the Office Web Extension and a single binding name.
2. The protocol server deletes the binding from the workbook.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<88>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.73.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaReleaseBinding_InputMessage	The request WSDL message for the DdaReleaseBinding WSDL operation.
ExcelServiceSoap_DdaReleaseBinding_OutputMessage	The response WSDL message for the DdaReleaseBinding WSDL operation.

3.1.4.73.1.1 ExcelServiceSoap_DdaReleaseBinding_InputMessage

The request WSDL message for the **DdaReleaseBinding** WSDL operation.

The SOAP action value is:

```

http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Excel
ServiceSoap/DdaReleaseBinding

```

The SOAP body contains the **DdaReleaseBinding** element.

3.1.4.73.1.2 ExcelServiceSoap_DdaReleaseBinding_OutputMessage

The response WSDL message for the **DdaReleaseBinding** WSDL operation.

The SOAP body contains the **DdaReleaseBindingResponse** element.

3.1.4.73.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaReleaseBinding	The input data for the DdaReleaseBinding WSDL operation.
DdaReleaseBindingResponse	The result data for the DdaReleaseBinding WSDL operation.

3.1.4.73.2.1 DdaReleaseBinding

The input data for the **DdaReleaseBinding** WSDL operation.

```
<xs:element name="DdaReleaseBinding" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

bindingId: String that specifies the Office Web Extension defined name for a binding.

3.1.4.73.2.2 DdaReleaseBindingResponse

The result data for the **DdaReleaseBinding** WSDL operation.

```
<xs:element name="DdaReleaseBindingResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaReleaseBindingResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaReleaseBindingResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.73.3 Complex Types

None.

3.1.4.73.4 Simple Types

None.

3.1.4.73.5 Attributes

None.

3.1.4.73.6 Groups

None.

3.1.4.73.7 Attribute Groups

None.

3.1.4.74 DdaSaveSettings

Replaces all existing settings on the Office Web Extension with the given settings.

```
<wsdl:operation name="DdaSaveSettings" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSaveSettings"
    message="tns:ExcelServiceSoap_DdaSaveSettings_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSaveSettingsResponse"
    message="tns:ExcelServiceSoap_DdaSaveSettings_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSaveSettingsExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_DdaSaveSettings_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>
```

The protocol client sends an **ExcelServiceSoap_DdaSaveSettings_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaSaveSettings_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension and a list of settings to associate with the extension.
2. If **overwriteIfStale** is true the protocol server compares the client version number with the server version number and MUST fail if they are not equal. Otherwise it replaces the list of settings with the given list and increments the settings version number.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<89>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.74.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaSaveSettings_InputMessage	The request WSDL message for the DdaSaveSettings WSDL operation.
ExcelServiceSoap_DdaSaveSettings_OutputMessage	The response WSDL message for the DdaSaveSettings WSDL operation.

3.1.4.74.1.1 ExcelServiceSoap_DdaSaveSettings_InputMessage

The request WSDL message for the **DdaSaveSettings** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaSaveSettings
```

The SOAP body contains the **DdaSaveSettings** element.

3.1.4.74.1.2 ExcelServiceSoap_DdaSaveSettings_OutputMessage

The response WSDL message for the **DdaSaveSettings** WSDL operation.

The SOAP body contains the **DdaSaveSettingsResponse** element.

3.1.4.74.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaSaveSettings	The input data for the DdaSaveSettings WSDL operation.
DdaSaveSettingsResponse	The result data for the DdaSaveSettings WSDL operation.

3.1.4.74.2.1 DdaSaveSettings

The input data for the **DdaSaveSettings** WSDL operation.

```
<xs:element name="DdaSaveSettings" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

```

    <xs:element minOccurs="0" maxOccurs="1" name="settings" type="tns:DdaSettings"/>
    <xs:element minOccurs="1" maxOccurs="1" name="overwriteIfStale" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
</xs:element>

```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

settings: List of strings in key/value pairs that replace the existing list of settings.

overwriteIfStale: If true the client version number in the new settings is ignored, if false this method MUST fail if the client version number is not equal to the server version number.

3.1.4.74.2.2 DdaSaveSettingsResponse

The result data for the **DdaSaveSettings** WSDL operation.

```

<xs:element name="DdaSaveSettingsResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaSaveSettingsResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

DdaSaveSettingsResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.74.3 Complex Types

None.

3.1.4.74.4 Simple Types

None.

3.1.4.74.5 Attributes

None.

3.1.4.74.6 Groups

None.

3.1.4.74.7 Attribute Groups

None.

3.1.4.75 DdaSetBindingData

Sets worksheet cell contents associated with a binding on the given Office Web Extension.

```

<wsdl:operation name="DdaSetBindingData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetBindingData"
    message="tns:ExcelServiceSoap_DdaSetBindingData_InputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetBindingDataResponse"
    message="tns:ExcelServiceSoap_DdaSetBindingData_OutputMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
    Service/ExcelServiceSoap/DdaSetBindingDataExcelServerMessageFault"
    name="ExcelServerMessageFault"
    message="tns:ExcelServiceSoap_DdaSetBindingData_ExcelServerMessageFault_FaultMessage"
    xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaSetBindingData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaSetBindingData_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension, a binding name, a matrix of cell contents, and optional location within the binding to set the cell contents.
2. The protocol server sets the cell contents within the binding range starting at the given location.
3. Each element inside the **data** element MUST be of type **ArrayOfAnyType** and be a row of worksheet cells sent to the protocol server. The number of rows in **data** MUST be equal to the number of rows in the specified binding element minus the value of **startRow**.
4. Each element inside each of the **ArrayOfAnyType** type nested inside **data** MUST be a single worksheet cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of columns in the specified binding minus the value of **startCol**.
5. All worksheet cells in the **data** element MUST either be empty and with the `xsi:nil` attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**. If the value is of type **string**, it MUST NOT be longer than 32767 characters. If the protocol server does not support the value, it MUST fail. If the protocol server does not support setting a value in the specified location, it MUST fail.
6. If location or the cell contents extends beyond the binding range then the operation MUST fail.
7. If any of the changed cells are hidden and the user has only view access then the operation MUST fail.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<90>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.75.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaSetBindingData_InputMessage	The request WSDL message for the DdaSetBindingData WSDL operation.
ExcelServiceSoap_DdaSetBindingData_OutputMessage	The response WSDL message for the DdaSetBindingData WSDL operation.

3.1.4.75.1.1 ExcelServiceSoap_DdaSetBindingData_InputMessage

The request WSDL message for the **DdaSetBindingData** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaSetBindingData
```

The SOAP body contains the **DdaSetBindingData** element.

3.1.4.75.1.2 ExcelServiceSoap_DdaSetBindingData_OutputMessage

The response WSDL message for the **DdaSetBindingData** WSDL operation.

The SOAP body contains the **DdaSetBindingDataResponse** element.

3.1.4.75.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaSetBindingData	The input data for the DdaSetBindingData WSDL operation.
DdaSetBindingDataResponse	The result data for the DdaSetBindingData WSDL operation.

3.1.4.75.2.1 DdaSetBindingData

The input data for the **DdaSetBindingData** WSDL operation.

```
<xs:element name="DdaSetBindingData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startRow" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startCol" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="data" type="tns:ArrayOfAnyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

bindingId: String that specifies the Office Web Extension defined name for a binding.

startRow: Optional row to offset from the start of the binding to set cell contents.

startCol: Optional column to offset from the start of the binding to set cell contents.

data: A matrix of data to set into the bound cells contents.

3.1.4.75.2 DdaSetBindingDataResponse

The result data for the **DdaSetBindingData** WSDL operation.

```
<xs:element name="DdaSetBindingDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaSetBindingDataResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaSetBindingDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.75.3 Complex Types

None.

3.1.4.75.4 Simple Types

None.

3.1.4.75.5 Attributes

None.

3.1.4.75.6 Groups

None.

3.1.4.75.7 Attribute Groups

None.

3.1.4.76 DdaSetSelectedData

Sets worksheet cell contents associated with the given range.

```
<wsdl:operation name="DdaSetSelectedData" xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:input>
    wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedData"
```

```

message="tns:ExcelServiceSoap_DdaSetSelectedData_InputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedDataResponse"
message="tns:ExcelServiceSoap_DdaSetSelectedData_OutputMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaSetSelectedData_ExcelServerMessageFault_FaultMessage"
xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"/>
</wsdl:operation>

```

The protocol client sends an **ExcelServiceSoap_DdaSetSelectedData_InputMessage** request message, and the protocol server responds with an **ExcelServiceSoap_DdaSetSelectedData_OutputMessage** response message, as follows:

1. The protocol client sends information identifying the Office Web Extension, a matrix of cell contents, and range string that describes the selected range.
2. The protocol server parses the string to a range on a worksheet and sets the cell contents in that range.
3. Each element inside the **data** element MUST be of type **ArrayOfAnyType** and be a row of worksheet cell data sent to the protocol server. The number of rows in **data** MUST be equal to the number of rows in the specified binding element minus the value of **startRow**.
4. Each element inside each of the **ArrayOfAnyType** type nested inside **data** MUST be a single worksheet cell. The number of elements inside each such nested **ArrayOfAnyType** MUST be equal to the number of columns in the specified binding minus the value of **startCol**.
5. All worksheet cells in the **data** element MUST either be empty and with the `xsi:nil` attribute set to true or one of the following types: **boolean**, **dateTime**, **decimal**, **double**, **float**, **int**, **short**, **string**, or **unsigned byte**. If the value is of type **string**, it MUST NOT be longer than 32767 characters. If the protocol server does not support the value, it MUST fail. If the protocol server does not support setting a value in the specified location, it MUST fail.
6. If the given cell matrix does not exactly match the selected range then this method MUST fail.

This operation is a state changing operation on the protocol server.

In the event of an application error on the protocol server during this operation, a SOAP fault is returned, as specified in section [2.2.2](#). The **Id** element of the **ExcelServerMessage** SHOULD [<91>](#) be one of the values specified in section [2.2.2.1](#)

3.1.4.76.1 Messages

The following table summarizes the set of WSDL message definitions that are specific to this operation.

Message	Description
ExcelServiceSoap_DdaSetSelectedData_InputMessage	The request WSDL message for the DdaSetSelectedData WSDL operation.
ExcelServiceSoap_DdaSetSelectedData_OutputMessage	The response WSDL message for the

Message	Description
	DdaSetSelectedData WSDL operation.

3.1.4.76.1.1 ExcelServiceSoap_DdaSetSelectedData_InputMessage

The request WSDL message for the **DdaSetSelectedData** WSDL operation.

The SOAP action value is:

```
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/DdaSetSelectedData
```

The SOAP body contains the **DdaSetSelectedData** element.

3.1.4.76.1.2 ExcelServiceSoap_DdaSetSelectedData_OutputMessage

The response WSDL message for the **DdaSetSelectedData** WSDL operation.

The SOAP body contains the **DdaSetSelectedDataResponse** element.

3.1.4.76.2 Elements

The following table summarizes the XML schema element definitions that are specific to this operation.

Element	Description
DdaSetSelectedData	The input data for the DdaSetSelectedData WSDL operation.
DdaSetSelectedDataResponse	The result data for the DdaSetSelectedData WSDL operation.

3.1.4.76.2.1 DdaSetSelectedData

The input data for the **DdaSetSelectedData** WSDL operation.

```
<xs:element name="DdaSetSelectedData" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter" type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="data" type="tns:ArrayOfAnyType"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

parameter: A **CommandParameter** as specified in section [2.2.4.20](#). MUST be present.

controlId: String that is a unique ID for the Office Web Extension.

formula: A range, as specified in section [2.2.5.18](#), which describes the binding's cells.

data: A matrix of cell data to set into cells referred to by the formula parameter.

3.1.4.76.2.2 DdaSetSelectedDataResponse

The result data for the **DdaSetSelectedData** WSDL operation.

```
<xs:element name="DdaSetSelectedDataResponse" xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="DdaSetSelectedDataResult"
        type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
```

DdaSetSelectedDataResult: A **CommandResult** as specified in section [2.2.4.21](#). MUST be present.

3.1.4.76.3 Complex Types

None.

3.1.4.76.4 Simple Types

None.

3.1.4.76.5 Attributes

None.

3.1.4.76.6 Groups

None.

3.1.4.76.7 Attribute Groups

None.

3.1.5 Timer Events

3.1.5.1 Session Timeout

The **Session Timeout** event MAY [<92>](#) completes a request for a timed out time sessions (2) with a SOAP fault, as specified in section [2.2.2](#), with the value of the **Id** element of the **ExcelServerMessage** set to **InvalidOrTimedOutSession**.

3.1.5.2 Request Timeout

The **Request Timeout** event SHOULD [<93>](#) completes a request by the protocol server with a SOAP fault, as specified in section [2.2.2](#), with the value of the **Id** element of the **ExcelServerMessage** set to **MaxRequestDurationExceeded**.

3.1.6 Other Local Events

None.

4 Protocol Examples

4.1 Filtering and sorting a list and returning XML

This example shows how this protocol is used to open a view session. It demonstrates how this protocol is used to filter a list (2) in a workbook and to fetch the representation of the workbook in XML format as specified in [\[MS-EXSPXML\]](#). It also demonstrates how this protocol is used to sort the list (2).

This example assumes that a workbook has already been created and is stored in a location that the protocol server can load files from. The workbook contains a list with an AutoFilter. The following UML diagram illustrates this example.

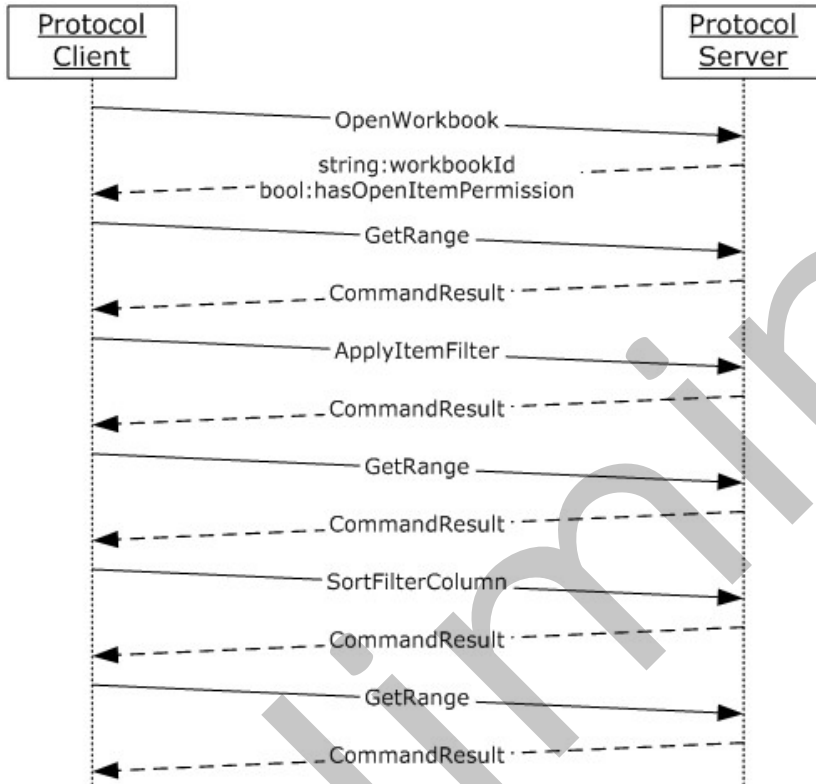


Figure 3: Communication sequence diagram for filtering and sorting a list and returning XML

The order of operations, including the relevant **XML** for each step, is as follows:

Opening a new session (loading the workbook)

Request

```
<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema">
```

```

    <OpenWorkbook
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
    <url>http://Contoso/Docs/Documents/Filter.xlsx</url>
    <flags>Recyclable</flags>
    <parameter>
    <StateId>-1</StateId>
    <VisibleSheetRangeRequest>
    <FirstRow>-1</FirstRow>
    <VisibleRowsRequested>1</VisibleRowsRequested>
    <FirstColumn>-1</FirstColumn>
    <VisibleColumnsRequested>1</VisibleColumnsRequested>
    <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
    <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
    <NoAutoAdjustToPublishedUsedRange>>false</NoAutoAdjustToPublishedUsedRange>
    <NeedAllBorderValues>>false</NeedAllBorderValues>
    <ChartsOnly>>false</ChartsOnly>
    </VisibleSheetRangeRequest>
    <Confirmation>Blank</Confirmation>
    <ConfirmationChoice>>false</ConfirmationChoice>
    <ProtocolClientId>ms-ewa</ProtocolClientId>
    <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
    <CompleteResponseTimeout>2000</CompleteResponseTimeout>
    <Flags></Flags>
    </parameter>
    <cultureParameter>
    <UICultureName>en-US</UICultureName>
    <DataCultureName>en-US</DataCultureName>
    <SharePointDataCultureName></SharePointDataCultureName>
    <TimeZoneSerialization>+0480#0000-11-00-01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-0060</TimeZoneSerialization>
    </cultureParameter>
    <subscriberId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</subscriberId>
    </OpenWorkbook>
  </s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <OpenWorkbookResponse
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
    <OpenWorkbookResult>
    <StateId>1</StateId>
    <SpreadsheetData>
    <Workbook>
    <WorkbookOptions/>
    <Styles>
    <Style ID="sD">
    <Font Size="11" FontName="Calibri" Color="#000000"/>
    </Style>
    <Style ID="1">
    <Font Size="11" FontName="Calibri" Color="#000000"/><Interior
Color="#D9D9D9" Pattern="Solid"/>
    </Style>

```

```

<Style ID="2">
  <Font Size="11" FontName="Calibri" Color="#000000"/>
  <Alignment Horizontal="Left"/>
  <Interior Color="#D9D9D9" Pattern="Solid"/>
</Style>
<Style ID="-1">
  <Borders/>
</Style>
<Style ID="bD">
  <Borders>
    <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
  </Borders>
</Style>
<Style ID="-3">
  <Borders>
    <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
  </Borders>
</Style>
</Styles>
<Worksheet ActiveSheet="1" Name="Sheet1">
  <WorksheetOptions DisplayOutlines="1"/>
  <autofilters>
    <autofilter Row="0" ColFirst="0" Type="Sheet">
      <item Index="0" DataType="Text" Name="Customer Geography"/>
    </autofilter>
  </autofilters>
  <Table LastNonEmptyRow="54" LastNonEmptyColumn="2"
CurrentFirstRow="1" FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1"
FirstVisibleColumn="1" LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4"
DefaultRowHeight="15" DefaultRowHeightPixels="20" DefaultColumnWidth="48"
DefaultColumnWidthPixels="64" DefaultIndentWidth="6.75" DefaultIndentWidthPixels="9"><Column
Width="116.25" WidthPixels="155"/>
    <Row Height="15" HeightPixels="20"><Cell StyleID="2"
BorderID="-3">
      <Data>Customer Geography</Data>
    </Cell>
  </Row>
</Table>
</Worksheet>
<Worksheet Name="Sheet2">
  <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
<Worksheet Name="Sheet3">
  <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
</Workbook>
</SpreadsheetData>
<HealthInformation>
  <StateFlags></StateFlags>
  <HealthScore>0</HealthScore>
</HealthInformation>
<SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
<EditSessionIsDirty>>false</EditSessionIsDirty>
<EditSessionHasMultipleUsers>>false</EditSessionHasMultipleUsers>

```

```

        </OpenWorkbookResult>
        <workbookId>1.V21.214QQ/7ySliVKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</workbookId>
        <outFlags>HasOpenItemPermission</outFlags>

<clientWorkbookUri>http://Contoso/Docs/Documents/Filter.xlsx</clientWorkbookUri>
    </OpenWorkbookResponse>
</s:Body>
</s:Envelope>

```

Fetching the XML

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRange
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalServic
e/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</WorkbookId>
        <StateId>1</StateId>
        <VisibleSheetRangeRequest>
          <SheetName>Sheet1</SheetName>
          <FirstRow>0</FirstRow>
          <VisibleRowsRequested>28</VisibleRowsRequested>
          <FirstColumn>0</FirstColumn>
          <VisibleColumnsRequested>30</VisibleColumnsRequested>
          <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
          <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
          <NoAutoAdjustToPublishedUsedRange>true</NoAutoAdjustToPublishedUsedRange>
          <NeedAllBorderValues>false</NeedAllBorderValues>
          <ChartsOnly>false</ChartsOnly>
        </VisibleSheetRangeRequest>
        <Confirmation>Blank</Confirmation>
        <ConfirmationChoice>false</ConfirmationChoice>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
      </parameter>
    </GetRange>
  </s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRangeResponse
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalServic
e/">

```

```

<GetRangeResult>
  <StateId>1</StateId>
  <SpreadsheetData><Workbook><WorkbookOptions/>
    <Styles>
      <Style ID="sD">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
      </Style>
      <Style ID="1">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
        <Interior Color="#D9D9D9" Pattern="Solid"/>
      </Style>
      <Style ID="2">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
        <Alignment Horizontal="Left"/>
        <Interior Color="#D9D9D9" Pattern="Solid"/>
      </Style>
      <Style ID="3">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
        <Interior Color="#D9D9D9" Pattern="Solid"/>
      </Style>
      <Style ID="4">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
        <Alignment Horizontal="Left"/>
        <Interior Color="#D9D9D9" Pattern="Solid"/>
      </Style>
      <Style ID="5">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
        <Alignment Horizontal="Left"/>
      </Style>
      <Style ID="6">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
      </Style>
      <Style ID="7">
        <Font Size="11" FontName="Calibri" Color="#000000"/>
        <Alignment Horizontal="Left"/>
      </Style>
      <Style ID="-1">
        <Borders/>
      </Style>
      <Style ID="bD">
        <Borders>
          <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
          <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
        </Borders>
      </Style>
      <Style ID="-3">
        <Borders>
          <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
        </Borders>
      </Style>
      <Style ID="-4">
        <Borders>
          <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
        </Borders>
      </Style>
    </Styles>
  </Workbook>
</SpreadsheetData>
</WorkbookOptions/>
</Workbook>
</StateId>1</StateId>
</GetRangeResult>

```

```

<Style ID="-5">
  <Borders>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
  </Borders>
</Style>
<Style ID="-6">
  <Borders>
    <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
  </Borders>
</Style>
<Style ID="-7">
  <Borders>
    <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
  </Borders>
</Style>
</Styles>
<Worksheet ActiveSheet="1" Name="Sheet1"><WorksheetOptions
DisplayOutlines="1"/>
  <autofilters>
    <autofilter Row="0" ColFirst="0" Type="Sheet"><item Index="0"
DataType="Text" Name="Customer Geography"/>
    <item Index="1" Name="Internet Sales Amount "/>
  </autofilter>
</autofilters>
  <Table LastNonEmptyRow="54" LastNonEmptyColumn="30" CurrentFirstRow="1"
FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1" FirstVisibleColumn="1"
LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4" DefaultRowHeight="15"
DefaultRowHeightPixels="20" DefaultColumnWidth="48" DefaultColumnWidthPixels="64"
DefaultIndentWidth="6.75" DefaultIndentWidthPixels="9">
    <Column Width="116.25" WidthPixels="155"/>
    <Column Width="131.25" WidthPixels="175"/>
    <Column Width="48" WidthPixels="64" Span="27"/>
    <Row Height="15" HeightPixels="20">
      <Cell StyleID="2" BorderID="-5">
        <Data>Customer Geography</Data>
      </Cell>
      <Cell StyleID="4" BorderID="-6">
        <Data xml:space="preserve">Internet Sales Amount</Data>
      </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
      <Cell StyleID="5">
        <Data>New South Wales</Data>
      </Cell>
      <Cell StyleID="7" FormulaBarText="3934485.7265">
        <Data xml:space="preserve"> $
3,934,485.73
      </Data>
      </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
      <Cell StyleID="5">
        <Data>Queensland</Data>
      </Cell>
      <Cell StyleID="7" FormulaBarText="1988415.0297">

```

```

        <Data xml:space="preserve"> $
1,988,415.03
</Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>South Australia</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="618255.8616">
        <Data xml:space="preserve"> $
618,255.86 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Tasmania</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="239937.9033">
        <Data xml:space="preserve"> $
239,937.90 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Victoria</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="2279906.0633">
        <Data xml:space="preserve"> $
2,279,906.06
</Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Alberta</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="22467.8025">
        <Data xml:space="preserve"> $
22,467.80 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>British Columbia</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="1955340.0996">
        <Data xml:space="preserve"> $
1,955,340.10
</Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">
    <Cell StyleID="5">
        <Data>Ontario</Data>
    </Cell>
    <Cell StyleID="7" FormulaBarText="36.96">
        <Data xml:space="preserve"> $
36.96 </Data>
    </Cell>
</Row>
<Row Height="15" HeightPixels="20">

```

```

        <Cell StyleID="5">
            <Data>Charente-Maritime</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="34441.7349">
            <Data xml:space="preserve"> $
34,441.73 </Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Essonne</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="279297.1838">
            <Data xml:space="preserve"> $
279,297.18 </Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Garonne (Haute)</Data>
        </Cell><Cell StyleID="7" FormulaBarText="54641.7232">
            <Data xml:space="preserve"> $
54,641.72 </Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Hauts de Seine</Data>
        </Cell><Cell StyleID="7" FormulaBarText="263416.1854">
            <Data xml:space="preserve"> $
263,416.19 </Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Loir et Cher</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="21473.7396">
            <Data xml:space="preserve"> $
21,473.74 </Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Loiret</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="91562.9056">
            <Data xml:space="preserve"> $
91,562.91 </Data>
        </Cell>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
            <Data>Moselle</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="94046.2295">
            <Data xml:space="preserve"> $
94,046.23 </Data>
        </Cell>

```



```

</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Nord</Data>
  </Cell><Cell StyleID="7" FormulaBarText="391400.2014">
    <Data xml:space="preserve"> $
391,400.20 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Pas de Calais</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="11342.9225">
    <Data xml:space="preserve"> $
11,342.92 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Seine (Paris)</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="539725.8">
    <Data xml:space="preserve"> $
539,725.80 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Seine et Marne</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="109735.2384">
    <Data xml:space="preserve"> $
109,735.24 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Seine Saint Denis</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="379479.7479">
    <Data xml:space="preserve"> $
379,479.75 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Somme</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="29555.2814">
    <Data xml:space="preserve"> $
29,555.28 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Val de Marne</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="28478.1246">

```

```

                <Data xml:space="preserve"> $
28,478.12 </Data>
            </Cell>
        </Row>
        <Row Height="15" HeightPixels="20">
            <Cell StyleID="5">
                <Data>Val d'Oise</Data>
            </Cell>
            <Cell StyleID="7" FormulaBarText="46755.9003">
                <Data xml:space="preserve"> $
46,755.90 </Data>
            </Cell>
        </Row>
        <Row Height="15" HeightPixels="20">
            <Cell StyleID="5">
                <Data>Yveline</Data>
            </Cell>
            <Cell StyleID="7" FormulaBarText="268664.7958">
                <Data xml:space="preserve"> $
268,664.80 </Data>
            </Cell>
        </Row>
        <Row Height="15" HeightPixels="20">
            <Cell StyleID="5">
                <Data>Bayern</Data>
            </Cell>
            <Cell StyleID="7" FormulaBarText="399966.7822">
                <Data xml:space="preserve"> $
399,966.78 </Data>
            </Cell>
        </Row>
        <Row Height="15" HeightPixels="20">
            <Cell StyleID="5">
                <Data>Brandenburg</Data>
            </Cell>
            <Cell StyleID="7" FormulaBarText="119571.0799">
                <Data xml:space="preserve"> $
119,571.08 </Data>
            </Cell>
        </Row>
        <Row Height="15" HeightPixels="20">
            <Cell StyleID="5">
                <Data>Hamburg</Data>
            </Cell>
            <Cell StyleID="7" FormulaBarText="467219.0392">
                <Data xml:space="preserve"> $
467,219.04 </Data>
            </Cell>
        </Row>
    </Table>
</Worksheet>
<Worksheet Name="Sheet2">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
<Worksheet Name="Sheet3">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
</Workbook>
</SpreadsheetData>

```

```

    <HealthInformation>
      <StateFlags></StateFlags>
      <HealthScore>0</HealthScore>
    </HealthInformation>
    <SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
    <EditSessionIsDirty>>false</EditSessionIsDirty>
    <EditSessionHasMultipleUsers>>false</EditSessionHasMultipleUsers>
  </GetRangeResult>
</GetRangeResponse>
</s:Body>
</s:Envelope>

```

Applying the filter

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <ApplyItemFilter
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-f65d01d0a3991.N</WorkbookId>
        <StateId>-1</StateId>
        <Confirmation>Blank</Confirmation>
        <ConfirmationChoice>>false</ConfirmationChoice>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
      </parameter>
      <autoFilterOptions>
        <AutoFilterType>Sheet</AutoFilterType>
        <CriteriaType>AboveAverage</CriteriaType>
        <Id>0</Id>
        <SheetName>Sheet1</SheetName>
        <Column>2</Column>
        <NamedObjectView>>false</NamedObjectView>
      </autoFilterOptions>
      <blanks>>false</blanks>
      <hideBlanks>>false</hideBlanks>
    </ApplyItemFilter>
  </s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <ApplyItemFilterResponse
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <ApplyItemFilterResult>

```

```

        <StateId>2</StateId>
        <HealthInformation>
            <StateFlags></StateFlags>
            <HealthScore>0</HealthScore>
        </HealthInformation>
        <SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
        <EditSessionIsDirty>>false</EditSessionIsDirty>
        <EditSessionHasMultipleUsers>>false</EditSessionHasMultipleUsers>
    </ApplyItemFilterResult>
</ApplyItemFilterResponse>
</s:Body>
</s:Envelope>

```

Fetching the XML

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRange
      xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</WorkbookId>
        <StateId>2</StateId>
        <VisibleSheetRangeRequest>
          <SheetName>Sheet1</SheetName>
          <FirstRow>0</FirstRow>
          <VisibleRowsRequested>28</VisibleRowsRequested>
          <FirstColumn>0</FirstColumn>
          <VisibleColumnsRequested>30</VisibleColumnsRequested>
          <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
          <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
          <NoAutoAdjustToPublishedUsedRange>>true</NoAutoAdjustToPublishedUsedRange>
          <NeedAllBorderValues>>false</NeedAllBorderValues>
          <ChartsOnly>>false</ChartsOnly>
        </VisibleSheetRangeRequest>
        <Confirmation>Blank</Confirmation>
        <ConfirmationChoice>>false</ConfirmationChoice>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
      </parameter>
    </GetRange>
  </s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema">

```

```

    <GetRangeResponse
xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
  <GetRangeResult>
    <StateId>2</StateId>
    <SpreadsheetData>
      <Workbook>
        <WorkbookOptions/>
        <Styles>
          <Style ID="sD">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
          </Style>
          <Style ID="1">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
            <Interior Color="#D9D9D9" Pattern="Solid"/>
          </Style>
          <Style ID="2">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
            <Alignment Horizontal="Left"/>
            <Interior Color="#D9D9D9" Pattern="Solid"/>
          </Style>
          <Style ID="3">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
            <Interior Color="#D9D9D9" Pattern="Solid"/>
          </Style>
          <Style ID="4">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
            <Alignment Horizontal="Left"/>
            <Interior Color="#D9D9D9" Pattern="Solid"/>
          </Style>
          <Style ID="5">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
            <Alignment Horizontal="Left"/>
          </Style>
          <Style ID="6">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
          </Style>
          <Style ID="7">
            <Font Size="11" FontName="Calibri" Color="#000000"/>
            <Alignment Horizontal="Left"/>
          </Style>
          <Style ID="-1">
            <Borders/>
          </Style>
          <Style ID="bD">
            <Borders>
              <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
              <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
            </Borders>
          </Style>
          <Style ID="-3">
            <Borders>
              <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
            </Borders>
          </Style>
          <Style ID="-4">

```

```

        <Borders>
          <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D0D7E5"/>
        </Borders>
      </Style>
    <Style ID="-5">
      <Borders>
        <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
      </Borders>
    </Style>
    <Style ID="-6">
      <Borders>
        <Border Weight="1" Position="Right" LineStyle="Continuous"
Color="#D9D9D9"/>
        <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D9D9D9"/>
      </Borders>
    </Style>
    <Style ID="-7">
      <Borders>
        <Border Weight="1" Position="Bottom" LineStyle="Continuous"
Color="#D0D7E5"/>
      </Borders>
    </Style>
  </Styles>
  <Worksheet ActiveSheet="1" Name="Sheet1">
    <WorksheetOptions DisplayOutlines="1"/>
    <autofilters>
      <autofilter Row="0" ColFirst="0" Type="Sheet">
        <item Index="0" DataType="Text" Name="Customer Geography"/>
        <item Index="1" Type="Filtered" Name=" Internet Sales Amount "
CriteriaType="AboveAverage"/>
      </autofilter>
    </autofilters>
    <Table LastNonEmptyRow="70" LastNonEmptyColumn="30" CurrentFirstRow="1"
FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1" FirstVisibleColumn="1"
LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4" DefaultRowHeight="15"
DefaultRowHeightPixels="20" DefaultColumnWidth="48" DefaultColumnWidthPixels="64"
DefaultIndentWidth="6.75" DefaultIndentWidthPixels="9">
      <Column Width="116.25" WidthPixels="155"/><Column Width="131.25"
WidthPixels="175"/>
      <Column Width="48" WidthPixels="64" Span="27"/>
      <Row Height="15" HeightPixels="20">
        <Cell StyleID="2" BorderID="-5">
          <Data>Customer Geography</Data>
        </Cell>
        <Cell StyleID="4" BorderID="-6">
          <Data xml:space="preserve"> Internet Sales Amount </Data>
        </Cell>
      </Row>
      <Row Height="15" HeightPixels="20">
        <Cell StyleID="5">
          <Data>New South Wales</Data>
        </Cell>
        <Cell StyleID="7" FormulaBarText="3934485.7265">
          <Data xml:space="preserve"> $
3,934,485.73 </Data>
        </Cell>
      </Row>
    </Table>
  </Worksheet>

```

```

<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Queensland</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="1988415.0297">
    <Data xml:space="preserve"> $
1,988,415.03 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>South Australia</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="618255.8616">
    <Data xml:space="preserve"> $
618,255.86 </Data>
  </Cell>
</Row>
<Row Hidden="1"/>
<Row Index="6" Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Victoria</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="2279906.0633">
    <Data xml:space="preserve"> $
2,279,906.06 </Data>
  </Cell>
</Row>
<Row Hidden="1"/>
<Row Index="8" Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>British Columbia</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="1955340.0996">
    <Data xml:space="preserve"> $
1,955,340.10 </Data>
  </Cell>
</Row>
<Row Hidden="1" Span="19"/>
<Row Index="29" Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Hessen</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="794876.0774">
    <Data xml:space="preserve"> $
794,876.08 </Data>
  </Cell>
</Row>
<Row Hidden="1"/>
<Row Index="31" Height="15" HeightPixels="20">
  <Cell StyleID="5">
    <Data>Saarland</Data>
  </Cell>
  <Cell StyleID="7" FormulaBarText="653087.484">
    <Data xml:space="preserve"> $
653,087.48 </Data>
  </Cell>
</Row>
<Row Height="15" HeightPixels="20">

```



```

        <Cell StyleID="6" Index="2"/>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="6" Index="2"/>
    </Row>
    <Row Height="15" HeightPixels="20">
        <Cell StyleID="6" Index="2"/>
    </Row>
    <Row Height="15" HeightPixels="20"><Cell StyleID="6" Index="2"/>
    </Row>
    <Row Height="15" HeightPixels="20"><Cell StyleID="6" Index="2"/>
    </Row>
    <Row Height="15" HeightPixels="20"><Cell StyleID="6" Index="2"/>
    </Row>
    <Row Height="15" HeightPixels="20"><Cell StyleID="6" Index="2"/>
    </Row>
    <Row Height="15" HeightPixels="20"><Cell StyleID="6" Index="2"/>
    </Row>
    </Table>
</Worksheet>
<Worksheet Name="Sheet2"><WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
<Worksheet Name="Sheet3">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
</Workbook>
</SpreadsheetData>
<HealthInformation>
    <StateFlags></StateFlags>
    <HealthScore>0</HealthScore>
</HealthInformation>
<SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
<EditSessionIsDirty>>false</EditSessionIsDirty>
<EditSessionHasMultipleUsers>>false</EditSessionHasMultipleUsers>
</GetRangeResult>
</GetRangeResponse>
</s:Body>
</s:Envelope>

```

Applying the sort

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <SortFilterColumn
      xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-
01T02:00:00:0000#+0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-
f65d01d0a3991.N</WorkbookId>
        <StateId>-1</StateId>
        <Confirmation>Blank</Confirmation>
        <ConfirmationChoice>>false</ConfirmationChoice>
        <ProtocolClientId>ms-ewa</ProtocolClientId>
        <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
      </parameter>
    </SortFilterColumn>
  </s:Body>
</s:Envelope>

```

```

        <CompleteResponseTimeout>0</CompleteResponseTimeout>
        <Flags></Flags>
    </parameter>
    <autoFilterOptions>
        <AutoFilterType>Sheet</AutoFilterType>
        <CriteriaType>Nil</CriteriaType>
        <Id>0</Id>
        <SheetName>Sheet1</SheetName>
        <Column>2</Column>
        <NamedObjectView>>false</NamedObjectView>
    </autoFilterOptions>
    <ascending>>true</ascending>
</SortFilterColumn>
</s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <SortFilterColumnResponse
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <SortFilterColumnResult>
        <StateId>3</StateId>
        <HealthInformation>
          <StateFlags></StateFlags>
          <HealthScore>0</HealthScore>
        </HealthInformation>
        <SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
        <EditSessionIsDirty>>false</EditSessionIsDirty>
        <EditSessionHasMultipleUsers>>false</EditSessionHasMultipleUsers>
      </SortFilterColumnResult>
    </SortFilterColumnResponse>
  </s:Body>
</s:Envelope>

```

Fetching the XML

Request

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
  <s:Body xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
    <GetRange
  xmlns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/">
      <parameter>
        <WorkbookId>1.V21.214QQ/7ySliVKuAUptXrY90.5.en-US5.en-US73.+0480#0000-11-00-01T02:00:00:0000#0000#0000-03-00-02T02:00:00:0000#-006036.bebf895a-f22a-49d5-b8b0-f65d01d0a3991.N</WorkbookId>
        <StateId>3</StateId>
        <VisibleSheetRangeRequest>
          <SheetName>Sheet1</SheetName>
          <FirstRow>0</FirstRow>
          <VisibleRowsRequested>28</VisibleRowsRequested>
        </VisibleSheetRangeRequest>
      </parameter>
    </GetRange>
  </s:Body>
</s:Envelope>

```

```

    <FirstColumn>0</FirstColumn>
    <VisibleColumnsRequested>30</VisibleColumnsRequested>
    <VisibleFirstRowOffset>0</VisibleFirstRowOffset>
    <VisibleFirstColumnOffset>0</VisibleFirstColumnOffset>
    <NoAutoAdjustToPublishedUsedRange>true</NoAutoAdjustToPublishedUsedRange>
    <NeedAllBorderValues>>false</NeedAllBorderValues>
    <ChartsOnly>>false</ChartsOnly>
  </VisibleSheetRangeRequest>
  <Confirmation>Blank</Confirmation>
  <ConfirmationChoice>>false</ConfirmationChoice>
  <ProtocolClientId>ms-ewa</ProtocolClientId>
  <RequestSiteId>bebf895a-f22a-49d5-b8b0-f65d01d0a399</RequestSiteId>
  <CompleteResponseTimeout>0</CompleteResponseTimeout>
  <Flags></Flags>
</parameter>
</GetRange>
</s:Body>
</s:Envelope>

```

Response

```

<s:Envelope xmlns:s="http://schemas.xmlsoap.org/soap/envelope/">
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  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
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        <SpreadsheetData>
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            <WorkbookOptions/>
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</s:Envelope>

```

```

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Color="#D0D7E5"/>
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</Style>
</Styles>
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  <WorksheetOptions DisplayOutlines="1"/>
  <autofilters>
    <autofilter Row="0" ColFirst="0" Type="Sheet">
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      <item Index="1" Type="BothAsc" Name=" Internet Sales Amount "
CriteriaType="AboveAverage"/>
    </autofilter>
  </autofilters>

```

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FirstVisibleRow="1" LastVisibleRow="1048576" CurrentFirstColumn="1" FirstVisibleColumn="1"
LastVisibleColumn="16384" SelectionTop="2" SelectionLeft="4" DefaultRowHeight="15"
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    </Cell>
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    </Cell>
  </Row>
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    <Cell StyleID="7" FormulaBarText="1955340.0996">

```

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	<Data>Washington</Data>	
	</Cell>	
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</Data>	<Data xml:space="preserve"> \$	2,467,248.34
	</Cell>	
	</Row>	
	<Row Hidden="1" Span="1"/>	
	<Row Index="35" Height="15" HeightPixels="20">	
	<Cell StyleID="5">	
	<Data>England</Data>	
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	<Data>New South Wales</Data>	
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</Data>	<Data xml:space="preserve"> \$	3,934,485.73
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	</Row>	
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	<Data>California</Data>	
	</Cell>	
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```

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    </Data>
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    </Row>
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        <Cell StyleID="6" Index="2"/>
    </Row>
    </Table>
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<Worksheet Name="Sheet2">
    <WorksheetOptions DisplayOutlines="1"/>
</Worksheet>
<Worksheet Name="Sheet3">

```

```
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    </Workbook>
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    <HealthScore>0</HealthScore>
  </HealthInformation>
  <SecondsBeforeNextPoll>60</SecondsBeforeNextPoll>
  <EditSessionIsDirty>>false</EditSessionIsDirty>
  <EditSessionHasMultipleUsers>>false</EditSessionHasMultipleUsers>
</GetRangeResult>
</GetRangeResponse>
</s:Body>
</s:Envelope>
```


5 Security

5.1 Security Considerations for Implementers

In addition to the security considerations applicable to the underlying protocols, there are security risks associated with exposing session identifiers (2). If the session identifier is exposed, then it is possible for an attacker to read information from, or modify data in, a session on the protocol server. An implementer of this protocol needs to consider keeping session identifiers protected. There could be some cases where it is desirable to expose the session identifier, however, an implementer is to use caution in how they expose session identifiers and consider the security risks.

5.2 Index of Security Parameters

None.

6 Appendix A: Full WSDL

WSDL name	Prefix	Section
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/	tns	6.1
http://tempuri.org/	Unassigned	6.2

For ease of implementation, the full WSDLs are provided in the following sections.

6.1

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/> WSDL

```
<?xml version="1.0"?>
<wsdl:definitions
  xmlns:tns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
  xmlns:wsam="http://www.w3.org/2007/05/addressing/metadata"
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  targetNamespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:types>
    <xs:schema
      xmlns:tns1="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Imports"
      targetNamespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/Imports">
      <xs:import
        namespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/" />
      <xs:import
        namespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server" />
      <xs:import namespace="http://microsoft.com/wsdl/types/" />
      <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/" />
    </xs:schema>
  </wsdl:types>
  <wsdl:message name="ExcelServiceSoap_GetBixAnalysis_InputMessage">
    <wsdl:part name="parameters" element="tns:GetBixAnalysis" />
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetBixAnalysis_OutputMessage">
    <wsdl:part name="parameters" element="tns:GetBixAnalysisResponse" />
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetBixAnalysis_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
      xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
      name="detail" element="q1:ExcelServerMessage" />
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_BixDrill_InputMessage">
    <wsdl:part name="parameters" element="tns:BixDrill" />
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_BixDrill_OutputMessage">
    <wsdl:part name="parameters" element="tns:BixDrillResponse" />
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_BixDrill_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
      xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
      name="detail" element="q1:ExcelServerMessage" />
  </wsdl:message>
</wsdl:definitions>
```

```

<wsdl:message name="ExcelServiceSoap_GetPivotFieldManagerData_InputMessage">
  <wsdl:part name="parameters" element="tns:GetPivotFieldManagerData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetPivotFieldManagerDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPivotFieldManagerData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFieldListData_InputMessage">
  <wsdl:part name="parameters" element="tns:GetPivotFieldListData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotFieldListData_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetPivotFieldListDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPivotFieldListData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage">
  <wsdl:part name="parameters" element="tns:ExpandPivotFieldListLevels"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage">
  <wsdl:part name="parameters" element="tns:ExpandPivotFieldListLevelsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ExpandPivotFieldListLevels_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage">
  <wsdl:part name="parameters" element="tns:ApplyPivotFieldManagerHiddenState"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage">
  <wsdl:part name="parameters" element="tns:ApplyPivotFieldManagerHiddenStateResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_ExcelServerMessageFault_FaultMessage
">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyPivot_InputMessage">
  <wsdl:part name="parameters" element="tns:ApplyPivot"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyPivot_OutputMessage">
  <wsdl:part name="parameters" element="tns:ApplyPivotResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyPivot_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>

```

```

<wsdl:message name="ExcelServiceSoap_ProcessODataRequest_InputMessage">
  <wsdl:part name="parameters" element="tns:ProcessODataRequest"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ProcessODataRequest_OutputMessage">
  <wsdl:part name="parameters" element="tns:ProcessODataRequestResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ProcessODataRequest_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage">
  <wsdl:part name="parameters" element="tns:ApplyTimeSlicerInteractivity"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage">
  <wsdl:part name="parameters" element="tns:ApplyTimeSlicerInteractivityResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ApplyTimeSlicerInteractivity_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage">
  <wsdl:part name="parameters" element="tns:ApplyPivotValueFieldSettings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage">
  <wsdl:part name="parameters" element="tns:ApplyPivotValueFieldSettingsResponse"/>
</wsdl:message>
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name="ExcelServiceSoap_ApplyPivotValueFieldSettings_ExcelServerMessageFault_FaultMessage">
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name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage">
  <wsdl:part name="parameters" element="tns:GetPivotValueFieldSettings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetPivotValueFieldSettingsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetPivotValueFieldSettings_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetSelectedData_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetSelectedData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetSelectedData_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetSelectedDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaGetSelectedData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>

```

```

<wsdl:message name="ExcelServiceSoap_DdaSetSelectedData_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaSetSelectedData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSetSelectedData_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaSetSelectedDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaSetSelectedData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaAddBinding_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaAddBinding"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaAddBinding_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaAddBindingResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaAddBinding_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetBinding_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetBinding"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetBinding_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetBindingResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetBinding_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
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  <wsdl:part name="parameters" element="tns:DdaReleaseBinding"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaReleaseBinding_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaReleaseBindingResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaReleaseBinding_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetBindingData_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetBindingData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetBindingData_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetBindingDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaGetBindingData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
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  <wsdl:part name="parameters" element="tns:DdaSetBindingData"/>

```

```

</wsdl:message>
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  <wsdl:part name="parameters" element="tns:DdaSetBindingDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaSetBindingData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetAllBindings_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetAllBindings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaGetAllBindings_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaGetAllBindingsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_DdaGetAllBindings_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaLoadSettings_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaLoadSettings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaLoadSettings_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaLoadSettingsResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaLoadSettings_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSaveSettings_InputMessage">
  <wsdl:part name="parameters" element="tns:DdaSaveSettings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSaveSettings_OutputMessage">
  <wsdl:part name="parameters" element="tns:DdaSaveSettingsResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_DdaSaveSettings_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_OpenWorkbook_InputMessage">
  <wsdl:part name="parameters" element="tns:OpenWorkbook"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_OpenWorkbook_OutputMessage">
  <wsdl:part name="parameters" element="tns:OpenWorkbookResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_OpenWorkbook_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_CloseWorkbook_InputMessage">
  <wsdl:part name="parameters" element="tns:CloseWorkbook"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_CloseWorkbook_OutputMessage">
  <wsdl:part name="parameters" element="tns:CloseWorkbookResponse"/>

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</wsdl:message>
<wsdl:message name="ExcelServiceSoap_CloseWorkbook_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SaveWorkbook_InputMessage">
  <wsdl:part name="parameters" element="tns:SaveWorkbook"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SaveWorkbook_OutputMessage">
  <wsdl:part name="parameters" element="tns:SaveWorkbookResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SaveWorkbook_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SaveWorkbookAs_InputMessage">
  <wsdl:part name="parameters" element="tns:SaveWorkbookAs"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SaveWorkbookAs_OutputMessage">
  <wsdl:part name="parameters" element="tns:SaveWorkbookAsResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SaveWorkbookAs_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ParseRange_InputMessage">
  <wsdl:part name="parameters" element="tns:ParseRange"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ParseRange_OutputMessage">
  <wsdl:part name="parameters" element="tns:ParseRangeResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ParseRange_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRange_InputMessage">
  <wsdl:part name="parameters" element="tns:GetRange"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRange_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRange_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeValues_InputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeValues"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeValues_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeValuesResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeValues_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>

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</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ProcessRestRequest_InputMessage">
  <wsdl:part name="parameters" element="tns:ProcessRestRequest"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ProcessRestRequest_OutputMessage">
  <wsdl:part name="parameters" element="tns:ProcessRestRequestResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ProcessRestRequest_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeValuesA1_InputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeValuesA1"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeValuesA1_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeValuesA1Response"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetRangeValuesA1_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetRange_InputMessage">
  <wsdl:part name="parameters" element="tns:SetRange"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetRange_OutputMessage">
  <wsdl:part name="parameters" element="tns:SetRangeResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetRange_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetRangeA1_InputMessage">
  <wsdl:part name="parameters" element="tns:SetRangeA1"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetRangeA1_OutputMessage">
  <wsdl:part name="parameters" element="tns:SetRangeA1Response"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetRangeA1_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetParameters_InputMessage">
  <wsdl:part name="parameters" element="tns:SetParameters"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetParameters_OutputMessage">
  <wsdl:part name="parameters" element="tns:SetParametersResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetParameters_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeForClipboard_InputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeForClipboard"/>

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</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeForClipboard_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeForClipboardResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetRangeForClipboard_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_Refresh_InputMessage">
  <wsdl:part name="parameters" element="tns:Refresh"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_Refresh_OutputMessage">
  <wsdl:part name="parameters" element="tns:RefreshResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_Refresh_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_RefreshAll_InputMessage">
  <wsdl:part name="parameters" element="tns:RefreshAll"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_RefreshAll_OutputMessage">
  <wsdl:part name="parameters" element="tns:RefreshAllResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_RefreshAll_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_RecalcAll_InputMessage">
  <wsdl:part name="parameters" element="tns:RecalcAll"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_RecalcAll_OutputMessage">
  <wsdl:part name="parameters" element="tns:RecalcAllResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_RecalcAll_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_CancelRequest_InputMessage">
  <wsdl:part name="parameters" element="tns:CancelRequest"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_CancelRequest_OutputMessage">
  <wsdl:part name="parameters" element="tns:CancelRequestResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_CancelRequest_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_Recalc_InputMessage">
  <wsdl:part name="parameters" element="tns:Recalc"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_Recalc_OutputMessage">
  <wsdl:part name="parameters" element="tns:RecalcResponse"/>
</wsdl:message>

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    <wsdl:message name="ExcelServiceSoap_Recalc_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_RecalcA1_InputMessage">
      <wsdl:part name="parameters" element="tns:RecalcA1"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_RecalcA1_OutputMessage">
      <wsdl:part name="parameters" element="tns:RecalcA1Response"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_RecalcA1_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetSessionInformation_InputMessage">
      <wsdl:part name="parameters" element="tns:GetSessionInformation"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetSessionInformation_OutputMessage">
      <wsdl:part name="parameters" element="tns:GetSessionInformationResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_GetSessionInformation_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_FindRange_InputMessage">
      <wsdl:part name="parameters" element="tns:FindRange"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_FindRange_OutputMessage">
      <wsdl:part name="parameters" element="tns:FindRangeResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_FindRange_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyTop10Filter_InputMessage">
      <wsdl:part name="parameters" element="tns:ApplyTop10Filter"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyTop10Filter_OutputMessage">
      <wsdl:part name="parameters" element="tns:ApplyTop10FilterResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ApplyTop10Filter_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyItemFilter_InputMessage">
      <wsdl:part name="parameters" element="tns:ApplyItemFilter"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyItemFilter_OutputMessage">
      <wsdl:part name="parameters" element="tns:ApplyItemFilterResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyItemFilter_ExcelServerMessageFault_FaultMessage">

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    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_SortFilterColumn_InputMessage">
    <wsdl:part name="parameters" element="tns:SortFilterColumn"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_SortFilterColumn_OutputMessage">
    <wsdl:part name="parameters" element="tns:SortFilterColumnResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_SortFilterColumn_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetAutoFilterItemList_InputMessage">
      <wsdl:part name="parameters" element="tns:GetAutoFilterItemList"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetAutoFilterItemList_OutputMessage">
      <wsdl:part name="parameters" element="tns:GetAutoFilterItemListResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_GetAutoFilterItemList_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetPivotMenu_InputMessage">
        <wsdl:part name="parameters" element="tns:GetPivotMenu"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetPivotMenu_OutputMessage">
        <wsdl:part name="parameters" element="tns:GetPivotMenuResponse"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetPivotMenu_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_GetSlicerItemList_InputMessage">
          <wsdl:part name="parameters" element="tns:GetSlicerItemList"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_GetSlicerItemList_OutputMessage">
          <wsdl:part name="parameters" element="tns:GetSlicerItemListResponse"/>
        </wsdl:message>
        <wsdl:message
name="ExcelServiceSoap_GetSlicerItemList_ExcelServerMessageFault_FaultMessage">
          <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage">
            <wsdl:part name="parameters" element="tns:ConnectAndGetSlicerItemList"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage">
            <wsdl:part name="parameters" element="tns:ConnectAndGetSlicerItemListResponse"/>
          </wsdl:message>
          <wsdl:message
name="ExcelServiceSoap_ConnectAndGetSlicerItemList_ExcelServerMessageFault_FaultMessage">

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    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ApplySlicerSelection_InputMessage">
    <wsdl:part name="parameters" element="tns:ApplySlicerSelection"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ApplySlicerSelection_OutputMessage">
    <wsdl:part name="parameters" element="tns:ApplySlicerSelectionResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_ApplySlicerSelection_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_UpdateSlicer_InputMessage">
      <wsdl:part name="parameters" element="tns:UpdateSlicer"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_UpdateSlicer_OutputMessage">
      <wsdl:part name="parameters" element="tns:UpdateSlicerResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_UpdateSlicer_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetPivotFilterItemList_InputMessage">
        <wsdl:part name="parameters" element="tns:GetPivotFilterItemList"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetPivotFilterItemList_OutputMessage">
        <wsdl:part name="parameters" element="tns:GetPivotFilterItemListResponse"/>
      </wsdl:message>
      <wsdl:message
name="ExcelServiceSoap_GetPivotFilterItemList_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage">
          <wsdl:part name="parameters" element="tns:ConnectAndGetPivotFilterItemList"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage">
          <wsdl:part name="parameters" element="tns:ConnectAndGetPivotFilterItemListResponse"/>
        </wsdl:message>
        <wsdl:message
name="ExcelServiceSoap_ConnectAndGetPivotFilterItemList_ExcelServerMessageFault_FaultMessage">
          </wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_ApplyPivotFilter_InputMessage">
            <wsdl:part name="parameters" element="tns:ApplyPivotFilter"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_ApplyPivotFilter_OutputMessage">
            <wsdl:part name="parameters" element="tns:ApplyPivotFilterResponse"/>
          </wsdl:message>
          <wsdl:message
name="ExcelServiceSoap_ApplyPivotFilter_ExcelServerMessageFault_FaultMessage">

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    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage">
    <wsdl:part name="parameters" element="tns:ApplyPivotTop10Filter"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage">
    <wsdl:part name="parameters" element="tns:ApplyPivotTop10FilterResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_ApplyPivotTop10Filter_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotSort_InputMessage">
      <wsdl:part name="parameters" element="tns:ApplyPivotSort"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotSort_OutputMessage">
      <wsdl:part name="parameters" element="tns:ApplyPivotSortResponse"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_ApplyPivotSort_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_TogglePivotDrill_InputMessage">
        <wsdl:part name="parameters" element="tns:TogglePivotDrill"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_TogglePivotDrill_OutputMessage">
        <wsdl:part name="parameters" element="tns:TogglePivotDrillResponse"/>
      </wsdl:message>
      <wsdl:message
name="ExcelServiceSoap_TogglePivotDrill_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_RemovePivotFilter_InputMessage">
          <wsdl:part name="parameters" element="tns:RemovePivotFilter"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_RemovePivotFilter_OutputMessage">
          <wsdl:part name="parameters" element="tns:RemovePivotFilterResponse"/>
        </wsdl:message>
        <wsdl:message
name="ExcelServiceSoap_RemovePivotFilter_ExcelServerMessageFault_FaultMessage">
          <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetWorkbook_InputMessage">
            <wsdl:part name="parameters" element="tns:GetWorkbook"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetWorkbook_OutputMessage">
            <wsdl:part name="parameters" element="tns:GetWorkbookResponse"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetWorkbook_ExcelServerMessageFault_FaultMessage">

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    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetPublishedObjects_InputMessage">
    <wsdl:part name="parameters" element="tns:GetPublishedObjects"/>
  </wsdl:message>
  <wsdl:message name="ExcelServiceSoap_GetPublishedObjects_OutputMessage">
    <wsdl:part name="parameters" element="tns:GetPublishedObjectsResponse"/>
  </wsdl:message>
  <wsdl:message
name="ExcelServiceSoap_GetPublishedObjects_ExcelServerMessageFault_FaultMessage">
    <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetObjectInformation_InputMessage">
      <wsdl:part name="parameters" element="tns:GetObjectInformation"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GetObjectInformation_OutputMessage">
      <wsdl:part name="parameters" element="tns:GetObjectInformationResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_GetObjectInformation_ExcelServerMessageFault_FaultMessage">
      <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetSheetNames_InputMessage">
        <wsdl:part name="parameters" element="tns:GetSheetNames"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetSheetNames_OutputMessage">
        <wsdl:part name="parameters" element="tns:GetSheetNamesResponse"/>
      </wsdl:message>
      <wsdl:message name="ExcelServiceSoap_GetSheetNames_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_GetSparklines_InputMessage">
          <wsdl:part name="parameters" element="tns:GetSparklines"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_GetSparklines_OutputMessage">
          <wsdl:part name="parameters" element="tns:GetSparklinesResponse"/>
        </wsdl:message>
        <wsdl:message name="ExcelServiceSoap_GetSparklines_ExcelServerMessageFault_FaultMessage">
          <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetImage_InputMessage">
            <wsdl:part name="parameters" element="tns:GetImage"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetImage_OutputMessage">
            <wsdl:part name="parameters" element="tns:GetImageResponse"/>
          </wsdl:message>
          <wsdl:message name="ExcelServiceSoap_GetImage_ExcelServerMessageFault_FaultMessage">
            <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
            </wsdl:message>

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</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetScaledImage_InputMessage">
  <wsdl:part name="parameters" element="tns:GetScaledImage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetScaledImage_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetScaledImageResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetScaledImage_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetChart_InputMessage">
  <wsdl:part name="parameters" element="tns:GetChart"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetChart_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetChartResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetChart_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetChartElementData_InputMessage">
  <wsdl:part name="parameters" element="tns:GetChartElementData"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetChartElementData_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetChartElementDataResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetChartElementData_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeImage_InputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeImage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeImage_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetRangeImageResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetRangeImage_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ExpandCollapseOutline_InputMessage">
  <wsdl:part name="parameters" element="tns:ExpandCollapseOutline"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ExpandCollapseOutline_OutputMessage">
  <wsdl:part name="parameters" element="tns:ExpandCollapseOutlineResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_ExpandCollapseOutline_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetCalculationOptions_InputMessage">
  <wsdl:part name="parameters" element="tns:SetCalculationOptions"/>

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</wsdl:message>
<wsdl:message name="ExcelServiceSoap_SetCalculationOptions_OutputMessage">
  <wsdl:part name="parameters" element="tns:SetCalculationOptionsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_SetCalculationOptions_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetHealthScore_InputMessage">
  <wsdl:part name="parameters" element="tns:GetHealthScore"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetHealthScore_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetHealthScoreResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetHealthScore_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_AutoFit_InputMessage">
  <wsdl:part name="parameters" element="tns:AutoFit"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_AutoFit_OutputMessage">
  <wsdl:part name="parameters" element="tns:AutoFitResponse"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_AutoFit_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage">
  <wsdl:part name="parameters" element="tns:GetTimeSlicerFilterState"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetTimeSlicerFilterStateResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetTimeSlicerFilterState_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetTimeSlicerStrings_InputMessage">
  <wsdl:part name="parameters" element="tns:GetTimeSlicerStrings"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage">
  <wsdl:part name="parameters" element="tns:GetTimeSlicerStringsResponse"/>
</wsdl:message>
<wsdl:message
name="ExcelServiceSoap_GetTimeSlicerStrings_ExcelServerMessageFault_FaultMessage">
  <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ResizeRowsColumns_InputMessage">
  <wsdl:part name="parameters" element="tns:ResizeRowsColumns"/>
</wsdl:message>
<wsdl:message name="ExcelServiceSoap_ResizeRowsColumns_OutputMessage">

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        <wsdl:part name="parameters" element="tns:ResizeRowsColumnsResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_ResizeRowsColumns_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage">
        <wsdl:part name="parameters" element="tns:GenerateWorkbookFromHtml"/>
    </wsdl:message>
    <wsdl:message name="ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage">
        <wsdl:part name="parameters" element="tns:GenerateWorkbookFromHtmlResponse"/>
    </wsdl:message>
    <wsdl:message
name="ExcelServiceSoap_GenerateWorkbookFromHtml_ExcelServerMessageFault_FaultMessage">
        <wsdl:part
xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
name="detail" element="q1:ExcelServerMessage"/>
    </wsdl:message>
    <wsdl:portType name="ExcelServiceSoap">
        <wsdl:operation name="GetBixAnalysis">
            <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetBixAnalysis"
message="tns:ExcelServiceSoap_GetBixAnalysis_InputMessage"/>
            <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetBixAnalysisResponse"
message="tns:ExcelServiceSoap_GetBixAnalysis_OutputMessage"/>
            <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetBixAnalysisExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetBixAnalysis_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="BixDrill">
            <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/BixDrill" message="tns:ExcelServiceSoap_BixDrill_InputMessage"/>
            <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/BixDrillResponse"
message="tns:ExcelServiceSoap_BixDrill_OutputMessage"/>
            <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/BixDrillExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_BixDrill_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="GetPivotFieldManagerData">
            <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerData"
message="tns:ExcelServiceSoap_GetPivotFieldManagerData_InputMessage"/>
            <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataResponse"
message="tns:ExcelServiceSoap_GetPivotFieldManagerData_OutputMessage"/>
            <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldManagerDataExcelServerMessageFault"
name="ExcelServerMessageFault"

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message="tns:ExcelServiceSoap_GetPivotFieldManagerData_ExcelServerMessageFault_FaultMessage"/
>
  </wsdl:operation>
  <wsdl:operation name="GetPivotFieldListData">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldListData"
message="tns:ExcelServiceSoap_GetPivotFieldListData_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldListDataResponse"
message="tns:ExcelServiceSoap_GetPivotFieldListData_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFieldListDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetPivotFieldListData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ExpandPivotFieldListLevels">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevels"
message="tns:ExcelServiceSoap_ExpandPivotFieldListLevels_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsResponse"
message="tns:ExcelServiceSoap_ExpandPivotFieldListLevels_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandPivotFieldListLevelsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ExpandPivotFieldListLevels_ExcelServerMessageFault_FaultMessage
"/>
      </wsdl:operation>
      <wsdl:operation name="ApplyPivotFieldManagerHiddenState">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenState"
message="tns:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateResponse"
message="tns:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFieldManagerHiddenStateExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotFieldManagerHiddenState_ExcelServerMessageFault_Fault
Message"/>
        </wsdl:operation>
        <wsdl:operation name="ApplyPivot">
          <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivot" message="tns:ExcelServiceSoap_ApplyPivot_InputMessage"/>
          <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotResponse"
message="tns:ExcelServiceSoap_ApplyPivot_OutputMessage"/>
          <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivot_ExcelServerMessageFault_FaultMessage"/>
          </wsdl:operation>
          <wsdl:operation name="ProcessODataRequest">

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    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessODataRequest"
message="tns:ExcelServiceSoap_ProcessODataRequest_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessODataRequestResponse"
message="tns:ExcelServiceSoap_ProcessODataRequest_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessODataRequestExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ProcessODataRequest_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyTimeSlicerInteractivity">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTimeSlicerInteractivity"
message="tns:ExcelServiceSoap_ApplyTimeSlicerInteractivity_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityResponse"
message="tns:ExcelServiceSoap_ApplyTimeSlicerInteractivity_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTimeSlicerInteractivityExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyTimeSlicerInteractivity_ExcelServerMessageFault_FaultMessa
ge"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyPivotValueFieldSettings">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettings"
message="tns:ExcelServiceSoap_ApplyPivotValueFieldSettings_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsResponse"
message="tns:ExcelServiceSoap_ApplyPivotValueFieldSettings_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotValueFieldSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotValueFieldSettings_ExcelServerMessageFault_FaultMessa
ge"/>
    </wsdl:operation>
    <wsdl:operation name="GetPivotValueFieldSettings">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettings"
message="tns:ExcelServiceSoap_GetPivotValueFieldSettings_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettingsResponse"
message="tns:ExcelServiceSoap_GetPivotValueFieldSettings_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotValueFieldSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetPivotValueFieldSettings_ExcelServerMessageFault_FaultMessage
"/>
    </wsdl:operation>
    <wsdl:operation name="DdaGetSelectedData">

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    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedData"
message="tns:ExcelServiceSoap_DdaGetSelectedData_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedDataResponse"
message="tns:ExcelServiceSoap_DdaGetSelectedData_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetSelectedDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaGetSelectedData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaSetSelectedData">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedData"
message="tns:ExcelServiceSoap_DdaSetSelectedData_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedDataResponse"
message="tns:ExcelServiceSoap_DdaSetSelectedData_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetSelectedDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaSetSelectedData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaAddBinding">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBinding"
message="tns:ExcelServiceSoap_DdaAddBinding_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBindingResponse"
message="tns:ExcelServiceSoap_DdaAddBinding_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaAddBindingExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaAddBinding_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaGetBinding">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBinding"
message="tns:ExcelServiceSoap_DdaGetBinding_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingResponse"
message="tns:ExcelServiceSoap_DdaGetBinding_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaGetBinding_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaReleaseBinding">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaReleaseBinding"
message="tns:ExcelServiceSoap_DdaReleaseBinding_InputMessage"/>

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    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaReleaseBindingResponse"
message="tns:ExcelServiceSoap_DdaReleaseBinding_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaReleaseBindingExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaReleaseBinding_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaGetBindingData">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingData"
message="tns:ExcelServiceSoap_DdaGetBindingData_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingDataResponse"
message="tns:ExcelServiceSoap_DdaGetBindingData_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetBindingDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaGetBindingData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaSetBindingData">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetBindingData"
message="tns:ExcelServiceSoap_DdaSetBindingData_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetBindingDataResponse"
message="tns:ExcelServiceSoap_DdaSetBindingData_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSetBindingDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaSetBindingData_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaGetAllBindings">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetAllBindings"
message="tns:ExcelServiceSoap_DdaGetAllBindings_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetAllBindingsResponse"
message="tns:ExcelServiceSoap_DdaGetAllBindings_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaGetAllBindingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaGetAllBindings_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="DdaLoadSettings">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettings"
message="tns:ExcelServiceSoap_DdaLoadSettings_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/DdaLoadSettingsResponse"
message="tns:ExcelServiceSoap_DdaLoadSettings_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaLoadSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaLoadSettings_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="DdaSaveSettings">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettings"
message="tns:ExcelServiceSoap_DdaSaveSettings_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettingsResponse"
message="tns:ExcelServiceSoap_DdaSaveSettings_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/DdaSaveSettingsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_DdaSaveSettings_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="OpenWorkbook">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbook"
message="tns:ExcelServiceSoap_OpenWorkbook_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbookResponse"
message="tns:ExcelServiceSoap_OpenWorkbook_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/OpenWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_OpenWorkbook_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="CloseWorkbook">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbook"
message="tns:ExcelServiceSoap_CloseWorkbook_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbookResponse"
message="tns:ExcelServiceSoap_CloseWorkbook_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CloseWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_CloseWorkbook_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="SaveWorkbook">
          <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbook"
message="tns:ExcelServiceSoap_SaveWorkbook_InputMessage"/>
          <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookResponse"
message="tns:ExcelServiceSoap_SaveWorkbook_OutputMessage"/>
          <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SaveWorkbook_ExcelServerMessageFault_FaultMessage"/>

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    </wsdl:operation>
    <wsdl:operation name="SaveWorkbookAs">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAs"
message="tns:ExcelServiceSoap_SaveWorkbookAs_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsResponse"
message="tns:ExcelServiceSoap_SaveWorkbookAs_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SaveWorkbookAsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SaveWorkbookAs_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ParseRange">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ParseRange" message="tns:ExcelServiceSoap_ParseRange_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ParseRangeResponse"
message="tns:ExcelServiceSoap_ParseRange_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ParseRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ParseRange_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetRange">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRange" message="tns:ExcelServiceSoap_GetRange_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeResponse"
message="tns:ExcelServiceSoap_GetRange_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRange_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetRangeValues">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValues"
message="tns:ExcelServiceSoap_GetRangeValues_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesResponse"
message="tns:ExcelServiceSoap_GetRangeValues_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRangeValues_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ProcessRestRequest">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessRestRequest"
message="tns:ExcelServiceSoap_ProcessRestRequest_InputMessage"/>

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    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessRestRequestResponse"
message="tns:ExcelServiceSoap_ProcessRestRequest_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ProcessRestRequestExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ProcessRestRequest_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetRangeValuesA1">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1"
message="tns:ExcelServiceSoap_GetRangeValuesA1_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1Response"
message="tns:ExcelServiceSoap_GetRangeValuesA1_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeValuesA1ExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRangeValuesA1_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SetRange">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRange" message="tns:ExcelServiceSoap_SetRange_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeResponse"
message="tns:ExcelServiceSoap_SetRange_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SetRange_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SetRangeA1">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeA1" message="tns:ExcelServiceSoap_SetRangeA1_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeA1Response"
message="tns:ExcelServiceSoap_SetRangeA1_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetRangeA1ExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SetRangeA1_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SetParameters">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetParameters"
message="tns:ExcelServiceSoap_SetParameters_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetParametersResponse"
message="tns:ExcelServiceSoap_SetParameters_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/SetParametersExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SetParameters_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="GetRangeForClipboard">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeForClipboard"
message="tns:ExcelServiceSoap_GetRangeForClipboard_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeForClipboardResponse"
message="tns:ExcelServiceSoap_GetRangeForClipboard_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeForClipboardExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRangeForClipboard_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
  <wsdl:operation name="Refresh">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/Refresh" message="tns:ExcelServiceSoap_Refresh_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshResponse"
message="tns:ExcelServiceSoap_Refresh_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_Refresh_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
  <wsdl:operation name="RefreshAll">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshAll" message="tns:ExcelServiceSoap_RefreshAll_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshAllResponse"
message="tns:ExcelServiceSoap_RefreshAll_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RefreshAllExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_RefreshAll_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
  <wsdl:operation name="RecalcAll">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAll" message="tns:ExcelServiceSoap_RecalcAll_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllResponse"
message="tns:ExcelServiceSoap_RecalcAll_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcAllExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_RecalcAll_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
  <wsdl:operation name="CancelRequest">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CancelRequest"
message="tns:ExcelServiceSoap_CancelRequest_InputMessage"/>

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    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CancelRequestResponse"
message="tns:ExcelServiceSoap_CancelRequest_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/CancelRequestExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_CancelRequest_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="Recalc">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/Recalc" message="tns:ExcelServiceSoap_Recalc_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcResponse"
message="tns:ExcelServiceSoap_Recalc_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_Recalc_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="RecalcA1">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcA1" message="tns:ExcelServiceSoap_RecalcA1_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcA1Response"
message="tns:ExcelServiceSoap_RecalcA1_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RecalcA1ExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_RecalcA1_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetSessionInformation">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSessionInformation"
message="tns:ExcelServiceSoap_GetSessionInformation_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSessionInformationResponse"
message="tns:ExcelServiceSoap_GetSessionInformation_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSessionInformationExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetSessionInformation_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="FindRange">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/FindRange" message="tns:ExcelServiceSoap_FindRange_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/FindRangeResponse"
message="tns:ExcelServiceSoap_FindRange_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/FindRangeExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_FindRange_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>

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    <wsdl:operation name="ApplyTop10Filter">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTop10Filter"
message="tns:ExcelServiceSoap_ApplyTop10Filter_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTop10FilterResponse"
message="tns:ExcelServiceSoap_ApplyTop10Filter_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyTop10FilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyTop10Filter_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ApplyItemFilter">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilter"
message="tns:ExcelServiceSoap_ApplyItemFilter_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilterResponse"
message="tns:ExcelServiceSoap_ApplyItemFilter_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyItemFilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyItemFilter_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SortFilterColumn">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumn"
message="tns:ExcelServiceSoap_SortFilterColumn_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumnResponse"
message="tns:ExcelServiceSoap_SortFilterColumn_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SortFilterColumnExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SortFilterColumn_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetAutoFilterItemList">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetAutoFilterItemList"
message="tns:ExcelServiceSoap_GetAutoFilterItemList_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetAutoFilterItemListResponse"
message="tns:ExcelServiceSoap_GetAutoFilterItemList_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetAutoFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetAutoFilterItemList_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetPivotMenu">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/GetPivotMenu"
message="tns:ExcelServiceSoap_GetPivotMenu_InputMessage"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotMenuResponse"
message="tns:ExcelServiceSoap_GetPivotMenu_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotMenuExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetPivotMenu_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="GetSlicerItemList">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemList"
message="tns:ExcelServiceSoap_GetSlicerItemList_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemListResponse"
message="tns:ExcelServiceSoap_GetSlicerItemList_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSlicerItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetSlicerItemList_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ConnectAndGetSlicerItemList">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemList"
message="tns:ExcelServiceSoap_ConnectAndGetSlicerItemList_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListResponse"
message="tns:ExcelServiceSoap_ConnectAndGetSlicerItemList_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetSlicerItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ConnectAndGetSlicerItemList_ExcelServerMessageFault_FaultMessag
e"/>
      </wsdl:operation>
      <wsdl:operation name="ApplySlicerSelection">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplySlicerSelection"
message="tns:ExcelServiceSoap_ApplySlicerSelection_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplySlicerSelectionResponse"
message="tns:ExcelServiceSoap_ApplySlicerSelection_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplySlicerSelectionExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplySlicerSelection_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="UpdateSlicer">
          <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/UpdateSlicer"
message="tns:ExcelServiceSoap_UpdateSlicer_InputMessage"/>
          <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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Service/ExcelServiceSoap/UpdateSlicerResponse"
message="tns:ExcelServiceSoap_UpdateSlicer_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/UpdateSlicerExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_UpdateSlicer_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="GetPivotFilterItemList">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemList"
message="tns:ExcelServiceSoap_GetPivotFilterItemList_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemListResponse"
message="tns:ExcelServiceSoap_GetPivotFilterItemList_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPivotFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetPivotFilterItemList_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="ConnectAndGetPivotFilterItemList">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemList"
message="tns:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListResponse"
message="tns:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ConnectAndGetPivotFilterItemListExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ConnectAndGetPivotFilterItemList_ExcelServerMessageFault_FaultM
essage"/>
      </wsdl:operation>
      <wsdl:operation name="ApplyPivotFilter">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFilter"
message="tns:ExcelServiceSoap_ApplyPivotFilter_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFilterResponse"
message="tns:ExcelServiceSoap_ApplyPivotFilter_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotFilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotFilter_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="ApplyPivotTop10Filter">
          <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotTop10Filter"
message="tns:ExcelServiceSoap_ApplyPivotTop10Filter_InputMessage"/>
          <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotTop10FilterResponse"
message="tns:ExcelServiceSoap_ApplyPivotTop10Filter_OutputMessage"/>
          <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

```

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Service/ExcelServiceSoap/ApplyPivotTop10FilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotTop10Filter_ExcelServerMessageFault_FaultMessage"/>
</wsdl:operation>
<wsdl:operation name="ApplyPivotSort">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSort"
message="tns:ExcelServiceSoap_ApplyPivotSort_InputMessage"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortResponse"
message="tns:ExcelServiceSoap_ApplyPivotSort_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ApplyPivotSortExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ApplyPivotSort_ExcelServerMessageFault_FaultMessage"/>
</wsdl:operation>
<wsdl:operation name="TogglePivotDrill">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrill"
message="tns:ExcelServiceSoap_TogglePivotDrill_InputMessage"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrillResponse"
message="tns:ExcelServiceSoap_TogglePivotDrill_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/TogglePivotDrillExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_TogglePivotDrill_ExcelServerMessageFault_FaultMessage"/>
</wsdl:operation>
<wsdl:operation name="RemovePivotFilter">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RemovePivotFilter"
message="tns:ExcelServiceSoap_RemovePivotFilter_InputMessage"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RemovePivotFilterResponse"
message="tns:ExcelServiceSoap_RemovePivotFilter_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/RemovePivotFilterExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_RemovePivotFilter_ExcelServerMessageFault_FaultMessage"/>
</wsdl:operation>
<wsdl:operation name="GetWorkbook">
  <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbook"
message="tns:ExcelServiceSoap_GetWorkbook_InputMessage"/>
  <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbookResponse"
message="tns:ExcelServiceSoap_GetWorkbook_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetWorkbookExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetWorkbook_ExcelServerMessageFault_FaultMessage"/>
</wsdl:operation>
<wsdl:operation name="GetPublishedObjects">

```

```

    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedObjects"
message="tns:ExcelServiceSoap_GetPublishedObjects_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedObjectsResponse"
message="tns:ExcelServiceSoap_GetPublishedObjects_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetPublishedObjectsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetPublishedObjects_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetObjectInformation">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformation"
message="tns:ExcelServiceSoap_GetObjectInformation_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformationResponse"
message="tns:ExcelServiceSoap_GetObjectInformation_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetObjectInformationExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetObjectInformation_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetSheetNames">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSheetNames"
message="tns:ExcelServiceSoap_GetSheetNames_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSheetNamesResponse"
message="tns:ExcelServiceSoap_GetSheetNames_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSheetNamesExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetSheetNames_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetSparklines">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSparklines"
message="tns:ExcelServiceSoap_GetSparklines_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSparklinesResponse"
message="tns:ExcelServiceSoap_GetSparklines_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetSparklinesExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetSparklines_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetImage">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImage" message="tns:ExcelServiceSoap_GetImage_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal

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```

Service/ExcelServiceSoap/GetImageResponse"
message="tns:ExcelServiceSoap_GetImage_OutputMessage"/>
  <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetImageExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetImage_ExcelServerMessageFault_FaultMessage"/>
  </wsdl:operation>
  <wsdl:operation name="GetScaledImage">
    <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetScaledImage"
message="tns:ExcelServiceSoap_GetScaledImage_InputMessage"/>
    <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetScaledImageResponse"
message="tns:ExcelServiceSoap_GetScaledImage_OutputMessage"/>
    <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetScaledImageExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetScaledImage_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetChart">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChart" message="tns:ExcelServiceSoap_GetChart_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartResponse"
message="tns:ExcelServiceSoap_GetChart_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetChart_ExcelServerMessageFault_FaultMessage"/>
      </wsdl:operation>
      <wsdl:operation name="GetChartElementData">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartElementData"
message="tns:ExcelServiceSoap_GetChartElementData_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartElementDataResponse"
message="tns:ExcelServiceSoap_GetChartElementData_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetChartElementDataExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetChartElementData_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="GetRangeImage">
          <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImage"
message="tns:ExcelServiceSoap_GetRangeImage_InputMessage"/>
          <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImageResponse"
message="tns:ExcelServiceSoap_GetRangeImage_OutputMessage"/>
          <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetRangeImageExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetRangeImage_ExcelServerMessageFault_FaultMessage"/>
          </wsdl:operation>

```



```

    <wsdl:operation name="ExpandCollapseOutline">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandCollapseOutline"
message="tns:ExcelServiceSoap_ExpandCollapseOutline_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandCollapseOutlineResponse"
message="tns:ExcelServiceSoap_ExpandCollapseOutline_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ExpandCollapseOutlineExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ExpandCollapseOutline_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="SetCalculationOptions">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetCalculationOptions"
message="tns:ExcelServiceSoap_SetCalculationOptions_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetCalculationOptionsResponse"
message="tns:ExcelServiceSoap_SetCalculationOptions_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/SetCalculationOptionsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_SetCalculationOptions_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetHealthScore">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetHealthScore"
message="tns:ExcelServiceSoap_GetHealthScore_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetHealthScoreResponse"
message="tns:ExcelServiceSoap_GetHealthScore_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetHealthScoreExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetHealthScore_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="AutoFit">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/AutoFit" message="tns:ExcelServiceSoap_AutoFit_InputMessage"/>
      <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/AutoFitResponse"
message="tns:ExcelServiceSoap_AutoFit_OutputMessage"/>
      <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/AutoFitExcelServerMessageFault" name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_AutoFit_ExcelServerMessageFault_FaultMessage"/>
    </wsdl:operation>
    <wsdl:operation name="GetTimeSlicerFilterState">
      <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterState"
message="tns:ExcelServiceSoap_GetTimeSlicerFilterState_InputMessage"/>

```

```

        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterStateResponse"
message="tns:ExcelServiceSoap_GetTimeSlicerFilterState_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerFilterStateExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetTimeSlicerFilterState_ExcelServerMessageFault_FaultMessage"/
>
        </wsdl:operation>
        <wsdl:operation name="GetTimeSlicerStrings">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerStrings"
message="tns:ExcelServiceSoap_GetTimeSlicerStrings_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerStringsResponse"
message="tns:ExcelServiceSoap_GetTimeSlicerStrings_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GetTimeSlicerStringsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GetTimeSlicerStrings_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="ResizeRowsColumns">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ResizeRowsColumns"
message="tns:ExcelServiceSoap_ResizeRowsColumns_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ResizeRowsColumnsResponse"
message="tns:ExcelServiceSoap_ResizeRowsColumns_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/ResizeRowsColumnsExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_ResizeRowsColumns_ExcelServerMessageFault_FaultMessage"/>
        </wsdl:operation>
        <wsdl:operation name="GenerateWorkbookFromHtml">
        <wsdl:input
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtml"
message="tns:ExcelServiceSoap_GenerateWorkbookFromHtml_InputMessage"/>
        <wsdl:output
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtmlResponse"
message="tns:ExcelServiceSoap_GenerateWorkbookFromHtml_OutputMessage"/>
        <wsdl:fault
wsam:Action="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternal
Service/ExcelServiceSoap/GenerateWorkbookFromHtmlExcelServerMessageFault"
name="ExcelServerMessageFault"
message="tns:ExcelServiceSoap_GenerateWorkbookFromHtml_ExcelServerMessageFault_FaultMessage"/
>
        </wsdl:operation>
    </wsdl:portType>
</wsdl:definitions>

```

6.2 http://tempuri.org/ WSDL

```
<?xml version="1.0"?>
<wsdl:definitions
  xmlns:tns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  name="ExcelServiceSoap"
  targetNamespace="http://tempuri.org/"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/">
  <wsdl:import
    namespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/"
    location=""/>
  <wsdl:types/>
  <wsdl:binding name="CustomBinding_ExcelServiceSoap" type="tns:ExcelServiceSoap">
    <soap:binding transport="http://schemas.xmlsoap.org/soap/http"/>
    <wsdl:operation name="GetBixAnalysis">
      <soap:operation
        soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetBixAnalysis"
        style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="BixDrill">
      <soap:operation
        soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/BixDrill"
        style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetPivotFieldManagerData">
      <soap:operation
        soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotFieldManagerData"
        style="document"/>
      <wsdl:input>
        <soap:body use="literal"/>
      </wsdl:input>
      <wsdl:output>
        <soap:body use="literal"/>
      </wsdl:output>
      <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
      </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetPivotFieldListData">
      <soap:operation
        soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/ExcelServiceSoap/GetPivotFieldListData"
        style="document"/>
      <wsdl:input>
```

```

        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ExpandPivotFieldListLevels">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ExpandPivotFieldListLevels" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivotFieldManagerHiddenState">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ApplyPivotFieldManagerHiddenState" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivot">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ApplyPivot" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ProcessODataRequest">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ProcessODataRequest" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>

```

```

    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplyTimeSlicerInteractivity">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/ApplyTimeSlicerInteractivity" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplyPivotValueFieldSettings">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/ApplyPivotValueFieldSettings" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetPivotValueFieldSettings">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/GetPivotValueFieldSettings" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="DdaGetSelectedData">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/DdaGetSelectedData" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>

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</wsdl:operation>
<wsdl:operation name="DdaSetSelectedData">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/DdaSetSelectedData" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaAddBinding">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/DdaAddBinding" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaGetBinding">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/DdaGetBinding" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaReleaseBinding">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/DdaReleaseBinding" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaGetBindingData">

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    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaGetBindingData" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaSetBindingData">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaSetBindingData" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaGetAllBindings">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaGetAllBindings" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaLoadSettings">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaLoadSettings" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="DdaSaveSettings">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/DdaSaveSettings" style="document"/>
    <wsdl:input>

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        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="OpenWorkbook">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/OpenWorkbook" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="CloseWorkbook">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/CloseWorkbook" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SaveWorkbook">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/SaveWorkbook" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SaveWorkbookAs">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/SaveWorkbookAs" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>

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        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="ParseRange">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ParseRange" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetRange">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRange" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="GetRangeValues">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeValues" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>
    <wsdl:operation name="ProcessRestRequest">
        <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ProcessRestRequest" style="document"/>
        <wsdl:input>
            <soap:body use="literal"/>
        </wsdl:input>
        <wsdl:output>
            <soap:body use="literal"/>
        </wsdl:output>
        <wsdl:fault name="ExcelServerMessageFault">
            <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
        </wsdl:fault>
    </wsdl:operation>

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</wsdl:operation>
<wsdl:operation name="GetRangeValuesA1">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetRangeValuesA1" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SetRange">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/SetRange" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SetRangeA1">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/SetRangeA1" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SetParameters">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/SetParameters" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetRangeForClipboard">

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    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeForClipboard" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="Refresh">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/Refresh" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="RefreshAll">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/RefreshAll" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="RecalcAll">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/RecalcAll" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="CancelRequest">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/CancelRequest" style="document"/>
    <wsdl:input>

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        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="Recalc">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/Recalc" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="RecalcA1">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/RecalcA1" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetSessionInformation">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetSessionInformation" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="FindRange">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/FindRange" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>

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    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplyTop10Filter">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/ApplyTop10Filter" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="ApplyItemFilter">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/ApplyItemFilter" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="SortFilterColumn">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/SortFilterColumn" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetAutoFilterItemList">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/GetAutoFilterItemList" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>

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</wsdl:operation>
<wsdl:operation name="GetPivotMenu">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetPivotMenu" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetSlicerItemList">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetSlicerItemList" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ConnectAndGetSlicerItemList">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ConnectAndGetSlicerItemList" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplySlicerSelection">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ApplySlicerSelection" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="UpdateSlicer">

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```

    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/UpdateSlicer" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetPivotFilterItemList">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetPivotFilterItemList" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ConnectAndGetPivotFilterItemList">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ConnectAndGetPivotFilterItemList" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivotFilter">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ApplyPivotFilter" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivotTop10Filter">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ApplyPivotTop10Filter" style="document"/>
    <wsdl:input>

```

```

        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ApplyPivotSort">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ApplyPivotSort" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="TogglePivotDrill">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/TogglePivotDrill" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="RemovePivotFilter">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/RemovePivotFilter" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetWorkbook">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetWorkbook" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>

```



```

    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetPublishedObjects">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/GetPublishedObjects" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetObjectInformation">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/GetObjectInformation" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetSheetNames">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/GetSheetNames" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>
  <wsdl:operation name="GetSparklines">
    <soap:operation
      soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
      ervice/ExcelServiceSoap/GetSparklines" style="document"/>
    <wsdl:input>
      <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
      <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
      <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
  </wsdl:operation>

```

```

</wsdl:operation>
<wsdl:operation name="GetImage">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetImage" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetScaledImage">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetScaledImage" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetChart">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetChart" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetChartElementData">
  <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetChartElementData" style="document"/>
  <wsdl:input>
    <soap:body use="literal"/>
  </wsdl:input>
  <wsdl:output>
    <soap:body use="literal"/>
  </wsdl:output>
  <wsdl:fault name="ExcelServerMessageFault">
    <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
  </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetRangeImage">

```

```

    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetRangeImage" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ExpandCollapseOutline">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/ExpandCollapseOutline" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="SetCalculationOptions">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/SetCalculationOptions" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetHealthScore">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/GetHealthScore" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="AutoFit">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalS
ervice/ExcelServiceSoap/AutoFit" style="document"/>
    <wsdl:input>

```

```

        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetTimeSlicerFilterState">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetTimeSlicerFilterState" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GetTimeSlicerStrings">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GetTimeSlicerStrings" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="ResizeRowsColumns">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/ResizeRowsColumns" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>
    <wsdl:fault name="ExcelServerMessageFault">
        <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
    </wsdl:fault>
</wsdl:operation>
<wsdl:operation name="GenerateWorkbookFromHtml">
    <soap:operation
soapAction="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternals
ervice/ExcelServiceSoap/GenerateWorkbookFromHtml" style="document"/>
    <wsdl:input>
        <soap:body use="literal"/>
    </wsdl:input>
    <wsdl:output>
        <soap:body use="literal"/>
    </wsdl:output>

```

```
</wsdl:output>
<wsdl:fault name="ExcelServerMessageFault">
  <soap:fault use="literal" name="ExcelServerMessageFault" namespace=""/>
</wsdl:fault>
</wsdl:operation>
</wsdl:binding>
</wsdl:definitions>
```

Preliminary

7 Appendix B: Full XML Schema

For ease of implementation, the following sections provide the full XML schema for this protocol.

Schema name	Prefix	Section
http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/	tns	7.1
http://microsoft.com/wsd/types/	q2	7.2
http://schemas.microsoft.com/2003/10/Serialization/	tns2	7.3
http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server	q1	7.4

7.1

<http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/> Schema

```
<?xml version="1.0"?>
<xs:schema
  xmlns:tns="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/" elementFormDefault="qualified"
  targetNamespace="http://schemas.microsoft.com/office/Excel/Server/WebServices/ExcelServerInternalService/" xmlns:xs="http://www.w3.org/2001/XMLSchema" attributeFormDefault="unqualified">
  <xs:import namespace="http://microsoft.com/wsd/types/" />
  <xs:element name="GetBixAnalysis">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
          type="tns:CommandParameter" />
        <xs:element minOccurs="0" maxOccurs="1" name="options"
          type="tns:PivotOperationOptions" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="CommandParameter">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfListInfo"
        type="tns:ClientUdfListInfo" />
      <xs:element minOccurs="0" maxOccurs="1" name="WorkbookId" type="xs:string" />
      <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int" />
      <xs:element minOccurs="0" maxOccurs="1" name="VisibleSheetRangeRequest"
        type="tns:VisibleSheetRange" />
      <xs:element minOccurs="0" maxOccurs="1" name="WorkOnBehalfRequest"
        type="tns:WorkOnBehalf" />
      <xs:element minOccurs="1" maxOccurs="1" name="Confirmation"
        type="tns:ExcelServerMessageId" />
      <xs:element minOccurs="1" maxOccurs="1" name="ConfirmationChoice" type="xs:boolean" />
      <xs:element minOccurs="0" maxOccurs="1" name="ProtocolClientId" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="UserFriendlyDisplayName"
        type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="Zone" type="xs:string" />
      <xs:element minOccurs="0" maxOccurs="1" name="PreviousOwnerId" type="xs:string" />
      <xs:element xmlns:q2="http://microsoft.com/wsd/types/" minOccurs="1" maxOccurs="1"
        name="RequestSiteId" type="q2:guid" />
      <xs:element minOccurs="0" maxOccurs="1" name="RequestId" type="xs:string" />
    </xs:sequence>
  </xs:complexType>
</xs:schema>
```

```

    <xs:element minOccurs="1" maxOccurs="1" name="CompleteResponseTimeout" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns:CommandParameterFlags"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RequestLimits" type="tns:RequestLimits"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsObjectModel" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="WantServerEvents" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CollaborationParameter"
type="tns:CollaborationParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataParameter"
type="tns:WorkbookMetadataParameter"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FrontEndMachineName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DoesNotCreatePrivateWorkbook"
type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfListInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfs"
type="tns:ArrayOfClientUdfDefinition"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfClientUdfDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfDefinition"
nillable="true" type="tns:ClientUdfDefinition"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfDefinition">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UdfName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsVolatile" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="VisibleSheetRange">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ObjectName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcelRange" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleRowsRequested" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleColumnsRequested" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleFirstRowOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VisibleFirstColumnOffset" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalculateVisibleOffsetFromOrigin"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NeedAllBorderValues" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ChartsOnly" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisallowAutoNOV" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FallbackOnInvalidSheet"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ReturnAllRelatedSlicers"
type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="RenderingOptions"
type="tns:GridRenderingOptions"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="GridRenderingOptions">
  <xs:list>
    <xs:simpleType>

```

```

    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="HideGridlines"/>
      <xs:enumeration value="HideRowAndColumnHeaders"/>
    </xs:restriction>
  </xs:simpleType>
</xs:list>
</xs:simpleType>
<xs:complexType name="WorkOnBehalf">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="UserName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UserSid" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UserToken" type="xs:base64Binary"/>
    <xs:element minOccurs="1" maxOccurs="1" name="UserTokenTtl" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ExcelServerMessageId">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Blank"/>
    <xs:enumeration value="InternalError"/>
    <xs:enumeration value="NotMemberOfRole"/>
    <xs:enumeration value="EncryptionTooLow"/>
    <xs:enumeration value="ConfirmDataRefresh"/>
    <xs:enumeration value="ExternalDataRefreshFailed"/>
    <xs:enumeration value="ExternalDataRefreshFailedReal"/>
    <xs:enumeration value="ExternalDataRefreshFailedReadOrViewOnly"/>
    <xs:enumeration value="NoAccessToOdcReadOrViewOnly"/>
    <xs:enumeration value="ErrorConnectingToDataSourceReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPasswordReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPassword"/>
    <xs:enumeration value="ExternalDataNotAllowedOnTL"/>
    <xs:enumeration value="InvalidUriorLocalConnectionPath"/>
    <xs:enumeration value="DclNotTrusted"/>
    <xs:enumeration value="OdcFileDoesNotExist"/>
    <xs:enumeration value="ErrorAccessingSsoFromEcs"/>
    <xs:enumeration value="SsoError"/>
    <xs:enumeration value="ErrorConnectingToDataSource"/>
    <xs:enumeration value="UnattendedAccountNotConfigured"/>
    <xs:enumeration value="IncorrectAuthUsed"/>
    <xs:enumeration value="ExternalDataRefreshFailed_Details"/>
    <xs:enumeration value="PivotNoOverlapAllowed"/>
    <xs:enumeration value="PivotOverlapList"/>
    <xs:enumeration value="PivotCubeNotUnique"/>
    <xs:enumeration value="NoDataItemsOlap"/>
    <xs:enumeration value="OlapSchemaFail"/>
    <xs:enumeration value="InvalidPivot"/>
    <xs:enumeration value="OlapNoMoreDetail"/>
    <xs:enumeration value="DrillActionInvalid"/>
    <xs:enumeration value="DriverNotOlap"/>
    <xs:enumeration value="CubeMissing"/>
    <xs:enumeration value="SkipLine"/>
    <xs:enumeration value="CDimMismatch"/>
    <xs:enumeration value="DataSetAxisTooBig"/>
    <xs:enumeration value="CubeIntegrityError"/>
    <xs:enumeration value="PivotNotExpandedtoProtectCellContents"/>
    <xs:enumeration value="PivotTruncatedSheetEdge"/>
    <xs:enumeration value="DdlGrpNotSup"/>
    <xs:enumeration value="PivotFormulasCollided"/>
    <xs:enumeration value="NoRetItems"/>
  </xs:restriction>
</xs:simpleType>

```



```
<xs:enumeration value="OlapConnectVisualModeProvider"/>
<xs:enumeration value="PivotNoSourceData"/>
<xs:enumeration value="PivotFilteringError"/>
<xs:enumeration value="PivotTableIncorrectDateFormat"/>
<xs:enumeration value="PivotTableEndingLargerThanStarting"/>
<xs:enumeration value="PivotTableIncorrectNumberFormat"/>
<xs:enumeration value="PivotTableOutOfRange"/>
<xs:enumeration value="MergedCellOverlap"/>
<xs:enumeration value="PivotSourceNotAvailable"/>
<xs:enumeration value="UnexpectedPivotError"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownReason"/>
<xs:enumeration value="EditModeCannotAcquireLock"/>
<xs:enumeration value="EditModeCannotAcquireLockUnknownUser"/>
<xs:enumeration value="EditModeWorkbookCheckedOutRequired"/>
<xs:enumeration value="EditModeWorkbookCheckedOutToLocalDrafts"/>
<xs:enumeration value="SiteTooBusy"/>
<xs:enumeration value="SiteCollectionMemoryQuotaExceeded"/>
<xs:enumeration value="SessionMemoryQuotaExceeded"/>
<xs:enumeration value="SiteCollectionChartQuotaExceeded"/>
<xs:enumeration value="RequestLimitsExceeded"/>
<xs:enumeration value="SavingUnsupportedInViewMode"/>
<xs:enumeration value="SavingWorkbookNoWorkbookName"/>
<xs:enumeration value="FileSaveGeneric"/>
<xs:enumeration value="SavingWorkbookInvalidPermissions"/>
<xs:enumeration value="SavingWorkbookLockedOrCheckedOut"/>
<xs:enumeration value="SavingWorkbookNotCheckedOut"/>
<xs:enumeration value="SavingWorkbookAccessDenied"/>
<xs:enumeration value="SavingWorkbookInvalidFileType"/>
<xs:enumeration value="SavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookNotTrustedLocation"/>
<xs:enumeration value="SavingWorkbookInvalidLocation"/>
<xs:enumeration value="SavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookTrustedLocationSettingWarning"/>
<xs:enumeration value="SavingWorkbookAlmostTooLarge"/>
<xs:enumeration value="SavingWorkbookTooLarge"/>
<xs:enumeration value="NewWorkbookInvalidLocation"/>
<xs:enumeration value="FileOpenSecuritySettings"/>
<xs:enumeration value="FileOpenNotFound"/>
<xs:enumeration value="FileOpenAccessDenied"/>
<xs:enumeration value="FileCorrupt"/>
<xs:enumeration value="OpenWorkbookTooLarge"/>
<xs:enumeration value="OpenWorkbookLocationNotTrusted"/>
<xs:enumeration value="OpenWorkbookAccessDenied"/>
<xs:enumeration value="WorkbookNotSupported"/>
<xs:enumeration value="WorkbookNotSupportedViewRight"/>
<xs:enumeration value="UnsupportedFeatureViewWarning"/>
<xs:enumeration value="UnsupportedFeatureSaveCopyWarning"/>
<xs:enumeration value="ExternalWorkbookLinksDisabled"/>
<xs:enumeration value="WorkbookLockedRead"/>
<xs:enumeration value="EditModeCannotEditNonSharePointWorkbook"/>
<xs:enumeration value="EditModeAccessDenied"/>
<xs:enumeration value="GenericFileOpenError"/>
<xs:enumeration value="IRMedWorkbook"/>
<xs:enumeration value="ParameterInvalid"/>
<xs:enumeration value="ParameterLimitExceeded"/>
<xs:enumeration value="WorkbookInternalLimit"/>
<xs:enumeration value="OldFormatConversionFailed"/>
```

```

<xs:enumeration value="EditModeWorkbookExternalData"/>
<xs:enumeration value="FormulaEditingNotEnabled"/>
<xs:enumeration value="DimensionMismatch"/>
<xs:enumeration value="SetRangeFailure"/>
<xs:enumeration value="ObjectTypeNotSupported"/>
<xs:enumeration value="ParameterDoesNotExist"/>
<xs:enumeration value="FormulaParseFailed"/>
<xs:enumeration value="SetParameterFailure"/>
<xs:enumeration value="CannotEditPivotTable"/>
<xs:enumeration value="InsDelCellsNonblankCells"/>
<xs:enumeration value="InsDelCellsArrayFmla"/>
<xs:enumeration value="InsDelCellsPivotTable"/>
<xs:enumeration value="InsDelCellsTable"/>
<xs:enumeration value="InsDelCellsMergedCells"/>
<xs:enumeration value="InsDelCellsDatatable"/>
<xs:enumeration value="InsDelCellsRowsForWholeColumn"/>
<xs:enumeration value="InsDelCellsColumnsForWholeRow"/>
<xs:enumeration value="InsertChartPivotTable"/>
<xs:enumeration value="SuggestChartNoNumericData"/>
<xs:enumeration value="SuggestChartFailed"/>
<xs:enumeration value="PivotChartInteractivityMissingWarning"/>
<xs:enumeration value="EditChartTitleTooLong"/>
<xs:enumeration value="EditChartTitleStartsWithEquals"/>
<xs:enumeration value="EditChartDataTooLong"/>
<xs:enumeration value="EditChartDataInvalidReference"/>
<xs:enumeration value="EditChartDataOverlapsPivotTable"/>
<xs:enumeration value="ChartOperationNotSupported"/>
<xs:enumeration value="EditChartDataPivotChart"/>
<xs:enumeration value="ChangeChartTypePivotScatter"/>
<xs:enumeration value="ChartTooManyDataSeries"/>
<xs:enumeration value="InvalidSheetName"/>
<xs:enumeration value="RangeParseError"/>
<xs:enumeration value="SpecifiedRangeNotFound"/>
<xs:enumeration value="RangeDefinitionError"/>
<xs:enumeration value="DiscontiguousRangeNotSupported"/>
<xs:enumeration value="RangeRequestAreaExceeded"/>
<xs:enumeration value="SheetRangeMismatch"/>
<xs:enumeration value="ImageGenFailed"/>
<xs:enumeration value="ApiInvalidArgument"/>
<xs:enumeration value="ApiInvalidCoordinate"/>
<xs:enumeration value="ConfirmationUnsupported"/>
<xs:enumeration value="ApiInvalidDimensionReturned"/>
<xs:enumeration value="ApiMissingSiteContext"/>
<xs:enumeration value="Ewr_IllegalPageSize"/>
<xs:enumeration value="Ewr_WorkbookNotSpecified"/>
<xs:enumeration value="Ewr_LoadProgress"/>
<xs:enumeration value="Ewr_FileCorrupt"/>
<xs:enumeration value="Ewr_WorkbookNotSupported"/>
<xs:enumeration value="Ewr_GenericFileOpenError"/>
<xs:enumeration value="Ewr_InvalidParameterGeneric"/>
<xs:enumeration value="Ewr_InvalidParameterMandatoryMissing"/>
<xs:enumeration value="Ewr_InvalidParameterUnexpectedFormat"/>
<xs:enumeration value="Ewr_InvalidParameterOutOfRange"/>
<xs:enumeration value="Ewr_InvalidParameterOperationNotAllowed"/>
<xs:enumeration value="Ewr_ParameterInvalid"/>
<xs:enumeration value="Ewr_ParameterLimitExceeded"/>
<xs:enumeration value="Ewr_ParameterDoesNotExist"/>
<xs:enumeration value="Ewr_SetParameterFailure"/>
<xs:enumeration value="Ewr_SetParameterFailureOnOpen"/>

```

```
<xs:enumeration value="Ewr_ParameterReadFromDocPropsError"/>
<xs:enumeration value="Ewr_FormulaEditingNotEnabled"/>
<xs:enumeration value="Ewr_InvalidVisibleItem"/>
<xs:enumeration value="Ewr_EditSaveAsOverCurrentWorkbook"/>
<xs:enumeration value="Ewr_RequestTimedOut"/>
<xs:enumeration value="Ewr_ServerCommunicationError"/>
<xs:enumeration value="Ewr_ServerAuthenticationError"/>
<xs:enumeration value="Ewr_Top10InvalidValue"/>
<xs:enumeration value="Ewr_Top10InvalidValue_Float"/>
<xs:enumeration value="Mewa_PageStateInitFailed"/>
<xs:enumeration value="Mewa_CriticalParameterMissing"/>
<xs:enumeration value="Mewa_GridViewRenderingFailed"/>
<xs:enumeration value="Mewa_FeatureNotActive"/>
<xs:enumeration value="OperationNotSupportedInViewOnly"/>
<xs:enumeration value="OperationOnInvalidState"/>
<xs:enumeration value="InvalidOrTimedOutSession"/>
<xs:enumeration value="InvalidOrTimedOutSessionRecoverable"/>
<xs:enumeration value="InvalidOrTimedOutSessionPageRefresh"/>
<xs:enumeration value="ScratchPadChangesLost"/>
<xs:enumeration value="MaxSessionsPerUserExceeded"/>
<xs:enumeration value="OperationCanceled"/>
<xs:enumeration value="MaxRequestDurationExceeded"/>
<xs:enumeration value="NoOccurrencesFound"/>
<xs:enumeration value="EcsInvalidNamedObject"/>
<xs:enumeration value="NoPublishedItems"/>
<xs:enumeration value="RetryError"/>
<xs:enumeration value="StopOpenOnRefreshFailure"/>
<xs:enumeration value="ProductExpired"/>
<xs:enumeration value="SortActionInvalid"/>
<xs:enumeration value="SortActionNotSupportedWithPivot"/>
<xs:enumeration value="CircularReferencesFound"/>
<xs:enumeration value="SessionNotFound"/>
<xs:enumeration value="NewWorkbookSessionTimeout"/>
<xs:enumeration value="NewWorkbookSessionTimeoutRecoverable"/>
<xs:enumeration value="EditXLSFile"/>
<xs:enumeration value="UnsupportedFeatureEditWarning"/>
<xs:enumeration value="EditModeSessionExists"/>
<xs:enumeration value="NewerWorkbookExists"/>
<xs:enumeration value="ExternalDataOfficeLive"/>
<xs:enumeration value="PowerPivotOfficeLive"/>
<xs:enumeration value="LostAuthentication"/>
<xs:enumeration value="ListEntryNotFound_1"/>
<xs:enumeration value="ListEntryNotFound_2"/>
<xs:enumeration value="ListEntryAlreadyExists_1"/>
<xs:enumeration value="ListEntryAlreadyExists_2"/>
<xs:enumeration value="InvalidArgumentValue"/>
<xs:enumeration value="MissingArgumentName"/>
<xs:enumeration value="InvalidArgumentName"/>
<xs:enumeration value="ArgumentBadInRemove"/>
<xs:enumeration value="ManagementUIListEntryAlreadyExists"/>
<xs:enumeration value="ManagementUIListEntryNotFound"/>
<xs:enumeration value="ManagementUIInternalError"/>
<xs:enumeration value="UnsupportedUICulture"/>
<xs:enumeration value="UnsupportedDataCulture"/>
<xs:enumeration value="SpecifiedItemNotFound"/>
<xs:enumeration value="EcsSnapshotAccessDenied"/>
<xs:enumeration value="SaveFailed"/>
<xs:enumeration value="WrongEcs"/>
<xs:enumeration value="PasteDataLimitHit"/>
```

```

<xs:enumeration value="UndoStackEmpty"/>
<xs:enumeration value="RedoStackEmpty"/>
<xs:enumeration value="UndoRedoCollabFail"/>
<xs:enumeration value="HyperlinkLocationRequired"/>
<xs:enumeration value="CollabLocaleMismatch"/>
<xs:enumeration value="LocaleRestored"/>
<xs:enumeration value="InvalidEditSession"/>
<xs:enumeration value="InvalidEditSessionPageRefresh"/>
<xs:enumeration value="InvalidEditSessionId"/>
<xs:enumeration value="UnableToLoadEditSession"/>
<xs:enumeration value="SavingWorkbookFailed"/>
<xs:enumeration value="RefreshLockFailed"/>
<xs:enumeration value="InvalidChartName"/>
<xs:enumeration value="RetryOutOfSync"/>
<xs:enumeration value="OperationFailed"/>
<xs:enumeration value="OpenInExcelActiveXError"/>
<xs:enumeration value="OpenInExcelCollaborationError"/>
<xs:enumeration value="ProcessingUserChangesFileDownloadIgnored"/>
<xs:enumeration value="PhoneticDataLossWarning"/>
<xs:enumeration value="NoLicenseError"/>
<xs:enumeration value="NoUnsupportedFeatureCopyAndEdit"/>
<xs:enumeration value="CrossEnvironmentEditNotSupported"/>
<xs:enumeration value="RestBiff8Unsupported"/>
<xs:enumeration value="TransitionXls"/>
<xs:enumeration value="UnsupportedFeaturesSaveOverwrite"/>
<xs:enumeration value="UnsupportedFeaturesSaveCopy"/>
<xs:enumeration value="ChallengeAnonymousUser"/>
<xs:enumeration value="ClipboardAccessDenied"/>
<xs:enumeration value="CannotMergeCellsInTable"/>
<xs:enumeration value="MergeCellsLoseData"/>
<xs:enumeration value="CollabConflictError"/>
<xs:enumeration value="OdfCompatibilityWarning"/>
<xs:enumeration value="OdfUnsupportedEncryption"/>
<xs:enumeration value="OdfUnreadableContentGeneric"/>
<xs:enumeration value="Ewr_OdfUnreadableContentGeneric"/>
<xs:enumeration value="XLSMacroFailure"/>
<xs:enumeration value="XLSPreBiff8Failure"/>
<xs:enumeration value="XLSPasswordProtectionFailure"/>
<xs:enumeration value="XLSIRMFailure"/>
<xs:enumeration value="XLSUnknownFailures"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidProperty"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidGenerationItems"/>
<xs:enumeration value="GenerateWorkbookFailureTable"/>
<xs:enumeration value="GenerateWorkbookFailureConditionalFormatting"/>
<xs:enumeration value="GenerateWorkbookFailureSlicers"/>
<xs:enumeration value="GenerateWorkbookFailureChart"/>
<xs:enumeration value="GenerateWorkbookFailureOpenWorkbook"/>
<xs:enumeration value="GenerateWorkbookFailureUpdateTheme"/>
<xs:enumeration value="GenerateWorkbookFailureAttribution"/>
<xs:enumeration value="CrossDomainAjaxNotSupported"/>
<xs:enumeration value="WorkbookNotInCollection"/>
<xs:enumeration value="Count"/>
</xs:restriction>
</xs:simpleType>
<xs:simpleType name="CommandParameterFlags">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ForceOneTimeRecalc"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>

```

```

        <xs:enumeration value="SuppressOneTimeRecalc"/>
        <xs:enumeration value="LogCpuTime"/>
    </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>
<xs:complexType name="RequestLimits">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="CellCount" nillable="true"
type="xs:long"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="CollaborationParameter">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CollaborationState"
type="tns:CollaborationState"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="CollaborationState">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="UserListVersion" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorkbookMetadataParameter">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataState"
type="tns:WorkbookMetadataState"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorkbookMetadataState">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="MetadataVersion" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ServerEventVersion" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="PivotOperationOptions">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="AnchorType"
type="tns:SharedPivotMenuAnchorType"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SourceIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObject" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FieldId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MemberPropertyId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FilterValue1" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FilterValue2" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns:PivotFilterType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ParentId" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Row" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Items" type="tns:ArrayOfInt"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SortByValue" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DataFieldIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HierarchyIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="LevelIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NavDrillDown" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ChartIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ChartElementValue1" type="xs:int"/>
    </xs:sequence>
</xs:complexType>

```

```

    <xs:element minOccurs="1" maxOccurs="1" name="ChartElementValue2" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="WholeDays" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="SharedPivotMenuAnchorType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="AnchorNotOnPivot"/>
    <xs:enumeration value="AnchorOnSheetCell"/>
    <xs:enumeration value="AnchorOnChartSeries"/>
    <xs:enumeration value="AnchorOnChartCat"/>
    <xs:enumeration value="AnchorOnChartDataPoint"/>
    <xs:enumeration value="AnchorOnChartPageButton"/>
    <xs:enumeration value="AnchorOnChartRowButton"/>
    <xs:enumeration value="AnchorOnChartColButton"/>
    <xs:enumeration value="AnchorOnChart"/>
    <xs:enumeration value="AnchorOnPivotChartHierarchy"/>
    <xs:enumeration value="AnchorOnPivotHierarchy"/>
    <xs:enumeration value="AnchorOnPivotChartHierarchyNotOnPivot"/>
    <xs:enumeration value="AnchorOnPivotHierarchyNotOnPivot"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="PivotFilterType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Invalid"/>
    <xs:enumeration value="FirstTop10"/>
    <xs:enumeration value="Count"/>
    <xs:enumeration value="Percent"/>
    <xs:enumeration value="Sum"/>
    <xs:enumeration value="LastTop10"/>
    <xs:enumeration value="CaptionFirst"/>
    <xs:enumeration value="CaptionEquals"/>
    <xs:enumeration value="CaptionDoesNotEqual"/>
    <xs:enumeration value="CaptionBeginsWith"/>
    <xs:enumeration value="CaptionDoesNotBeginWith"/>
    <xs:enumeration value="CaptionEndsWith"/>
    <xs:enumeration value="CaptionDoesNotEndWith"/>
    <xs:enumeration value="CaptionContains"/>
    <xs:enumeration value="CaptionDoesNotContain"/>
    <xs:enumeration value="CaptionIsGreaterThan"/>
    <xs:enumeration value="CaptionIsGreaterThanOrEqualTo"/>
    <xs:enumeration value="CaptionIsLessThan"/>
    <xs:enumeration value="CaptionIsLessThanOrEqualTo"/>
    <xs:enumeration value="CaptionIsBetween"/>
    <xs:enumeration value="CaptionIsNotBetween"/>
    <xs:enumeration value="ValueFirst"/>
    <xs:enumeration value="ValueEqual"/>
    <xs:enumeration value="ValueNotEqual"/>
    <xs:enumeration value="ValueGreaterThan"/>
    <xs:enumeration value="ValueGreaterThanOrEqual"/>
    <xs:enumeration value="ValueLessThan"/>
    <xs:enumeration value="ValueLessThanOrEqual"/>
    <xs:enumeration value="ValueBetween"/>
    <xs:enumeration value="ValueNotBetween"/>
    <xs:enumeration value="DateFirst"/>
    <xs:enumeration value="DateEquals"/>
    <xs:enumeration value="DateOlderThan"/>
    <xs:enumeration value="DateNewerThan"/>
    <xs:enumeration value="DateBetween"/>
    <xs:enumeration value="DateTomorrow"/>
  </xs:restriction>
</xs:simpleType>

```

```

<xs:enumeration value="DateToday"/>
<xs:enumeration value="DateYesterday"/>
<xs:enumeration value="DateNextWeek"/>
<xs:enumeration value="DateThisWeek"/>
<xs:enumeration value="DateLastWeek"/>
<xs:enumeration value="DateNextMonth"/>
<xs:enumeration value="DateThisMonth"/>
<xs:enumeration value="DateLastMonth"/>
<xs:enumeration value="DateNextQuarter"/>
<xs:enumeration value="DateThisQuarter"/>
<xs:enumeration value="DateLastQuarter"/>
<xs:enumeration value="DateNextYear"/>
<xs:enumeration value="DateThisYear"/>
<xs:enumeration value="DateLastYear"/>
<xs:enumeration value="DateYearToDate"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter1"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter2"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter3"/>
<xs:enumeration value="DateAllDatesInPeriodQuarter4"/>
<xs:enumeration value="DateAllDatesInPeriodJanuary"/>
<xs:enumeration value="DateAllDatesInPeriodFebruary"/>
<xs:enumeration value="DateAllDatesInPeriodMarch"/>
<xs:enumeration value="DateAllDatesInPeriodApril"/>
<xs:enumeration value="DateAllDatesInPeriodMay"/>
<xs:enumeration value="DateAllDatesInPeriodJune"/>
<xs:enumeration value="DateAllDatesInPeriodJuly"/>
<xs:enumeration value="DateAllDatesInPeriodAugust"/>
<xs:enumeration value="DateAllDatesInPeriodSeptember"/>
<xs:enumeration value="DateAllDatesInPeriodOctober"/>
<xs:enumeration value="DateAllDatesInPeriodNovember"/>
<xs:enumeration value="DateAllDatesInPeriodDecember"/>
<xs:enumeration value="DateNotEqual"/>
<xs:enumeration value="DateOlderOrEqual"/>
<xs:enumeration value="DateNewerOrEqual"/>
<xs:enumeration value="DateNotBetween"/>
<xs:enumeration value="Last"/>
</xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfInt">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="int" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="GetBixAnalysisResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetBixAnalysisResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="analysis" type="tns:BixAnalysis"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="CommandResult">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TransientEditSessionToken"
type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SpreadsheetData" type="xs:string"/>
  </xs:sequence>
</xs:complexType>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="ExtendedInfo"
type="tns:CommandResultExtendedInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfCallInfo"
type="tns:ClientUdfCallInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PeriodicRefreshInfo"
type="tns:PeriodicRefreshInfo"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HealthInformation"
type="tns:ServerHealthInformation"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SecondsBeforeNextPoll" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="EditSessionIsDirty" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="EditSessionHasMultipleCollaborationUsers"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RequestId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CollaborationResult"
type="tns:CollaborationResult"/>
        <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataResult"
type="tns:WorkbookMetadataResult"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ServerEvents" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="CommandResultExtendedInfo">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Messages"
type="tns:ArrayOfExcelServerMessage"/>
        <xs:element minOccurs="1" maxOccurs="1" name="WarnOnManualDataRefresh"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UnsupportedFeaturesRemoved"
type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfExcelServerMessage">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ExcelServerMessage"
nillable="true" type="tns:ExcelServerMessage"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ExcelServerMessage">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="HasOpenItemPermission"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HasClientUrl" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Id" type="tns:ExcelServerMessageId"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DebugInfo" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Severity"
type="tns:ExcelServerMessageSeverity"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:ExcelServerMessageType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Appearance"
type="tns:ExcelServerMessageAppearance"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Description" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ExtendedDescription" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HelpTopicId" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DisplaysCorrelationId"
type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HelpDisplayText" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="HealthInformation"
type="tns:ServerHealthInformation"/>
        <xs:element minOccurs="0" maxOccurs="1" name="WrongEcsServerId" type="xs:string"/>
    </xs:sequence>
</xs:complexType>

```



```

<xs:simpleType name="ExcelServerMessageSeverity">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error"/>
    <xs:enumeration value="Warning"/>
    <xs:enumeration value="Information"/>
    <xs:enumeration value="Progress"/>
    <xs:enumeration value="GettingStarted"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ExcelServerMessageType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Alert"/>
    <xs:enumeration value="Status"/>
    <xs:enumeration value="Confirmation"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="ExcelServerMessageAppearance">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="OK"/>
        <xs:enumeration value="Cancel"/>
        <xs:enumeration value="Yes"/>
        <xs:enumeration value="No"/>
        <xs:enumeration value="Notification"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:complexType name="ServerHealthInformation">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="StateFlags" type="tns:ServerStateFlags"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HealthScore" type="xs:float"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="ServerStateFlags">
  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="ShuttingDown"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:complexType name="ClientUdfCallInfo">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Calls" type="tns:ArrayOfClientUdfCall"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfClientUdfCall">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfCall" nillable="true"
type="tns:ClientUdfCall"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfCall">
  <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="Id" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UdfName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Parameters" type="tns:ArrayOfAnyType"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfAnyType">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="anyType" nillable="true"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="PeriodicRefreshInfo">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ExpirationTime" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ConnectionNames"
type="tns:ArrayOfString"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfString">
    <xs:sequence>
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type="xs:string"/>
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</xs:complexType>
<xs:complexType name="CollaborationResult">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CollaborationState"
type="tns:CollaborationState"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Users"
type="tns:ArrayOfPresenceUserInfo"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfPresenceUserInfo">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="PresenceUserInfo" nillable="true"
type="tns:PresenceUserInfo"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="PresenceUserInfo">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="User" type="tns:PresenceUserId"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UserColor" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NumberOfTimesInSession" type="xs:int"/>
    </xs:sequence>
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<xs:complexType name="PresenceUserId">
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        <xs:element minOccurs="0" maxOccurs="1" name="UserName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsApiUser" type="xs:boolean"/>
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    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="WorkbookMetadataState"
type="tns:WorkbookMetadataState"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Metadata" type="tns:WorkbookMetadata"/>
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</xs:complexType>
<xs:complexType name="WorkbookMetadata">
    <xs:sequence>

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        <xs:element minOccurs="0" maxOccurs="1" name="Sheets" type="tns:ArrayOfWorksheetData"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SheetChanges"
type="tns:ArrayOfWorksheetChangeInfo"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HidePivotFieldList" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ServerEventMetadataList"
type="tns:ArrayOfServerEventMetadata"/>
        <xs:element minOccurs="0" maxOccurs="1" name="WebExtensions"
type="tns:ArrayOfWebExtensionMetadata"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfWorksheetData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="WorksheetData" nillable="true"
type="tns:WorksheetData"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorksheetData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="TabColor" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns:SheetFlags"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SheetType" type="tns:SheetType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Visibility" type="tns:SheetVisibility"/>
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                <xs:enumeration value="None"/>
                <xs:enumeration value="RtlName"/>
                <xs:enumeration value="DisplayRtl"/>
                <xs:enumeration value="HeadersVisible"/>
                <xs:enumeration value="DisplayOutlines"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
</xs:simpleType>
<xs:simpleType name="SheetType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Worksheet"/>
        <xs:enumeration value="Chart"/>
    </xs:restriction>
</xs:simpleType>
<xs:simpleType name="SheetVisibility">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Visible"/>
        <xs:enumeration value="Hidden"/>
        <xs:enumeration value="VeryHidden"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="ArrayOfWorksheetChangeInfo">
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nillable="true" type="tns:WorksheetChangeInfo"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorksheetChangeInfo">
    <xs:sequence>

```

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        <xs:element minOccurs="1" maxOccurs="1" name="StateVersion" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="NewName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Type" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfServerEventMetadata">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="ServerEventMetadata"
nillable="true" type="tns:ServerEventMetadata"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ServerEventMetadata">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="StateVersion" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ServerEventXml" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfWebExtensionMetadata">
    <xs:sequence>
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nillable="true" type="tns:WebExtensionMetadata"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WebExtensionMetadata">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="WebExtensionId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="BindingData"
type="tns:ArrayOfBindingMetadata"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfBindingMetadata">
    <xs:sequence>
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type="tns:BindingMetadata"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="BindingMetadata">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="BindingType" type="tns:DdaBindingType"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Version" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Reference" type="tns:BindingReference"/>
        <xs:element minOccurs="1" maxOccurs="1" name="HasHeaders" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsValidRef" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="DdaBindingType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="None"/>
        <xs:enumeration value="Table"/>
        <xs:enumeration value="Text"/>
        <xs:enumeration value="Matrix"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="BindingReference">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FirstRow" type="xs:int"/>
    </xs:sequence>
</xs:complexType>

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    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="LastColumn" type="xs:int"/>
  </xs:sequence>
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<xs:complexType name="BixAnalysis">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillContext"
type="tns:BixDrillContext"/>
    <xs:element minOccurs="0" maxOccurs="1" name="ExcludeHierarchies"
type="tns:ArrayOfInt"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Context" type="tns:BixContext"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="BixDrillContext">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillDown" type="tns:BixDrillField"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DrillUp" type="tns:BixDrillField"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="BixDrillField">
  <xs:sequence>
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    <xs:element minOccurs="1" maxOccurs="1" name="Id" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="BixContext">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="DimensionCaption" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HierarchyCaption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HierarchyId" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="BixDrill">
  <xs:complexType>
    <xs:sequence>
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type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns:PivotOperationOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="BixDrillResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="BixDrillResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetPivotFieldManagerData">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

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        <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
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</xs:complexType>
</xs:element>
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    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DataAxis"
type="tns:ArrayOfPivotFieldListItem"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FilterAxis"
type="tns:ArrayOfPivotFieldListItem"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ColumnAxis"
type="tns:ArrayOfPivotFieldListItem"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RowAxis"
type="tns:ArrayOfPivotFieldListItem"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FieldWellVersion" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfPivotFieldListItem">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="PivotFieldListItem"
nillable="true" type="tns:PivotFieldListItem"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="PivotFieldListItem">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Children"
type="tns:ArrayOfPivotFieldListItem"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsSet" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShowFilterArrow" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="CanDrag" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsCollapsible" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShowCheckBox" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsCollapsed" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsChecked" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="UserRank" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FilterImage" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Image" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="InternalMargin" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="TypeTag" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="PivotTableIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="PivotCacheIndex" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ToolTip" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="UniqueName" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    </xs:sequence>
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    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFieldManagerDataResult"
type="tns:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldManagerData"
type="tns:PivotFieldManagerData"/>
        </xs:sequence>
    </xs:complexType>
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<xs:element name="GetPivotFieldListData">
    <xs:complexType>
        <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
        <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="version" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="relatedGroup" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="selectedTab" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:complexType name="PivotFieldListData">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="RelatedGroups"
type="tns:ArrayOfPivotFieldListRelatedGroup"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FieldListItems"
type="tns:ArrayOfPivotFieldListItem"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FieldListCacheId" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SelectedTab" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShowRelatedGroups" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ShowTabs" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfPivotFieldListRelatedGroup">
    <xs:sequence>
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nillable="true" type="tns:PivotFieldListRelatedGroup"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="PivotFieldListRelatedGroup">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="GroupId" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="GroupName" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="GetPivotFieldListDataResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetPivotFieldListDataResult"
type="tns:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldListData"
type="tns:PivotFieldListData"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ExpandPivotFieldListLevels">
    <xs:complexType>
        <xs:sequence>
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type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
            <xs:element minOccurs="1" maxOccurs="1" name="type" type="xs:int"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ExpandPivotFieldListLevelsResponse">
    <xs:complexType>
        <xs:sequence>

```

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        <xs:element minOccurs="0" maxOccurs="1" name="ExpandPivotFieldListLevelsResult"
type="tns:CommandResult"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="ApplyPivotFieldManagerHiddenState">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
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        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ApplyPivotFieldManagerHiddenStateResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1"
name="ApplyPivotFieldManagerHiddenStateResult" type="tns:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ApplyPivot">
    <xs:complexType>
        <xs:sequence>
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type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
            <xs:element minOccurs="0" maxOccurs="1" name="pivotFieldApplyData"
type="tns:PivotFieldApplyData"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="PivotFieldApplyData">
    <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="FieldListType" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FieldListVersion" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FieldWellVersion" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SourceAxis" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SourceAxisPosition" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ItemType" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="ItemIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DestinationAxis" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="DestinationAxisPosition" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="ApplyPivotResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotResult"
type="tns:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ProcessODataRequest">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>

```



```

        <xs:element minOccurs="0" maxOccurs="1" name="request" type="tns:RestODataRequest"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:complexType name="RestODataRequest">
    <xs:complexContent mixed="false">
        <xs:extension base="tns:RestRequest">
            <xs:sequence>
                <xs:element minOccurs="0" maxOccurs="1" name="RequestHeaders"
type="tns:ArrayOfArrayOfString"/>
                <xs:element minOccurs="0" maxOccurs="1" name="ResponseHeaders"
type="tns:ArrayOfArrayOfString"/>
                <xs:element minOccurs="0" maxOccurs="1" name="ServicePathUri" type="xs:string"/>
                <xs:element minOccurs="0" maxOccurs="1" name="Uri" type="xs:string"/>
                <xs:element minOccurs="0" maxOccurs="1" name="RequestBody" type="xs:base64Binary"/>
                <xs:element minOccurs="0" maxOccurs="1" name="HttpMethod" type="xs:string"/>
            </xs:sequence>
        </xs:extension>
    </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRequest">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="OpenWorkbookInParameters"
type="tns:OpenWorkbookInParameters"/>
        <xs:element xmlns:q2="http://microsoft.com/wsdl/types/" minOccurs="1" maxOccurs="1"
name="RequestSiteId" type="q2:guid"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SessionId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ListOfCellsToSet"
type="tns:ArrayOfRangeValuesA1"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="OpenWorkbookInParameters">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Url" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Canary" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SubscriberId" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Flags" type="tns:OpenWorkbookFlags"/>
        <xs:element minOccurs="0" maxOccurs="1" name="CultureCommandParameter"
type="tns:CultureCommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DocumentProperties"
type="xs:base64Binary"/>
        <xs:element minOccurs="0" maxOccurs="1" name="WacUserSessionId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PreviousSessionId" type="xs:string"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="OpenWorkbookFlags">
    <xs:list>
        <xs:simpleType>
            <xs:restriction base="xs:string">
                <xs:enumeration value="NewWorkbook"/>
                <xs:enumeration value="EditMode"/>
                <xs:enumeration value="DisableUndo"/>
                <xs:enumeration value="Recyclable"/>
                <xs:enumeration value="ShouldCheckCanary"/>
                <xs:enumeration value="InternalWorkbook"/>
                <xs:enumeration value="EmbedView"/>
                <xs:enumeration value="DisallowXls"/>
                <xs:enumeration value="IsCopiedOrConvertedFile"/>
                <xs:enumeration value="ForceAnonymous"/>
            </xs:restriction>
        </xs:simpleType>
    </xs:list>
</xs:simpleType>

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```

    <xs:enumeration value="GenerateWorkbook"/>
    <xs:enumeration value="PreviouslyHadUnsupportedFeatures"/>
    <xs:enumeration value="OnlyOpenFromCollection"/>
    <xs:enumeration value="LoadedOnDemand"/>
  </xs:restriction>
</xs:simpleType>
</xs:list>
</xs:simpleType>
<xs:complexType name="CultureCommandParameter">
  <xs:sequence>
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    <xs:element minOccurs="0" maxOccurs="1" name="DataCultureName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SharePointDataCultureName"
type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="TimeZoneSerialization" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfRangeValuesA1">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="RangeValuesA1" nillable="true"
type="tns:RangeValuesA1"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="RangeValuesA1">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfAnyType"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfArrayOfString">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ArrayOfString" nillable="true"
type="tns:ArrayOfString"/>
  </xs:sequence>
</xs:complexType>
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    <xs:sequence>
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type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="responseHeaders"
type="tns:ArrayOfArrayOfString"/>
      <xs:element minOccurs="0" maxOccurs="1" name="responseBody" type="xs:base64Binary"/>
      <xs:element minOccurs="1" maxOccurs="1" name="responseStatusCode" type="xs:int"/>
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</xs:element>
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    <xs:sequence>
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type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedSlicerOptions"
type="tns:SlicerOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="timeSlicerInteractivityType"
type="tns:TimeSlicerInteractivityType"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sharedFilterState"
type="tns:TimeSlicerFilterState"/>
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  </xs:complexType>
</xs:element>

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        <xs:element minOccurs="0" maxOccurs="1" name="sharedTimeSlicerSettings"
type="tns:TimeSlicerSettings"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="SlicerViewId" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SlicerExternalSourceIndex"
type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SlicerItemsOffset" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SlicerItemsCount" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SlicerClearItems" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SlicerVersion" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsNov2" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="TimeSlicerInteractivityType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="UpdateSelection"/>
        <xs:enumeration value="UpdateDisplayLevel"/>
        <xs:enumeration value="UpdateScrollPosition"/>
    </xs:restriction>
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type="tns:DateTimeRecord"/>
        <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="tns:DateTimeRecord"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:int"/>
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        <xs:element minOccurs="0" maxOccurs="1" name="DisplayStart" type="tns:DateTimeRecord"/>
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<xs:element name="ApplyTimeSlicerInteractivityResponse">
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type="tns:CommandResult"/>
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        <xs:sequence>
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type="tns:CommandParameter"/>
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    </xs:complexType>
</xs:element>

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        <xs:element minOccurs="0" maxOccurs="1" name="pivotOperationOptions"
type="tns:PivotOperationOptions"/>
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type="tns:PivotValueFieldSettingsApplyData"/>
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</xs:complexType>
</xs:element>
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        <xs:element minOccurs="1" maxOccurs="1" name="Aggregation" type="xs:int"/>
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        <xs:sequence>
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type="tns:CommandResult"/>
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    </xs:complexType>
</xs:element>
<xs:element name="GetPivotValueFieldSettings">
    <xs:complexType>
        <xs:sequence>
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type="tns:CommandParameter"/>
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type="tns:PivotOperationOptions"/>
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    </xs:complexType>
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type="tns:CommandResult"/>
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type="tns:PivotValueFieldSettingsInfo"/>
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    </xs:complexType>
</xs:element>
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        <xs:sequence>
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type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
            <xs:element minOccurs="1" maxOccurs="1" name="coerceType" type="tns:DdaCoerceType"/>
            <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns:DdaValueType"/>
            <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns:DdaFilterType"/>
            <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
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    <xs:restriction base="xs:string">
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      <xs:enumeration value="Table"/>
      <xs:enumeration value="Text"/>
      <xs:enumeration value="Matrix"/>
      <xs:enumeration value="Html"/>
      <xs:enumeration value="Ooxml"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="DdaValueType">
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      <xs:enumeration value="None"/>
      <xs:enumeration value="Formatted"/>
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    </xs:restriction>
  </xs:simpleType>
  <xs:simpleType name="DdaFilterType">
    <xs:restriction base="xs:string">
      <xs:enumeration value="None"/>
      <xs:enumeration value="All"/>
      <xs:enumeration value="OnlyVisible"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="DdaGetSelectedDataResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DdaGetSelectedDataResult"
type="tns:CommandResult"/>
        <xs:element minOccurs="0" maxOccurs="1" name="selectedData"
type="tns:ArrayOfAnyType"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="DdaSetSelectedData">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="formula" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="data" type="tns:ArrayOfAnyType"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="DdaSetSelectedDataResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DdaSetSelectedDataResult"
type="tns:CommandResult"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="DdaAddBinding">
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type="tns:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
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    </xs:complexType>
  </xs:element>

```

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        <xs:element minOccurs="1" maxOccurs="1" name="bindingType"
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type="tns:CommandResult"/>
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    </xs:complexType>
</xs:element>
<xs:element name="DdaGetBinding">
    <xs:complexType>
        <xs:sequence>
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type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DdaGetBindingResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="DdaGetBindingResult"
type="tns:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="binding" type="tns:BindingMetadata"/>
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    </xs:complexType>
</xs:element>
<xs:element name="DdaReleaseBinding">
    <xs:complexType>
        <xs:sequence>
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type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
        </xs:sequence>
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</xs:element>
<xs:element name="DdaReleaseBindingResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="DdaReleaseBindingResult"
type="tns:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="DdaGetBindingData">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
            <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
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    </xs:complexType>
</xs:element>

```

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    <xs:element minOccurs="1" maxOccurs="1" name="coerceType" type="tns:DdaCoerceType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="valueFormat" type="tns:DdaValueType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="filterType" type="tns:DdaFilterType"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="startCol" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="rowCount" type="xs:int"/>
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    <xs:sequence>
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type="tns:CommandResult"/>
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type="tns:ArrayOfAnyType"/>
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<xs:element name="DdaSetBindingData">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="bindingId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startRow" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="startCol" type="xs:int"/>
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</xs:element>
<xs:element name="DdaSetBindingDataResponse">
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    <xs:sequence>
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type="tns:CommandResult"/>
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  </xs:complexType>
</xs:element>
<xs:element name="DdaGetAllBindings">
  <xs:complexType>
    <xs:sequence>
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type="tns:CommandParameter"/>
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  </xs:complexType>
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<xs:element name="DdaGetAllBindingsResponse">
  <xs:complexType>
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type="tns:CommandResult"/>
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type="tns:ArrayOfBindingMetadata"/>
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  </xs:complexType>

```

```

</xs:element>
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type="tns:CommandParameter"/>
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type="tns:ArrayOfArrayOfString"/>
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    <xs:sequence>
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type="tns:CommandResult"/>
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</xs:element>
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  <xs:complexType>
    <xs:sequence>
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type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="controlId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="settings" type="tns:DdaSettings"/>
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type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="OpenWorkbook">
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    <xs:sequence>
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type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="inParameters"
type="tns:OpenWorkbookInParameters"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="OpenWorkbookOutParameters">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="ClientWorkbookUri" type="xs:string"/>
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```

    <xs:element minOccurs="0" maxOccurs="1" name="CloseUri" type="xs:string"/>
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  <xs:complexType>
    <xs:sequence>
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type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="workbookId" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="outFlags"
type="tns:OpenWorkbookOutFlags"/>
      <xs:element minOccurs="0" maxOccurs="1" name="outParameters"
type="tns:OpenWorkbookOutParameters"/>
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</xs:element>
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        <xs:enumeration value="HasOpenItemPermission"/>
        <xs:enumeration value="HasEditItemPermission"/>
        <xs:enumeration value="RequiresCheckOut"/>
        <xs:enumeration value="Biff8Format"/>
        <xs:enumeration value="HasUnsupportedFeatures"/>
        <xs:enumeration value="SupportsEditing"/>
        <xs:enumeration value="StaticView"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:element name="CloseWorkbook">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
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type="tns:CommandResult"/>
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  </xs:complexType>
</xs:element>
<xs:element name="SaveWorkbook">
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type="tns:CommandParameter"/>
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    <xs:sequence>
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type="tns:CommandParameter"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="workbookType" type="tns:WorkbookType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="flags" type="tns:SaveAsFlags"/>
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  <xs:restriction base="xs:string">
    <xs:enumeration value="FullWorkbook"/>
    <xs:enumeration value="FullSnapshot"/>
    <xs:enumeration value="PublishedItemsSnapshot"/>
  </xs:restriction>
</xs:simpleType>
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  <xs:list>
    <xs:simpleType>
      <xs:restriction base="xs:string">
        <xs:enumeration value="OverwriteExistingFile"/>
        <xs:enumeration value="WarnWhenCrossingTrustedLocation"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
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  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SaveWorkbookAsResult"
type="tns:CommandResult"/>
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type="tns:CommandParameter"/>
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    </xs:sequence>
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</xs:element>
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    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FirstColumn" type="xs:int"/>
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    </xs:sequence>
  </xs:complexType>
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type="tns:CommandResult"/>
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  </xs:element>
  <xs:element name="GetRange">
    <xs:complexType>
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type="tns:CommandParameter"/>
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    </xs:complexType>
  </xs:element>
  <xs:element name="GetRangeResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetRangeResult"
type="tns:CommandResult"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetRangeValues">
    <xs:complexType>
      <xs:sequence>
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type="tns:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns:SheetRange"/>
        <xs:element minOccurs="1" maxOccurs="1" name="formatted" type="xs:boolean"/>
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    </xs:complexType>
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  <xs:element name="GetRangeValuesResponse">
    <xs:complexType>
      <xs:sequence>
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type="tns:CommandResult"/>
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    </xs:complexType>
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type="tns:CommandParameter"/>
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      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="RestResult">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="OpenWorkbookOutParameters"
type="tns:OpenWorkbookOutParameters"/>
    </xs:sequence>
  </xs:complexType>

```

```

    </xs:sequence>
  </xs:complexType>
  <xs:element name="ProcessRestRequestResponse">
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      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ProcessRestRequestResult"
type="tns:CommandResult"/>
        <xs:element minOccurs="0" maxOccurs="1" name="result" type="tns:RestResult"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="GetRangeValuesA1">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="rangeRequests"
type="tns:ArrayOfRangeValuesA1"/>
        <xs:element minOccurs="1" maxOccurs="1" name="formatting" type="tns:CellDataFormat"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:simpleType name="CellDataFormat">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="Formatted"/>
          <xs:enumeration value="Unformatted"/>
          <xs:enumeration value="Compound"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>
  <xs:element name="GetRangeValuesA1Response">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GetRangeValuesA1Result"
type="tns:CommandResult"/>
        <xs:element minOccurs="0" maxOccurs="1" name="rangeRequests"
type="tns:ArrayOfRangeValuesA1"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:element name="SetRange">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="activeCell" type="tns:SheetCell"/>
        <xs:element minOccurs="0" maxOccurs="1" name="cellsArray"/>
        <xs:element minOccurs="0" maxOccurs="1" name="setCellRange" type="tns:SheetRange"/>
        <xs:element minOccurs="1" maxOccurs="1" name="comboKey" type="tns:ComboKeyType"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:complexType name="SheetCell">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Row" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>

```

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    <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
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  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="CTRL"/>
    <xs:enumeration value="CTRLSHIFT"/>
    <xs:enumeration value="COMBOKEYMAX"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="TypeExporter">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="CellError" type="tns:CellError"/>
    <xs:element minOccurs="0" maxOccurs="1" name="CellCompoundValue"
type="tns:CellCompoundValue"/>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookGenerationOptions"
type="tns:WorkbookGenerationOptions"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestChartPngRequest"
type="tns:RestChartPngRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangePngRequest"
type="tns:RestRangePngRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPngResult" type="tns:RestPngResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestChartPngResult"
type="tns:RestChartPngResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPublishedObjectsRequest"
type="tns:RestPublishedObjectsRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestPublishedObjectsResult"
type="tns:RestPublishedObjectsResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestWorkbookRequest"
type="tns:RestWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestWorkbookResult"
type="tns:RestWorkbookResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeValuesRequest"
type="tns:RestRangeValuesRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeValuesResult"
type="tns:RestRangeValuesResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeXmlRequest"
type="tns:RestRangeXmlRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestRangeXmlResult"
type="tns:RestRangeXmlResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestODataRequest"
type="tns:RestODataRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestODataResult"
type="tns:RestODataResult"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestOpenWorkbookRequest"
type="tns:RestOpenWorkbookRequest"/>
    <xs:element minOccurs="0" maxOccurs="1" name="RestOpenWorkbookResult"
type="tns:RestOpenWorkbookResult"/>
  </xs:sequence>
</xs:complexType>
<xs:simpleType name="CellError">
  <xs:restriction base="xs:string">
    <xs:enumeration value="None"/>
    <xs:enumeration value="Div0"/>
    <xs:enumeration value="NotApplicable"/>
    <xs:enumeration value="Name"/>
    <xs:enumeration value="Null"/>
    <xs:enumeration value="Num"/>
    <xs:enumeration value="Ref"/>
  </xs:restriction>
</xs:simpleType>

```

```

    <xs:enumeration value="Value"/>
    <xs:enumeration value="GettingData"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="CellCompoundValue">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Value"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Formatted" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="WorkbookGenerationOptions">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="WorkbookName" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Locale" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataCulture" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="UICulture" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GenerateItems"
type="tns:WorkbookGenerationItems"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DarkColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DarkColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LightColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="LightColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AccentColor1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AccentColor2" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="FontName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FontSize" type="xs:double"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Attribution" type="xs:string"/>
  </xs:sequence>
</xs:complexType>
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  <xs:list>
    <xs:simpleType>
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        <xs:enumeration value="Table"/>
        <xs:enumeration value="Slicers"/>
        <xs:enumeration value="Chart"/>
        <xs:enumeration value="ConditionalFormatting"/>
        <xs:enumeration value="All"/>
      </xs:restriction>
    </xs:simpleType>
  </xs:list>
</xs:simpleType>
<xs:complexType name="RestChartPngRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ChartName" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRangePngRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Nov" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

```

    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="RestPngResult">
    <xs:complexContent mixed="false">
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        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="RestChartPngResult">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:RestPngResult"/>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="RestPublishedObjectsRequest">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:RestRequest">
        <xs:sequence>
          <xs:element minOccurs="1" maxOccurs="1" name="Options"
type="tns:GetPublishedObjectsOptions"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:simpleType name="GetPublishedObjectsOptions">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="ReturnImplicitPublish"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>
  <xs:complexType name="RestPublishedObjectsResult">
    <xs:complexContent mixed="false">
      <xs:extension base="tns:RestResult">
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="PublishedObjects"
type="tns:ArrayOfPublishedObjectName"/>
        </xs:sequence>
      </xs:extension>
    </xs:complexContent>
  </xs:complexType>
  <xs:complexType name="ArrayOfPublishedObjectName">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="PublishedObjectName"
nillable="true" type="tns:PublishedObjectName"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="PublishedObjectName">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Type" type="tns:NamedObjectType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="TableId" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>

```

```

<xs:simpleType name="NamedObjectType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="InvalidNamedObjectType"/>
    <xs:enumeration value="Chart"/>
    <xs:enumeration value="PivotTable"/>
    <xs:enumeration value="Table"/>
    <xs:enumeration value="NamedRange"/>
    <xs:enumeration value="WebExtension"/>
    <xs:enumeration value="MaxNamedObjectType"/>
  </xs:restriction>
</xs:simpleType>
<xs:complexType name="RestWorkbookRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestWorkbookResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="WorkbookBits"
type="xs:base64Binary"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRangeValuesRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType" nillable="true"
type="tns:NamedObjectType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRangeValuesResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfAnyType"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRangeXmlRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="StateId" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="RangeName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectView" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestRangeXmlResult">
  <xs:complexContent mixed="false">

```



```

    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="CommandResult"
type="tns:CommandResult"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsChromeRtl" type="xs:boolean"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestODataResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ResponseStatusCode" type="xs:int"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseHeaders"
type="tns:ArrayOfArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="ResponseBody"
type="xs:base64Binary"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestOpenWorkbookRequest">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestRequest"/>
  </xs:complexContent>
</xs:complexType>
<xs:complexType name="RestOpenWorkbookResult">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:RestResult">
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="SessionId" type="xs:string"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="SetRangeResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetRangeResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SetRangeA1">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="setRangeRequests"
type="tns:ArrayOfRangeValuesA1"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SetRangeA1Response">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SetRangeA1Result"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

        </xs:sequence>
    </xs:complexType>
</xs:element>
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    <xs:complexType>
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type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="workbookParameters"
type="tns:ArrayOfWorkbookParameter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="ArrayOfWorkbookParameter">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="unbounded" name="WorkbookParameter"
nillable="true" type="tns:WorkbookParameter"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="WorkbookParameter">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="Comment" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsPivotPageField" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsSlicer" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RequiresConnection" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Values" type="tns:ArrayOfString"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="SetParametersResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="SetParametersResult"
type="tns:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetRangeForClipboard">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="source" type="tns:SheetRange"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="GetRangeForClipboardResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetRangeForClipboardResult"
type="tns:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="clipboardString" type="xs:string"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="Refresh">
    <xs:complexType>
        <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
        <xs:element minOccurs="0" maxOccurs="1" name="dataConnectionName" type="xs:string"/>
        <xs:element minOccurs="1" maxOccurs="1" name="externalSourceIndex" type="xs:int"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="RefreshResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="RefreshResult"
type="tns:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="RefreshAll">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
            <xs:element minOccurs="1" maxOccurs="1" name="periodic" type="xs:boolean"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="RefreshAllResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="RefreshAllResult"
type="tns:CommandResult"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="RecalcAll">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
            <xs:element minOccurs="1" maxOccurs="1" name="calculateType"
type="tns:CalculateType"/>
            <xs:element minOccurs="0" maxOccurs="1" name="recalcParams"
type="tns:RecalcParameters"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:simpleType name="CalculateType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Recalculate"/>
        <xs:enumeration value="CalculateFull"/>
    </xs:restriction>
</xs:simpleType>
<xs:complexType name="RecalcParameters">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="ClientUdfResultInfo"
type="tns:ClientUdfResultInfo"/>
        <xs:element minOccurs="1" maxOccurs="1" name="FirstClientUdfRecalc" type="xs:boolean"/>
    </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfResultInfo">
    <xs:sequence>

```

```

    <xs:element minOccurs="0" maxOccurs="1" name="Results"
type="tns:ArrayOfClientUdfResult"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CalcVersion" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfClientUdfResult">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="ClientUdfResult" nillable="true"
type="tns:ClientUdfResult"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ClientUdfResult">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Id" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Result"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ErrorResult" type="tns:CellError"/>
  </xs:sequence>
</xs:complexType>
<xs:element name="RecalcAllResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcAllResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="CancelRequest">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="CancelRequestResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="CancelRequestResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="Recalc">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetRange" type="tns:SheetRange"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="RecalcResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>

```

```

<xs:element name="RecalcA1">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="sheetName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="rangeName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="RecalcA1Response">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="RecalcA1Result"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetSessionInformation">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetSessionInformationResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetSessionInformationResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="serverVersion" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="uiCultureName" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="dataCultureName" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="FindRange">
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    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="searchTerm" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="searchUp" type="xs:boolean"/>
      <xs:element minOccurs="0" maxOccurs="1" name="searchAfterCell" type="tns:SheetCell"/>
    </xs:sequence>
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</xs:element>
<xs:element name="FindRangeResponse">
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    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="FindRangeResult"
type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="foundCell" type="tns:SheetCell"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ApplyTop10Filter">
  <xs:complexType>

```

```

    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
      <xs:element minOccurs="1" maxOccurs="1" name="top" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="percent" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="value" type="xs:int"/>
    </xs:sequence>
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</xs:element>
<xs:complexType name="AutoFilterOptions">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterType" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Criteria"
type="tns:ArrayOfAutoFilterCriteria"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CriteriaType"
type="tns:AutoFilterCriteriaType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Id" type="xs:unsignedInt"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Column" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectView" type="xs:boolean"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="Type"
type="tns:AutoFilterOperationType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Relation"
type="tns:AutoFilterRelationOperator"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Value" type="xs:string"/>
  </xs:sequence>
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<xs:simpleType name="AutoFilterOperationType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="EQ"/>
    <xs:enumeration value="NEQ"/>
    <xs:enumeration value="GT"/>
    <xs:enumeration value="GTEQ"/>
    <xs:enumeration value="LT"/>
    <xs:enumeration value="LTEQ"/>
    <xs:enumeration value="LastCount"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AutoFilterRelationOperator">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Nil"/>
    <xs:enumeration value="And"/>
    <xs:enumeration value="Or"/>
    <xs:enumeration value="LastCount"/>
  </xs:restriction>
</xs:simpleType>
<xs:simpleType name="AutoFilterCriteriaType">

```

```

<xs:restriction base="xs:string">
  <xs:enumeration value="Nil"/>
  <xs:enumeration value="AboveAverage"/>
  <xs:enumeration value="BelowAverage"/>
  <xs:enumeration value="Tomorrow"/>
  <xs:enumeration value="Today"/>
  <xs:enumeration value="Yesterday"/>
  <xs:enumeration value="NextWeek"/>
  <xs:enumeration value="ThisWeek"/>
  <xs:enumeration value="LastWeek"/>
  <xs:enumeration value="NextMonth"/>
  <xs:enumeration value="ThisMonth"/>
  <xs:enumeration value="LastMonth"/>
  <xs:enumeration value="NextQuarter"/>
  <xs:enumeration value="ThisQuarter"/>
  <xs:enumeration value="LastQuarter"/>
  <xs:enumeration value="NextYear"/>
  <xs:enumeration value="ThisYear"/>
  <xs:enumeration value="LastYear"/>
  <xs:enumeration value="YearToDate"/>
  <xs:enumeration value="Q1"/>
  <xs:enumeration value="Q2"/>
  <xs:enumeration value="Q3"/>
  <xs:enumeration value="Q4"/>
  <xs:enumeration value="M1"/>
  <xs:enumeration value="M2"/>
  <xs:enumeration value="M3"/>
  <xs:enumeration value="M4"/>
  <xs:enumeration value="M5"/>
  <xs:enumeration value="M6"/>
  <xs:enumeration value="M7"/>
  <xs:enumeration value="M8"/>
  <xs:enumeration value="M9"/>
  <xs:enumeration value="M10"/>
  <xs:enumeration value="M11"/>
  <xs:enumeration value="M12"/>
  <xs:enumeration value="LastCount"/>
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type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ApplyItemFilter">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="values" type="tns:ArrayOfString"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterDateNodes"
type="tns:ArrayOfAutoFilterDateNodeInfo"/>
      <xs:element minOccurs="1" maxOccurs="1" name="blanks" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="hideBlanks" type="xs:boolean"/>
    </xs:sequence>
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</xs:element>

```

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        </xs:sequence>
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</xs:complexType>
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    <xs:sequence>
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type="tns:AutoFilterDateNodeType"/>
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        <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Hour" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Minute" type="xs:short"/>
        <xs:element minOccurs="1" maxOccurs="1" name="Second" type="xs:short"/>
    </xs:sequence>
</xs:complexType>
<xs:simpleType name="AutoFilterDateNodeType">
    <xs:restriction base="xs:string">
        <xs:enumeration value="Nil"/>
        <xs:enumeration value="Year"/>
        <xs:enumeration value="Month"/>
        <xs:enumeration value="Day"/>
        <xs:enumeration value="Hour"/>
        <xs:enumeration value="Minute"/>
        <xs:enumeration value="Second"/>
        <xs:enumeration value="Max"/>
    </xs:restriction>
</xs:simpleType>
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    <xs:complexType>
        <xs:sequence>
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type="tns:CommandResult"/>
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    </xs:complexType>
</xs:element>
<xs:element name="SortFilterColumn">
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type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
            <xs:element minOccurs="1" maxOccurs="1" name="sortType" type="tns:SortType"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
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        <xs:enumeration value="None"/>
        <xs:enumeration value="Ascending"/>
        <xs:enumeration value="Descending"/>
        <xs:enumeration value="Toggle"/>
    </xs:restriction>

```



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</xs:simpleType>
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    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="SortFilterColumnResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetAutoFilterItemList">
  <xs:complexType>
    <xs:sequence>
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type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="autoFilterOptions"
type="tns:AutoFilterOptions"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="AutoFilterItemList">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="ShowTime" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemListMaxExceeded" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsBlanksSelected" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterDateNodes"
type="tns:ArrayOfAutoFilterDateNodeInfo"/>
    <xs:element minOccurs="0" maxOccurs="1" name="AutoFilterItems"
type="tns:ArrayOfAutoFilterItem"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecondValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SecondKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinuteValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinuteKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HourValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="HourKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DayKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MonthKeys" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearValues" type="tns:ArrayOfAnyType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="YearKeys" type="tns:ArrayOfAnyType"/>
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type="tns:AutoFilterItem"/>
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</xs:complexType>
<xs:complexType name="AutoFilterItem">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Selected" type="xs:boolean"/>
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<xs:element name="GetAutoFilterItemListResponse">
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    <xs:sequence>

```

```

        <xs:element minOccurs="0" maxOccurs="1" name="GetAutoFilterItemListResult"
type="tns:CommandResult"/>
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type="tns:AutoFilterItemList"/>
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</xs:element>
<xs:element name="GetPivotMenu">
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        <xs:sequence>
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type="tns:CommandParameter"/>
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type="tns:PivotOperationOptions"/>
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    </xs:complexType>
</xs:element>
<xs:complexType name="PivotMenu">
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        <xs:element minOccurs="1" maxOccurs="1" name="AdvancedFiltering" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsPageFilter" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PivotDataItems"
type="tns:ArrayOfPivotField"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PivotDataFields"
type="tns:ArrayOfPivotField"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PivotFields"
type="tns:ArrayOfPivotField"/>
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type="tns:PivotField"/>
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    <xs:sequence>
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type="tns:ArrayOfPivotField"/>
        <xs:element minOccurs="0" maxOccurs="1" name="PivotFilterParameters"
type="tns:ArrayOfPivotFilterParameter"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsWholeDays" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsEnabledWholeDays" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="SortByValueIndex" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsNonnumericCaptionFilteringEnabled"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsDateFilteringEnabled"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsCaptionFilteringEnabled"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsFilteringEnabled" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsDateField" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsDataField" type="xs:boolean"/>
        <xs:element minOccurs="0" maxOccurs="1" name="FilterParameter"
type="tns:Top10FilterParameter"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInRowArea" type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsFieldInPageFilterArea"
type="xs:boolean"/>
        <xs:element minOccurs="1" maxOccurs="1" name="IsSortedByValue" type="xs:boolean"/>
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</xs:complexType>

```

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    <xs:element minOccurs="1" maxOccurs="1" name="IsSortedDescending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsSortedAscending" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasCustomFilter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasManualFilter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasTop10Filter" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsHierarchy" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="IdString" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayString" type="xs:string"/>
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  </xs:sequence>
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  <xs:sequence>
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    <xs:element minOccurs="0" maxOccurs="1" name="FilterString1" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MemberPropertyId" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DataFieldId" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns:PivotFilterType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue2" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue1" type="xs:double"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns:Top10FilterType"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterValue" type="xs:double"/>
    <xs:element minOccurs="1" maxOccurs="1" name="IsTopFilter" type="xs:boolean"/>
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    <xs:enumeration value="Count"/>
    <xs:enumeration value="Percent"/>
    <xs:enumeration value="Sum"/>
  </xs:restriction>
</xs:simpleType>
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    <xs:sequence>
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type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="pivotMenu" type="tns:PivotMenu"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GetSlicerItemList">
  <xs:complexType>
    <xs:sequence>
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type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns:SlicerOptions"/>
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  </xs:complexType>
</xs:element>

```

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    </xs:sequence>
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</xs:element>
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type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemsToScrollBar" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CellDistance" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CellMargin" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemCount" type="xs:int"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="Margin" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemWidth" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ItemHeight" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CaptionHeight" type="xs:unsignedInt"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="ColCount" type="xs:int"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="ScrollbarVisible" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="CaptionVisible" type="xs:boolean"/>
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</xs:complexType>
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    <xs:element minOccurs="1" maxOccurs="1" name="GradientStop0" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="GradientType" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasGradient" type="xs:boolean"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SlicerFontType"
type="tns:SlicerFontType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="BorderFormat" type="tns:BorderFormat"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FillColor" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Ident" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HorizontalAlignment" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="VerticalAlignment" type="xs:int"/>
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```

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    <xs:element minOccurs="1" maxOccurs="1" name="Italic" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Bold" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FontSize" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FontColor" type="xs:int"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="Hidden" type="xs:boolean"/>
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type="tns:CommandResult"/>
      <xs:element minOccurs="0" maxOccurs="1" name="itemList" type="tns:SlicerItemList"/>
      <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns:SlicerFormatElementList"/>
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type="tns:CommandParameter"/>
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type="tns:SlicerOptions"/>
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type="tns:SlicerFormatElementList"/>
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type="tns:SlicerOptions"/>
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type="tns:ArrayOfSlicerItemRange"/>
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type="tns:ArrayOfSlicerItemRange"/>
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type="tns:SlicerOptions"/>
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type="tns:CommandResult"/>
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type="tns:PivotOperationOptions"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="IsBlanksSelected" type="xs:boolean"/>
    <xs:element minOccurs="1" maxOccurs="1" name="HasBlanks" type="xs:boolean"/>
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type="tns:ArrayOfPivotFilterItem"/>
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type="tns:CommandResult"/>
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type="tns:PivotFilterItemList"/>
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type="tns:PivotOperationOptions"/>
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type="tns:PivotOperationOptions"/>
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  <xs:element name="ApplyPivotTop10FilterResponse">
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        <xs:element minOccurs="0" maxOccurs="1" name="ApplyPivotTop10FilterResult"
type="tns:CommandResult"/>
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  </xs:element>
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type="tns:CommandParameter"/>
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type="tns:PivotOperationOptions"/>
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type="tns:PivotOperationOptions"/>
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    </xs:element>
    <xs:element name="RemovePivotFilter">
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type="tns:PivotOperationOptions"/>
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type="tns:CommandResult"/>
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    <xs:element name="GetWorkbookResponse">
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type="tns:GetPublishedObjectsOptions"/>
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type="tns:CommandResult"/>
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type="tns:ArrayOfPublishedObjectName"/>
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</xs:element>
<xs:element name="GetObjectInformation">
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type="tns:CommandParameter"/>
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type="tns:NamedObjectType"/>
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type="tns:CommandResult"/>
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type="tns:ObjectInformation"/>
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  </xs:complexType>
</xs:element>
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type="tns:ArrayOfSheetName"/>
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type="xs:base64Binary"/>
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type="tns:CommandParameter"/>
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type="tns:CommandResult"/>
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type="xs:base64Binary"/>
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type="tns:CommandParameter"/>
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type="tns:GetChartInformation"/>
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type="tns:CommandResult"/>
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type="xs:base64Binary"/>
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type="tns:CommandResult"/>
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type="tns:ChartDataElement"/>
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type="tns:GetRangeImageInformation"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="Width100" type="xs:int"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="ShowHeaders" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
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    <xs:element minOccurs="1" maxOccurs="1" name="LastRow" type="xs:int"/>
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type="xs:base64Binary"/>
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      <xs:element minOccurs="1" maxOccurs="1" name="namedRange" type="xs:boolean"/>
      <xs:element minOccurs="1" maxOccurs="1" name="outlineLevel" type="xs:unsignedByte"/>
      <xs:element minOccurs="1" maxOccurs="1" name="rowColumn" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="row" type="xs:boolean"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="ExpandCollapseOutlineResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ExpandCollapseOutlineResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="SetCalculationOptions">
  <xs:complexType>

```

```

        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
          <xs:element minOccurs="1" maxOccurs="1" name="calcType"
type="tns:WorkbookCalculation"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:simpleType name="WorkbookCalculation">
      <xs:restriction base="xs:string">
        <xs:enumeration value="Manual"/>
        <xs:enumeration value="Automatic"/>
        <xs:enumeration value="Semiautomatic"/>
      </xs:restriction>
    </xs:simpleType>
    <xs:element name="SetCalculationOptionsResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="SetCalculationOptionsResult"
type="tns:CommandResult"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="GetHealthScore">
      <xs:complexType/>
    </xs:element>
    <xs:element name="GetHealthScoreResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="GetHealthScoreResult"
type="tns:CommandResult"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="AutoFit">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
          <xs:element minOccurs="1" maxOccurs="1" name="isRow" type="xs:boolean"/>
          <xs:element minOccurs="0" maxOccurs="1" name="autoFitRange" type="tns:SheetRange"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="AutoFitResponse">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="AutoFitResult"
type="tns:CommandResult"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>
    <xs:element name="GetTimeSlicerFilterState">
      <xs:complexType>
        <xs:sequence>
          <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
          <xs:element minOccurs="0" maxOccurs="1" name="slicerOptions"
type="tns:SlicerOptions"/>
        </xs:sequence>
      </xs:complexType>
    </xs:element>

```

```

    </xs:complexType>
</xs:element>
<xs:complexType name="TimeSlicerView">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="SpaceWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DayWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="MonthWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="QuarterWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="YearWidth" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="SelectionLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplayLevel" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="DisplaySettings" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="FilterType" type="tns:PivotFilterType"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionEnd" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="SelectionBegin" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="DisplayStart" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MaxDate" type="tns:TimeDtr"/>
    <xs:element minOccurs="0" maxOccurs="1" name="MinDate" type="tns:TimeDtr"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Caption" type="xs:string"/>
    <xs:element minOccurs="1" maxOccurs="1" name="OlapSourced" type="xs:boolean"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeDtr">
  <xs:sequence>
    <xs:element minOccurs="1" maxOccurs="1" name="Day" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Month" type="xs:int"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Year" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeSlicerFormatElementList">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="TimeSlicerFormatElements"
type="tns:ArrayOfTimeSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfTimeSlicerFormatElement">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="TimeSlicerFormatElement"
nillable="true" type="tns:TimeSlicerFormatElement"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="TimeSlicerFormatElement">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SlicerFormatElement">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="GradientAngle" type="xs:double"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="GetTimeSlicerFilterStateResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerFilterStateResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>

```



```

        <xs:element minOccurs="0" maxOccurs="1" name="formatList"
type="tns:TimeSlicerFormatElementList"/>
        <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerView"
type="tns:TimeSlicerView"/>
    </xs:sequence>
</xs:complexType>
</xs:element>
<xs:element name="GetTimeSlicerStrings">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:complexType name="TimeSlicerStringTemplates">
    <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="DayToDayYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DayToDayMonth" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MonthYearToMonthYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MonthToMonthYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MonthYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="QuarterYearToQuarterYear"
type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="QuarterToQuarterYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="QuarterToYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="YearToYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="AllDatesIn" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="DayYearToDayYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="NotBetween" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="Day" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="NotEqual" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="AllPeriods" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelDay" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelMonth" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelQuarter" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="LevelYear" type="xs:string"/>
        <xs:element minOccurs="0" maxOccurs="1" name="QuarterNames" type="tns:ArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MonthNamesShort"
type="tns:ArrayOfString"/>
        <xs:element minOccurs="0" maxOccurs="1" name="MonthNames" type="tns:ArrayOfString"/>
    </xs:sequence>
</xs:complexType>
<xs:element name="GetTimeSlicerStringsResponse">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="GetTimeSlicerStringsResult"
type="tns:CommandResult"/>
            <xs:element minOccurs="0" maxOccurs="1" name="timeSlicerStrings"
type="tns:TimeSlicerStringTemplates"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="ResizeRowsColumns">
    <xs:complexType>
        <xs:sequence>
            <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
            <xs:element minOccurs="0" maxOccurs="1" name="resizeRowColumnRange"
type="tns:ResizeRowColumnRange"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>

```

```

    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="ResizeRowColumnRange">
  <xs:complexContent mixed="false">
    <xs:extension base="tns:SheetRange">
      <xs:sequence>
        <xs:element minOccurs="1" maxOccurs="1" name="ColumnWidth" type="xs:int"/>
        <xs:element minOccurs="1" maxOccurs="1" name="RowHeight" type="xs:int"/>
      </xs:sequence>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>
<xs:element name="ResizeRowsColumnsResponse">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="ResizeRowsColumnsResult"
type="tns:CommandResult"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="GenerateWorkbookFromHtml">
  <xs:complexType>
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="parameter"
type="tns:CommandParameter"/>
      <xs:element minOccurs="0" maxOccurs="1" name="html" type="tns:TableHtml"/>
      <xs:element minOccurs="0" maxOccurs="1" name="options"
type="tns:WorkbookGenerationOptions"/>
      <xs:element minOccurs="0" maxOccurs="1" name="subscriberId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="url" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:complexType name="TableHtml">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Hd" type="tns:ArrayOfRowHtml"/>
    <xs:element minOccurs="0" maxOccurs="1" name="Bd" type="tns:ArrayOfRowHtml"/>
    <xs:element minOccurs="1" maxOccurs="1" name="Li" type="xs:int"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfRowHtml">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="RowHtml" nillable="true"
type="tns:RowHtml"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="RowHtml">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="1" name="Cs" type="tns:ArrayOfCellHtml"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="ArrayOfCellHtml">
  <xs:sequence>
    <xs:element minOccurs="0" maxOccurs="unbounded" name="CellHtml" nillable="true"
type="tns:CellHtml"/>
  </xs:sequence>
</xs:complexType>
<xs:complexType name="CellHtml">

```

```

    <xs:sequence>
      <xs:element minOccurs="1" maxOccurs="1" name="C" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="R" type="xs:int"/>
      <xs:element minOccurs="0" maxOccurs="1" name="I" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="H" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="GenerateWorkbookFromHtmlResult">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="WorkbookId" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="GeneratedObjects"
type="tns:ArrayOfGeneratedNamedObject"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="ArrayOfGeneratedNamedObject">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="unbounded" name="GeneratedNamedObject"
nillable="true" type="tns:GeneratedNamedObject"/>
    </xs:sequence>
  </xs:complexType>
  <xs:complexType name="GeneratedNamedObject">
    <xs:sequence>
      <xs:element minOccurs="0" maxOccurs="1" name="Name" type="xs:string"/>
      <xs:element minOccurs="0" maxOccurs="1" name="SheetName" type="xs:string"/>
      <xs:element minOccurs="1" maxOccurs="1" name="NamedObjectType"
type="tns:NamedObjectType"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Width" type="xs:int"/>
      <xs:element minOccurs="1" maxOccurs="1" name="Height" type="xs:int"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="GenerateWorkbookFromHtmlResponse">
    <xs:complexType>
      <xs:sequence>
        <xs:element minOccurs="0" maxOccurs="1" name="GenerateWorkbookFromHtmlResult"
type="tns:CommandResult"/>
        <xs:element minOccurs="0" maxOccurs="1" name="generateWorkbookResult"
type="tns:GenerateWorkbookFromHtmlResult"/>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
  <xs:simpleType name="RangeReference">
    <xs:restriction base="xs:string"/>
  </xs:simpleType>
  <xs:simpleType name="SessionIdentifier">
    <xs:restriction base="xs:string"/>
  </xs:simpleType>
</xs:schema>

```

7.2 <http://microsoft.com/wsd/types/> Schema

```

<?xml version="1.0"?>
<xs:schema elementFormDefault="qualified" targetNamespace="http://microsoft.com/wsd/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>
</xs:schema>

```

7.3 <http://schemas.microsoft.com/2003/10/Serialization/> Schema

```

<?xml version="1.0"?>
<xs:schema xmlns:tns2="http://schemas.microsoft.com/2003/10/Serialization/"
attributeFormDefault="qualified" elementFormDefault="qualified"
targetNamespace="http://schemas.microsoft.com/2003/10/Serialization/"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="anyType" nillable="true" type="xs:anyType"/>
  <xs:element name="anyURI" nillable="true" type="xs:anyURI"/>
  <xs:element name="base64Binary" nillable="true" type="xs:base64Binary"/>
  <xs:element name="boolean" nillable="true" type="xs:boolean"/>
  <xs:element name="byte" nillable="true" type="xs:byte"/>
  <xs:element name="dateTime" nillable="true" type="xs:dateTime"/>
  <xs:element name="decimal" nillable="true" type="xs:decimal"/>
  <xs:element name="double" nillable="true" type="xs:double"/>
  <xs:element name="float" nillable="true" type="xs:float"/>
  <xs:element name="int" nillable="true" type="xs:int"/>
  <xs:element name="long" nillable="true" type="xs:long"/>
  <xs:element name="QName" nillable="true" type="xs:QName"/>
  <xs:element name="short" nillable="true" type="xs:short"/>
  <xs:element name="string" nillable="true" type="xs:string"/>
  <xs:element name="unsignedByte" nillable="true" type="xs:unsignedByte"/>
  <xs:element name="unsignedInt" nillable="true" type="xs:unsignedInt"/>
  <xs:element name="unsignedLong" nillable="true" type="xs:unsignedLong"/>
  <xs:element name="unsignedShort" nillable="true" type="xs:unsignedShort"/>
  <xs:element name="char" nillable="true" type="tns2:char"/>
  <xs:simpleType name="char">
    <xs:restriction base="xs:int"/>
  </xs:simpleType>
  <xs:element name="duration" nillable="true" type="tns2:duration"/>
  <xs:simpleType name="duration">
    <xs:restriction base="xs:duration">
      <xs:pattern value="\-?P(\d*D)?(T(\d*H)?(\d*M)?(\d*(\.\d*)?S)?)?"/>
      <xs:minInclusive value="-P10675199DT2H48M5.4775808S"/>
      <xs:maxInclusive value="P10675199DT2H48M5.4775807S"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:element name="guid" nillable="true" type="tns2:guid"/>
  <xs:simpleType name="guid">
    <xs:restriction base="xs:string">
      <xs:pattern value="[\da-fA-F]{8}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{4}-[\da-fA-F]{12}"/>
    </xs:restriction>
  </xs:simpleType>
  <xs:attribute name="FactoryType" type="xs:QName"/>
  <xs:attribute name="Id" type="xs:ID"/>
  <xs:attribute name="Ref" type="xs:IDREF"/>
</xs:schema>

```

7.4 <http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server> Schema

```

<?xml version="1.0"?>

```

```

<xs:schema xmlns:q1="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
elementFormDefault="qualified"
targetNamespace="http://schemas.datacontract.org/2004/07/Microsoft.Office.Excel.Server"
xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:import namespace="http://schemas.microsoft.com/2003/10/Serialization/" />
  <xs:complexType name="ExcelServerMessage">
    <xs:sequence>
      <xs:element minOccurs="0" name="Appearance" type="q1:ExcelServerMessageAppearance"/>
      <xs:element minOccurs="0" name="Caption" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="DebugInfo" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="Description" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="DisplaysCorrelationId" type="xs:boolean"/>
      <xs:element minOccurs="0" name="ExtendedDescription" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="HasClientUrl" type="xs:boolean"/>
      <xs:element minOccurs="0" name="HasOpenItemPermission" type="xs:boolean"/>
      <xs:element minOccurs="0" name="HealthInformation" nillable="true"
type="q1:ServerHealthInformation"/>
      <xs:element minOccurs="0" name="HelpDisplayText" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="HelpTopicId" nillable="true" type="xs:string"/>
      <xs:element minOccurs="0" name="Id" type="q1:ExcelServerMessageId"/>
      <xs:element minOccurs="0" name="Severity" type="q1:ExcelServerMessageSeverity"/>
      <xs:element minOccurs="0" name="Type" type="q1:ExcelServerMessageType"/>
      <xs:element minOccurs="0" name="WrongEcsServerId" nillable="true" type="xs:string"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ExcelServerMessage" nillable="true" type="q1:ExcelServerMessage"/>
  <xs:simpleType name="ExcelServerMessageAppearance">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="None"/>
          <xs:enumeration value="OK"/>
          <xs:enumeration value="Cancel"/>
          <xs:enumeration value="Yes"/>
          <xs:enumeration value="No"/>
          <xs:enumeration value="Notification"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>
  <xs:element name="ExcelServerMessageAppearance" nillable="true"
type="q1:ExcelServerMessageAppearance"/>
  <xs:complexType name="ServerHealthInformation">
    <xs:sequence>
      <xs:element minOccurs="0" name="HealthScore" type="xs:float"/>
      <xs:element minOccurs="0" name="StateFlags" type="q1:ServerStateFlags"/>
    </xs:sequence>
  </xs:complexType>
  <xs:element name="ServerHealthInformation" nillable="true"
type="q1:ServerHealthInformation"/>
  <xs:simpleType name="ServerStateFlags">
    <xs:list>
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:enumeration value="None"/>
          <xs:enumeration value="Probation"/>
          <xs:enumeration value="ShuttingDown"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:list>
  </xs:simpleType>

```

```

</xs:list>
</xs:simpleType>
<xs:element name="ServerStateFlags" nillable="true" type="q1:ServerStateFlags"/>
<xs:simpleType name="ExcelServerMessageId">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Blank"/>
    <xs:enumeration value="InternalError"/>
    <xs:enumeration value="NotMemberOfRole"/>
    <xs:enumeration value="EncryptionTooLow"/>
    <xs:enumeration value="ConfirmDataRefresh"/>
    <xs:enumeration value="ExternalDataRefreshFailed"/>
    <xs:enumeration value="ExternalDataRefreshFailedReal"/>
    <xs:enumeration value="ExternalDataRefreshFailedReadOrViewOnly"/>
    <xs:enumeration value="NoAccessToOdcReadOrViewOnly"/>
    <xs:enumeration value="ErrorConnectingToDataSourceReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPasswordReadOrViewOnly"/>
    <xs:enumeration value="InvalidUserNameOrPassword"/>
    <xs:enumeration value="ExternalDataNotAllowedOnTL"/>
    <xs:enumeration value="InvalidUriOrLocalConnectionPath"/>
    <xs:enumeration value="DclNotTrusted"/>
    <xs:enumeration value="OdcFileDoesNotExist"/>
    <xs:enumeration value="ErrorAccessingSsoFromEcs"/>
    <xs:enumeration value="SsoError"/>
    <xs:enumeration value="ErrorConnectingToDataSource"/>
    <xs:enumeration value="UnattendedAccountNotConfigured"/>
    <xs:enumeration value="IncorrectAuthUsed"/>
    <xs:enumeration value="ExternalDataRefreshFailed_Details"/>
    <xs:enumeration value="PivotNoOverlapAllowed"/>
    <xs:enumeration value="PivotOverlapList"/>
    <xs:enumeration value="PivotCubeNotUnique"/>
    <xs:enumeration value="NoDataItemsOlap"/>
    <xs:enumeration value="OlapSchemaFail"/>
    <xs:enumeration value="InvalidPivot"/>
    <xs:enumeration value="OlapNoMoreDetail"/>
    <xs:enumeration value="DrillActionInvalid"/>
    <xs:enumeration value="DriverNotOlap"/>
    <xs:enumeration value="CubeMissing"/>
    <xs:enumeration value="SkipLine"/>
    <xs:enumeration value="CDimMismatch"/>
    <xs:enumeration value="DataSetAxisTooBig"/>
    <xs:enumeration value="CubeIntegrityError"/>
    <xs:enumeration value="PivotNotExpandedtoProtectCellContents"/>
    <xs:enumeration value="PivotTruncatedSheetEdge"/>
    <xs:enumeration value="DdlGrpNotSup"/>
    <xs:enumeration value="PivotFormulasCollided"/>
    <xs:enumeration value="NoRetItems"/>
    <xs:enumeration value="OlapConnectVisualModeProvider"/>
    <xs:enumeration value="PivotNoSourceData"/>
    <xs:enumeration value="PivotFilteringError"/>
    <xs:enumeration value="PivotTableIncorrectDateFormat"/>
    <xs:enumeration value="PivotTableEndingLargerThanStarting"/>
    <xs:enumeration value="PivotTableIncorrectNumberFormat"/>
    <xs:enumeration value="PivotTableOutOfRange"/>
    <xs:enumeration value="MergedCellOverlap"/>
    <xs:enumeration value="PivotSourceNotAvailable"/>
    <xs:enumeration value="UnexpectedPivotError"/>
    <xs:enumeration value="EditModeCannotAcquireLockUnknownReason"/>
    <xs:enumeration value="EditModeCannotAcquireLock"/>
    <xs:enumeration value="EditModeCannotAcquireLockUnknownUser"/>
  </xs:restriction>
</xs:simpleType>

```

```
<xs:enumeration value="EditModeWorkbookCheckedOutRequired"/>
<xs:enumeration value="EditModeWorkbookCheckedOutToLocalDrafts"/>
<xs:enumeration value="SiteTooBusy"/>
<xs:enumeration value="SiteCollectionMemoryQuotaExceeded"/>
<xs:enumeration value="SessionMemoryQuotaExceeded"/>
<xs:enumeration value="SiteCollectionChartQuotaExceeded"/>
<xs:enumeration value="RequestLimitsExceeded"/>
<xs:enumeration value="SavingUnsupportedInViewMode"/>
<xs:enumeration value="SavingWorkbookNoWorkbookName"/>
<xs:enumeration value="FileSaveGeneric"/>
<xs:enumeration value="SavingWorkbookInvalidPermissions"/>
<xs:enumeration value="SavingWorkbookLockedOrCheckedOut"/>
<xs:enumeration value="SavingWorkbookNotCheckedOut"/>
<xs:enumeration value="SavingWorkbookAccessDenied"/>
<xs:enumeration value="SavingWorkbookInvalidFileType"/>
<xs:enumeration value="SavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookFileNameExists"/>
<xs:enumeration value="HostedSavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookNotTrustedLocation"/>
<xs:enumeration value="SavingWorkbookInvalidLocation"/>
<xs:enumeration value="SavingWorkbookInvalidFileName"/>
<xs:enumeration value="SavingWorkbookTrustedLocationSettingWarning"/>
<xs:enumeration value="SavingWorkbookAlmostTooLarge"/>
<xs:enumeration value="SavingWorkbookTooLarge"/>
<xs:enumeration value="NewWorkbookInvalidLocation"/>
<xs:enumeration value="FileOpenSecuritySettings"/>
<xs:enumeration value="FileOpenNotFound"/>
<xs:enumeration value="FileOpenAccessDenied"/>
<xs:enumeration value="FileCorrupt"/>
<xs:enumeration value="OpenWorkbookTooLarge"/>
<xs:enumeration value="OpenWorkbookLocationNotTrusted"/>
<xs:enumeration value="OpenWorkbookAccessDenied"/>
<xs:enumeration value="WorkbookNotSupported"/>
<xs:enumeration value="WorkbookNotSupportedViewRight"/>
<xs:enumeration value="UnsupportedFeatureViewWarning"/>
<xs:enumeration value="UnsupportedFeatureSaveCopyWarning"/>
<xs:enumeration value="ExternalWorkbookLinksDisabled"/>
<xs:enumeration value="WorkbookLockedRead"/>
<xs:enumeration value="EditModeCannotEditNonSharePointWorkbook"/>
<xs:enumeration value="EditModeAccessDenied"/>
<xs:enumeration value="GenericFileOpenError"/>
<xs:enumeration value="IRMedWorkbook"/>
<xs:enumeration value="ParameterInvalid"/>
<xs:enumeration value="ParameterLimitExceeded"/>
<xs:enumeration value="WorkbookInternalLimit"/>
<xs:enumeration value="OldFormatConversionFailed"/>
<xs:enumeration value="EditModeWorkbookExternalData"/>
<xs:enumeration value="FormulaEditingNotEnabled"/>
<xs:enumeration value="DimensionMismatch"/>
<xs:enumeration value="SetRangeFailure"/>
<xs:enumeration value="ObjectTypeNotSupported"/>
<xs:enumeration value="ParameterDoesNotExist"/>
<xs:enumeration value="FormulaParseFailed"/>
<xs:enumeration value="SetParameterFailure"/>
<xs:enumeration value="CannotEditPivotTable"/>
<xs:enumeration value="InsDelCellsNonblankCells"/>
<xs:enumeration value="InsDelCellsArrayFmla"/>
<xs:enumeration value="InsDelCellsPivotTable"/>
<xs:enumeration value="InsDelCellsTable"/>
```

```

<xs:enumeration value="InsDelCellsMergedCells"/>
<xs:enumeration value="InsDelCellsDatatable"/>
<xs:enumeration value="InsDelCellsRowsForWholeColumn"/>
<xs:enumeration value="InsDelCellsColumnsForWholeRow"/>
<xs:enumeration value="InsertChartPivotTable"/>
<xs:enumeration value="SuggestChartNoNumericData"/>
<xs:enumeration value="SuggestChartFailed"/>
<xs:enumeration value="PivotChartInteractivityMissingWarning"/>
<xs:enumeration value="EditChartTitleTooLong"/>
<xs:enumeration value="EditChartTitleStartsWithEquals"/>
<xs:enumeration value="EditChartDataTooLong"/>
<xs:enumeration value="EditChartDataInvalidReference"/>
<xs:enumeration value="EditChartDataOverlapsPivotTable"/>
<xs:enumeration value="ChartOperationNotSupported"/>
<xs:enumeration value="EditChartDataPivotChart"/>
<xs:enumeration value="ChangeChartTypePivotScatter"/>
<xs:enumeration value="ChartTooManyDataSeries"/>
<xs:enumeration value="InvalidSheetName"/>
<xs:enumeration value="RangeParseError"/>
<xs:enumeration value="SpecifiedRangeNotFound"/>
<xs:enumeration value="RangeDefinitionError"/>
<xs:enumeration value="DiscontiguousRangeNotSupported"/>
<xs:enumeration value="RangeRequestAreaExceeded"/>
<xs:enumeration value="SheetRangeMismatch"/>
<xs:enumeration value="ImageGenFailed"/>
<xs:enumeration value="ApiInvalidArgument"/>
<xs:enumeration value="ApiInvalidCoordinate"/>
<xs:enumeration value="ConfirmationUnsupported"/>
<xs:enumeration value="ApiInvalidDimensionReturned"/>
<xs:enumeration value="ApiMissingSiteContext"/>
<xs:enumeration value="Ewr_IllegalPageSize"/>
<xs:enumeration value="Ewr_WorkbookNotSpecified"/>
<xs:enumeration value="Ewr_LoadProgress"/>
<xs:enumeration value="Ewr_FileCorrupt"/>
<xs:enumeration value="Ewr_WorkbookNotSupported"/>
<xs:enumeration value="Ewr_GenericFileOpenError"/>
<xs:enumeration value="Ewr_InvalidParameterGeneric"/>
<xs:enumeration value="Ewr_InvalidParameterMandatoryMissing"/>
<xs:enumeration value="Ewr_InvalidParameterUnexpectedFormat"/>
<xs:enumeration value="Ewr_InvalidParameterOutOfRange"/>
<xs:enumeration value="Ewr_InvalidParameterOperationNotAllowed"/>
<xs:enumeration value="Ewr_ParameterInvalid"/>
<xs:enumeration value="Ewr_ParameterLimitExceeded"/>
<xs:enumeration value="Ewr_ParameterDoesNotExist"/>
<xs:enumeration value="Ewr_SetParameterFailure"/>
<xs:enumeration value="Ewr_SetParameterFailureOnOpen"/>
<xs:enumeration value="Ewr_ParameterReadFromDocPropsError"/>
<xs:enumeration value="Ewr_FormulaEditingNotEnabled"/>
<xs:enumeration value="Ewr_InvalidVisibleItem"/>
<xs:enumeration value="Ewr_EditSaveAsOverCurrentWorkbook"/>
<xs:enumeration value="Ewr_RequestTimedOut"/>
<xs:enumeration value="Ewr_ServerCommunicationError"/>
<xs:enumeration value="Ewr_ServerAuthenticationError"/>
<xs:enumeration value="Ewr_Top10InvalidValue"/>
<xs:enumeration value="Ewr_Top10InvalidValue_Float"/>
<xs:enumeration value="Mewa_PageStateInitFailed"/>
<xs:enumeration value="Mewa_CriticalParameterMissing"/>
<xs:enumeration value="Mewa_GridViewRenderingFailed"/>
<xs:enumeration value="Mewa_FeatureNotActive"/>

```



```
<xs:enumeration value="OperationNotSupportedInViewOnly"/>
<xs:enumeration value="OperationOnInvalidState"/>
<xs:enumeration value="InvalidOrTimedOutSession"/>
<xs:enumeration value="InvalidOrTimedOutSessionRecoverable"/>
<xs:enumeration value="InvalidOrTimedOutSessionPageRefresh"/>
<xs:enumeration value="ScratchPadChangesLost"/>
<xs:enumeration value="MaxSessionsPerUserExceeded"/>
<xs:enumeration value="OperationCanceled"/>
<xs:enumeration value="MaxRequestDurationExceeded"/>
<xs:enumeration value="NoOccurrencesFound"/>
<xs:enumeration value="EcsInvalidNamedObject"/>
<xs:enumeration value="NoPublishedItems"/>
<xs:enumeration value="RetryError"/>
<xs:enumeration value="StopOpenOnRefreshFailure"/>
<xs:enumeration value="ProductExpired"/>
<xs:enumeration value="SortActionInvalid"/>
<xs:enumeration value="SortActionNotSupportedWithPivot"/>
<xs:enumeration value="CircularReferencesFound"/>
<xs:enumeration value="SessionNotFound"/>
<xs:enumeration value="NewWorkbookSessionTimeout"/>
<xs:enumeration value="NewWorkbookSessionTimeoutRecoverable"/>
<xs:enumeration value="EditXLSFile"/>
<xs:enumeration value="UnsupportedFeatureEditWarning"/>
<xs:enumeration value="EditModeSessionExists"/>
<xs:enumeration value="NewerWorkbookExists"/>
<xs:enumeration value="ExternalDataOfficeLive"/>
<xs:enumeration value="PowerPivotOfficeLive"/>
<xs:enumeration value="LostAuthentication"/>
<xs:enumeration value="ListEntryNotFound_1"/>
<xs:enumeration value="ListEntryNotFound_2"/>
<xs:enumeration value="ListEntryAlreadyExists_1"/>
<xs:enumeration value="ListEntryAlreadyExists_2"/>
<xs:enumeration value="InvalidArgumentValue"/>
<xs:enumeration value="MissingArgumentName"/>
<xs:enumeration value="InvalidArgumentName"/>
<xs:enumeration value="ArgumentBadInRemove"/>
<xs:enumeration value="ManagementUIListEntryAlreadyExists"/>
<xs:enumeration value="ManagementUIListEntryNotFound"/>
<xs:enumeration value="ManagementUIInternalError"/>
<xs:enumeration value="UnsupportedUICulture"/>
<xs:enumeration value="UnsupportedDataCulture"/>
<xs:enumeration value="SpecifiedItemNotFound"/>
<xs:enumeration value="EcsSnapshotAccessDenied"/>
<xs:enumeration value="SaveFailed"/>
<xs:enumeration value="WrongEcs"/>
<xs:enumeration value="PasteDataLimitHit"/>
<xs:enumeration value="UndoStackEmpty"/>
<xs:enumeration value="RedoStackEmpty"/>
<xs:enumeration value="UndoRedoCollabFail"/>
<xs:enumeration value="HyperlinkLocationRequired"/>
<xs:enumeration value="CollabLocaleMismatch"/>
<xs:enumeration value="LocaleRestored"/>
<xs:enumeration value="InvalidEditSession"/>
<xs:enumeration value="InvalidEditSessionPageRefresh"/>
<xs:enumeration value="InvalidEditSessionId"/>
<xs:enumeration value="UnableToLoadEditSession"/>
<xs:enumeration value="SavingWorkbookFailed"/>
<xs:enumeration value="RefreshLockFailed"/>
<xs:enumeration value="InvalidChartName"/>
```

```

<xs:enumeration value="RetryOutOfSync"/>
<xs:enumeration value="OperationFailed"/>
<xs:enumeration value="OpenInExcelActiveXError"/>
<xs:enumeration value="OpenInExcelCollaborationError"/>
<xs:enumeration value="ProcessingUserChangesFileDownloadIgnored"/>
<xs:enumeration value="PhoneticDataLossWarning"/>
<xs:enumeration value="NoLicenseError"/>
<xs:enumeration value="NoUnsupportedFeatureCopyAndEdit"/>
<xs:enumeration value="CrossEnvironmentEditNotSupported"/>
<xs:enumeration value="RestBiff8Unsupported"/>
<xs:enumeration value="TransitionXls"/>
<xs:enumeration value="UnsupportedFeaturesSaveOverwrite"/>
<xs:enumeration value="UnsupportedFeaturesSaveCopy"/>
<xs:enumeration value="ChallengeAnonymousUser"/>
<xs:enumeration value="ClipboardAccessDenied"/>
<xs:enumeration value="CannotMergeCellsInTable"/>
<xs:enumeration value="MergeCellsLoseData"/>
<xs:enumeration value="CollabConflictError"/>
<xs:enumeration value="OdfCompatibilityWarning"/>
<xs:enumeration value="OdfUnsupportedEncryption"/>
<xs:enumeration value="OdfUnreadableContentGeneric"/>
<xs:enumeration value="Ewr_OdfUnreadableContentGeneric"/>
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<xs:enumeration value="XLSPreBiff8Failure"/>
<xs:enumeration value="XLSPasswordProtectionFailure"/>
<xs:enumeration value="XLSIRMFailure"/>
<xs:enumeration value="XLSUnknownFailures"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidProperty"/>
<xs:enumeration value="GenerateWorkbookFailureInvalidGenerationItems"/>
<xs:enumeration value="GenerateWorkbookFailureTable"/>
<xs:enumeration value="GenerateWorkbookFailureConditionalFormatting"/>
<xs:enumeration value="GenerateWorkbookFailureSlicers"/>
<xs:enumeration value="GenerateWorkbookFailureChart"/>
<xs:enumeration value="GenerateWorkbookFailureOpenWorkbook"/>
<xs:enumeration value="GenerateWorkbookFailureUpdateTheme"/>
<xs:enumeration value="GenerateWorkbookFailureAttribution"/>
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<xs:enumeration value="WorkbookNotInCollection"/>
<xs:enumeration value="Count"/>
</xs:restriction>
</xs:simpleType>
<xs:element name="ExcelServerMessageId" nillable="true" type="q1:ExcelServerMessageId"/>
<xs:simpleType name="ExcelServerMessageSeverity">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Error"/>
    <xs:enumeration value="Warning"/>
    <xs:enumeration value="Information"/>
    <xs:enumeration value="Progress"/>
    <xs:enumeration value="GettingStarted"/>
  </xs:restriction>
</xs:simpleType>
<xs:element name="ExcelServerMessageSeverity" nillable="true"
type="q1:ExcelServerMessageSeverity"/>
<xs:simpleType name="ExcelServerMessageType">
  <xs:restriction base="xs:string">
    <xs:enumeration value="Alert"/>
    <xs:enumeration value="Status"/>
    <xs:enumeration value="Confirmation"/>
  </xs:restriction>

```

```
</xs:simpleType>
  <xs:element name="ExcelServerMessageType" nillable="true"
type="q1:ExcelServerMessageType"/>
</xs:schema>
```

Preliminary

8 Appendix C: Product Behavior

The information in this specification is applicable to the following Microsoft products or supplemental software. References to product versions include released service packs:

- Microsoft® SharePoint® Server 15 Technical Preview

Exceptions, if any, are noted below. If a service pack or Quick Fix Engineering (QFE) number appears with the product version, behavior changed in that service pack or QFE. The new behavior also applies to subsequent service packs of the product unless otherwise specified. If a product edition appears with the product version, behavior is different in that product edition.

Unless otherwise specified, any statement of optional behavior in this specification that is prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that the product does not follow the prescription.

[<1> Section 2.2.2.1:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.9](#).

[<2> Section 2.2.4.13:](#) If the date value is the 0th day in the month of January of the year 1900, Excel Calculation Services 2010 sets the value of the **Day** element to 0.

[<3> Section 2.2.4.13:](#) If the date value is the 0th day in the month of January of the year 1900, Excel Calculation Services 2010 sets the value of the **Day** element to 0.

[<4> Section 2.2.4.51:](#) Excel Calculation Services 2010 will attempt to fallback to a **fallback UI culture** when an unsupported UI culture is requested.

[<5> Section 2.2.4.58:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<6> Section 2.2.4.58:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<7> Section 2.2.4.58:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<8> Section 2.2.5:](#) Excel Calculation Services 2010 uses the **A1** notation. See [\[MSFT-ACRR\]](#).

[<9> Section 2.2.5.18:](#) Excel Calculation Services 2010 uses the A1 notation. See [\[MSFT-ACRR\]](#).

[<10> Section 3.1.4.1:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<11> Section 3.1.4.2:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<12> Section 3.1.4.3:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

[<13> Section 3.1.4.4:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<14> Section 3.1.4.5:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

- [<15> Section 3.1.4.6:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<16> Section 3.1.4.7:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<17> Section 3.1.4.8:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<18> Section 3.1.4.9:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<19> Section 3.1.4.10:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<20> Section 3.1.4.11:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<21> Section 3.1.4.12:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<22> Section 3.1.4.13:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<23> Section 3.1.4.14:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<24> Section 3.1.4.15:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<25> Section 3.1.4.16:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<26> Section 3.1.4.17:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<27> Section 3.1.4.18:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).
- [<28> Section 3.1.4.19:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<29> Section 3.1.4.20:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<30> Section 3.1.4.21:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<31> Section 3.1.4.22:](#) Excel Calculation Services 2010 returns the **SpecifiedItemNotFound** value specified in section [2.2.5.10](#) if a user does not have Open Item permission and if the requested range is not wholly contained inside a published item.
- [<32> Section 3.1.4.22:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).
- [<33> Section 3.1.4.23:](#) Excel Calculation Services 2010 returns the **SpecifiedItemNotFound** value specified in section [2.2.5.10](#) if a user does not have Open Item permission and if the requested range is not wholly contained inside a published item.

<34> [Section 3.1.4.23](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<35> [Section 3.1.4.24](#): Excel Calculation Services 2010 returns the **SpecifiedItemNotFound** value specified in section [2.2.5.10](#) if a user does not have Open Item permission and if the requested range is not wholly contained inside a published item.

<36> [Section 3.1.4.24](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<37> [Section 3.1.4.25](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<38> [Section 3.1.4.25.2.2](#): Excel Calculation Services 2010 returns "Excel Calculation Services (14.0)" when the **GetSessionInformation** operation is called.

<39> [Section 3.1.4.26](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<40> [Section 3.1.4.27](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<41> [Section 3.1.4.28](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<42> [Section 3.1.4.29](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<43> [Section 3.1.4.30](#): Excel Calculation Services 2010 has exceptions as noted in [\[MSDN-UFES\]](#).

<44> [Section 3.1.4.30](#): Excel Calculation Services 2010 has exceptions as noted in [\[MSDN-UFES\]](#).

<45> [Section 3.1.4.30](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<46> [Section 3.1.4.31](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<47> [Section 3.1.4.32](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<48> [Section 3.1.4.33](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<49> [Section 3.1.4.34](#): Excel Calculation Services 2010 can use any of the values specified in [ExcelServerMessageId](#).

<50> [Section 3.1.4.35](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<51> [Section 3.1.4.36](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<52> [Section 3.1.4.37](#): Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

<53> [Section 3.1.4.38](#): Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<54> Section 3.1.4.39:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<55> Section 3.1.4.40:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<56> Section 3.1.4.41:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<57> Section 3.1.4.42:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<58> Section 3.1.4.43:](#) Excel Calculation Services 2010 will set the values sent by the protocol client and will not return an error if **rangeValues** contains values in only one dimension (A single column (2) or a single row (2)), and the first worksheet cell of **rangeCoordinates** falls on a workbook parameter.

[<59> Section 3.1.4.43:](#) Excel Calculation Services 2010 can use any of the values specified in [ExcelServerMessageId](#).

[<60> Section 3.1.4.44:](#) Excel Calculation Services 2010 will set the values sent by the protocol client and will not return an error if the **Value** in **RangeValuesA1** contains values in only one dimension (A single column (2) or a single row (2)), and the first worksheet cell of **rangeName** in **RangeValuesA1** falls on a workbook parameter.

[<61> Section 3.1.4.44:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<62> Section 3.1.4.45:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<63> Section 3.1.4.46:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<64> Section 3.1.4.47:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

[<65> Section 3.1.4.48:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

[<66> Section 3.1.4.49:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

[<67> Section 3.1.4.50:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

[<68> Section 3.1.4.51:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

[<69> Section 3.1.4.52:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

[<70> Section 3.1.4.53:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

[<71> Section 3.1.4.54:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<72> [Section 3.1.4.55:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<73> [Section 3.1.4.57:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<74> [Section 3.1.4.58:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<75> [Section 3.1.4.59:](#) Excel Calculation Services 2010 can use any of the values specified in [ExcelServerMessageId](#).

<76> [Section 3.1.4.60:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<77> [Section 3.1.4.62:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

<78> [Section 3.1.4.63:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<79> [Section 3.1.4.64:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

<80> [Section 3.1.4.65:](#) Excel Calculation Services 2010 can also use any of the values specified in section [2.2.5.10](#).

<81> [Section 3.1.4.66:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<82> [Section 3.1.4.67:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<83> [Section 3.1.4.68:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<84> [Section 3.1.4.69:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<85> [Section 3.1.4.70:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<86> [Section 3.1.4.71:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<87> [Section 3.1.4.72:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<88> [Section 3.1.4.73:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<89> [Section 3.1.4.74:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<90> [Section 3.1.4.75:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<91> [Section 3.1.4.76:](#) Excel Calculation Services 2010 can use any of the values specified in section [2.2.5.10](#).

<92> [Section 3.1.5.1:](#) Excel Calculation Services 2010 times out sessions (2) which are not edit sessions after a period of time of inactivity. This period of time is configurable.

<93> [Section 3.1.5.2:](#) In Excel Calculation Services 2010, only some operations time out. Other operations can go over the allotted time.

Preliminary

9 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

Preliminary

10 Index

A

[Abstract data model server](#) 177
[Applicability](#) 34
[ArrayOfAnyType complex type](#) 48
[ArrayOfArrayOfString complex type](#) 85
[ArrayOfAutoFilterCriteria complex type](#) 49
[ArrayOfAutoFilterDateNodeInfo complex type](#) 49
[ArrayOfBindingMetadata complex type](#) 106
[ArrayOfClientUdfCall complex type](#) 109
[ArrayOfClientUdfDefinition complex type](#) 109
[ArrayOfExcelServerMessage complex type](#) 49
[ArrayOfInt complex type](#) 50
[ArrayOfPivotFieldListItem complex type](#) 86
[ArrayOfPivotFilterItem complex type](#) 50
[ArrayOfPresenceUserInfo complex type](#) 50
[ArrayOfPublishedObjectName complex type](#) 86
[ArrayOfRangeValuesA1 complex type](#) 51
[ArrayOfServerEventMetadata complex type](#) 106
[ArrayOfSlicerFormatElement complex type](#) 51
[ArrayOfSlicerItem complex type](#) 52
[ArrayOfString complex type](#) 52
[ArrayOfWebExtensionMetadata complex type](#) 107
[ArrayOfWorksheetChangeInfo complex type](#) 86
[ArrayOfWorksheetData complex type](#) 87
[Attribute groups](#) 175
[Attributes](#) 175
[AutoFilterCriteria complex type](#) 52
[AutoFilterCriteriaType simple type](#) 116
[AutoFilterDateNodeInfo complex type](#) 53
[AutoFilterDateNodeType simple type](#) 118
[AutoFilterOperationType simple type](#) 119
[AutoFilterOptions complex type](#) 54
[AutoFilterRelationOperator simple type](#) 120

B

[BindingMetadata complex type](#) 107
[BindingReference complex type](#) 107
[BorderFormat complex type](#) 55

C

[Capability negotiation](#) 34
[CellCompoundValue complex type](#) 56
[CellError simple type](#) 120
[Change tracking](#) 602
[char simple type](#) 170
[Client overview](#) 176
[ClientUdfCall complex type](#) 110
[ClientUdfCallInfo complex type](#) 110
[ClientUdfDefinition complex type](#) 110
[ClientUdfListInfo complex type](#) 111
[CollaborationParameter complex type](#) 57
[CollaborationResult complex type](#) 57
[CollaborationState complex type](#) 57
[CommandParameter complex type](#) 58

[CommandParameterFlags simple type](#) 121
[CommandResult complex type](#) 60
[CommandResultExtendedInfo complex type](#) 62
[Common list of Id values - fault](#) 36
[Complex types](#) 37
[ArrayOfAnyType](#) 48
[ArrayOfArrayOfString](#) 85
[ArrayOfAutoFilterCriteria](#) 49
[ArrayOfAutoFilterDateNodeInfo](#) 49
[ArrayOfBindingMetadata](#) 106
[ArrayOfClientUdfCall](#) 109
[ArrayOfClientUdfDefinition](#) 109
[ArrayOfExcelServerMessage](#) 49
[ArrayOfInt](#) 50
[ArrayOfPivotFieldListItem](#) 86
[ArrayOfPivotFilterItem](#) 50
[ArrayOfPresenceUserInfo](#) 50
[ArrayOfPublishedObjectName](#) 86
[ArrayOfRangeValuesA1](#) 51
[ArrayOfServerEventMetadata](#) 106
[ArrayOfSlicerFormatElement](#) 51
[ArrayOfSlicerItem](#) 52
[ArrayOfString](#) 52
[ArrayOfWebExtensionMetadata](#) 107
[ArrayOfWorksheetChangeInfo](#) 86
[ArrayOfWorksheetData](#) 87
[AutoFilterCriteria](#) 52
[AutoFilterDateNodeInfo](#) 53
[AutoFilterOptions](#) 54
[BindingMetadata](#) 107
[BindingReference](#) 107
[BorderFormat](#) 55
[CellCompoundValue](#) 56
[ClientUdfCall](#) 110
[ClientUdfCallInfo](#) 110
[ClientUdfDefinition](#) 110
[ClientUdfListInfo](#) 111
[CollaborationParameter](#) 57
[CollaborationResult](#) 57
[CollaborationState](#) 57
[CommandParameter](#) 58
[CommandResult](#) 60
[CommandResultExtendedInfo](#) 62
[CultureCommandParameter](#) 87
[DdaSettings](#) 108
[ExcelServerMessage \(section 2.2.4.23 62, section 2.2.4.24 63\)](#)
[OpenWorkbookInParameters](#) 89
[OpenWorkbookOutParameters](#) 90
[PeriodicRefreshInfo](#) 65
[PivotFieldListItem](#) 90
[PivotFilterItem](#) 65
[PivotFilterItemList](#) 66
[PivotOperationOptions](#) 66
[PresenceUserId](#) 70
[PresenceUserInfo](#) 71
[PublishedObjectName](#) 93
[RangeValuesA1](#) 71
[RequestLimits](#) 71

[RestChartPngRequest](#) 93
[RestChartPngResult](#) 94
[RestODataRequest](#) 94
[RestODataResult](#) 95
[RestOpenWorkbookRequest](#) 105
[RestOpenWorkbookResult](#) 106
[RestPngResult](#) 96
[RestPublishedObjectsRequest](#) 96
[RestPublishedObjectsResult](#) 96
[RestRangePngRequest](#) 97
[RestRangeValuesRequest](#) 97
[RestRangeValuesResult](#) 98
[RestRangeXmlRequest](#) 98
[RestRangeXmlResult](#) 99
[RestRequest](#) 100
[RestResult](#) 100
[RestWorkbookRequest](#) 100
[RestWorkbookResult](#) 101
[ServerEventMetadata](#) 108
[ServerHealthInformation](#) ([section 2.2.4.33](#) 72, [section 2.2.4.34](#) 72)
[SheetCell](#) 101
[SheetRange](#) 73
[SlicerFontType](#) 73
[SlicerFormatElement](#) 74
[SlicerFormatElementList](#) 76
[SlicerItem](#) 76
[SlicerItemList](#) 76
[SlicerOptions](#) 77
[SlicerView](#) 77
[TypeExporter](#) 79
[VisibleSheetRange](#) 80
[WebExtensionMetadata](#) 109
[WorkbookGenerationOptions](#) 101
[WorkbookMetadata](#) 103
[WorkbookMetadataParameter](#) 103
[WorkbookMetadataResult](#) 104
[WorkbookMetadataState](#) 104
[WorkOnBehalf](#) 85
[WorksheetChangeInfo](#) 104
[WorksheetData](#) 105
[CultureCommandParameter](#) [complex type](#) 87

D

Data model - abstract
[server](#) 177
[DdaBindingType](#) [simple type](#) 171
[DdaCoerceType](#) [simple type](#) 172
[DdaFilterType](#) [simple type](#) 172
[DdaSettings](#) [complex type](#) 108
[DdaValueType](#) [simple type](#) 173
[duration](#) [simple type](#) 171

E

Events
[local - server](#) 448

Examples
[filtering and sorting a list and returning XML](#) 449

ExcelServerMessage [complex type](#) ([section 2.2.4.23](#) 62, [section 2.2.4.24](#) 63)

[ExcelServerMessageAppearance](#) [simple type](#)
 ([section 2.2.5.7](#) 122, [section 2.2.5.8](#) 123)
[ExcelServerMessageId](#) [simple type](#) ([section 2.2.5.9](#) 123, [section 2.2.5.10](#) 140)
[ExcelServerMessageSeverity](#) [simple type](#) ([section 2.2.5.11](#) 154, [section 2.2.5.12](#) 155)
[ExcelServerMessageType](#) [simple type](#) ([section 2.2.5.13](#) 155, [section 2.2.5.14](#) 156)

F

[Faults](#) 36
[common list of Id values](#) 36
[Fields - vendor-extensible](#) 34
[Filtering and sorting a list and returning XML](#)
[example](#) 449
[Full WSDL](#) 474

G

[GetPublishedObjectsOptions](#) [simple type](#) 166
[Glossary](#) 26
[GridRenderingOptions](#) [simple type](#) 173
[Groups](#) 175
[guid](#) [simple type](#) ([section 2.2.5.15](#) 156, [section 2.2.5.30](#) 171)

I

[Implementer - security considerations](#) 473
[Index of security parameters](#) 473
[Informative references](#) 32
 Initialization
[server](#) 178
[Introduction](#) 26

L

Local events
[server](#) 448

M

Message processing
[server](#) 178
 Messages
[ArrayOfAnyType](#) [complex type](#) 48
[ArrayOfArrayOfString](#) [complex type](#) 85
[ArrayOfAutoFilterCriteria](#) [complex type](#) 49
[ArrayOfAutoFilterDateNodeInfo](#) [complex type](#) 49
[ArrayOfBindingMetadata](#) [complex type](#) 106
[ArrayOfClientUdfCall](#) [complex type](#) 109
[ArrayOfClientUdfDefinition](#) [complex type](#) 109
[ArrayOfExcelServerMessage](#) [complex type](#) 49
[ArrayOfInt](#) [complex type](#) 50
[ArrayOfPivotFieldListItem](#) [complex type](#) 86
[ArrayOfPivotFilterItem](#) [complex type](#) 50
[ArrayOfPresenceUserInfo](#) [complex type](#) 50
[ArrayOfPublishedObjectName](#) [complex type](#) 86
[ArrayOfRangeValuesA1](#) [complex type](#) 51
[ArrayOfServerEventMetadata](#) [complex type](#) 106
[ArrayOfSlicerFormatElement](#) [complex type](#) 51

[ArrayOfSlicerItem complex type](#) 52
[ArrayOfString complex type](#) 52
[ArrayOfWebExtensionMetadata complex type](#) 107
[ArrayOfWorksheetChangeInfo complex type](#) 86
[ArrayOfWorksheetData complex type](#) 87
[attribute groups](#) 175
[attributes](#) 175
[AutoFilterCriteria complex type](#) 52
[AutoFilterCriteriaType simple type](#) 116
[AutoFilterDateNodeInfo complex type](#) 53
[AutoFilterDateNodeType simple type](#) 118
[AutoFilterOperationType simple type](#) 119
[AutoFilterOptions complex type](#) 54
[AutoFilterRelationOperator simple type](#) 120
[BindingMetadata complex type](#) 107
[BindingReference complex type](#) 107
[BorderFormat complex type](#) 55
[CellCompoundValue complex type](#) 56
[CellError simple type](#) 120
[char simple type](#) 170
[ClientUdfCall complex type](#) 110
[ClientUdfCallInfo complex type](#) 110
[ClientUdfDefinition complex type](#) 110
[ClientUdfListInfo complex type](#) 111
[CollaborationParameter complex type](#) 57
[CollaborationResult complex type](#) 57
[CollaborationState complex type](#) 57
[CommandParameter complex type](#) 58
[CommandParameterFlags simple type](#) 121
[CommandResult complex type](#) 60
[CommandResultExtendedInfo complex type](#) 62
[Common List of Id Element Values](#) 36
[Common List of Id Element Values message](#) 36
[common list of Id values - fault](#) 36
[complex types](#) 37
[CultureCommandParameter complex type](#) 87
[DdaBindingType simple type](#) 171
[DdaCoerceType simple type](#) 172
[DdaFilterType simple type](#) 172
[DdaSettings complex type](#) 108
[DdaValueType simple type](#) 173
[duration simple type](#) 171
[elements](#) 37
[enumerated](#) 36
[ExcelServerMessage complex type](#) ([section 2.2.4.23](#) 62, [section 2.2.4.24](#) 63)
[ExcelServerMessageAppearance simple type](#) ([section 2.2.5.7](#) 122, [section 2.2.5.8](#) 123)
[ExcelServerMessageId simple type](#) ([section 2.2.5.9](#) 123, [section 2.2.5.10](#) 140)
[ExcelServerMessageSeverity simple type](#) ([section 2.2.5.11](#) 154, [section 2.2.5.12](#) 155)
[ExcelServerMessageType simple type](#) ([section 2.2.5.13](#) 155, [section 2.2.5.14](#) 156)
[faults](#) 36
[GetPublishedObjectsOptions simple type](#) 166
[GridRenderingOptions simple type](#) 173
[groups](#) 175
[guid simple type](#) ([section 2.2.5.15](#) 156, [section 2.2.5.30](#) 171)
[NamedObjectType simple type](#) 156
[namespaces](#) 35
[OpenWorkbookFlags simple type](#) 166
[OpenWorkbookInParameters complex type](#) 89
[OpenWorkbookOutParameters complex type](#) 90
[PeriodicRefreshInfo complex type](#) 65
[PivotFieldListItem complex type](#) 90
[PivotFilterItem complex type](#) 65
[PivotFilterItemList complex type](#) 66
[PivotFilterType simple type](#) 157
[PivotOperationOptions complex type](#) 66
[PresenceUserId complex type](#) 70
[PresenceUserInfo complex type](#) 71
[PublishedObjectName complex type](#) 93
[RangeReference simple type](#) 163
[RangeValuesA1 complex type](#) 71
[RequestLimits complex type](#) 71
[RestChartPngRequest complex type](#) 93
[RestChartPngResult complex type](#) 94
[RestODataRequest complex type](#) 94
[RestODataResult complex type](#) 95
[RestOpenWorkbookRequest complex type](#) 105
[RestOpenWorkbookResult complex type](#) 106
[RestPngResult complex type](#) 96
[RestPublishedObjectsRequest complex type](#) 96
[RestPublishedObjectsResult complex type](#) 96
[RestRangePngRequest complex type](#) 97
[RestRangeValuesRequest complex type](#) 97
[RestRangeValuesResult complex type](#) 98
[RestRangeXmlRequest complex type](#) 98
[RestRangeXmlResult complex type](#) 99
[RestRequest complex type](#) 100
[RestResult complex type](#) 100
[RestWorkbookRequest complex type](#) 100
[RestWorkbookResult complex type](#) 101
[ServerEventMetadata complex type](#) 108
[ServerHealthInformation complex type](#) ([section 2.2.4.33](#) 72, [section 2.2.4.34](#) 72)
[ServerStateFlags simple type](#) ([section 2.2.5.19](#) 163, [section 2.2.5.20](#) 164)
[SessionIdentifier simple type](#) 164
[SharedPivotMenuAnchorType simple type](#) 168
[SheetCell complex type](#) 101
[SheetFlags simple type](#) 169
[SheetRange complex type](#) 73
[SheetType simple type](#) 174
[SheetVisibility simple type](#) 174
[simple types](#) 111
[SlicerFontType complex type](#) 73
[SlicerFormatElement complex type](#) 74
[SlicerFormatElementList complex type](#) 76
[SlicerItem complex type](#) 76
[SlicerItemList complex type](#) 76
[SlicerOptions complex type](#) 77
[SlicerView complex type](#) 77
[syntax](#) 35
[transport](#) 35
[TypeExporter complex type](#) 79
[VisibleSheetRange complex type](#) 80
[WebExtensionMetadata complex type](#) 109
[WorkbookGenerationItems simple type](#) 170
[WorkbookGenerationOptions complex type](#) 101

[WorkbookMetadata complex type](#) 103
[WorkbookMetadataParameter complex type](#) 103
[WorkbookMetadataResult complex type](#) 104
[WorkbookMetadataState complex type](#) 104
[WorkbookType simple type](#) 165
[WorkOnBehalf complex type](#) 85
[WorksheetChangeInfo complex type](#) 104
[WorksheetData complex type](#) 105

N

[NamedObjectType simple type](#) 156
[Namespaces](#) 35
[Normative references](#) 30

O

[OpenWorkbookFlags simple type](#) 166
[OpenWorkbookInParameters complex type](#) 89
[OpenWorkbookOutParameters complex type](#) 90

Operations

[ApplyItemFilter](#) 182
[ApplyPivot](#) 336
[ApplyPivotFieldManagerHiddenState](#) 341
[ApplyPivotFilter](#) 185
[ApplyPivotSort](#) 188
[ApplyPivotTop10Filter](#) 192
[ApplyPivotValueFieldSettings](#) 401
[ApplySlicerSelection](#) 195
[ApplyTimeSlicerInteractivity](#) 405
[ApplyTop10Filter](#) 199
[AutoFit](#) 384
[BixDrill](#) 386
[CancelRequest](#) 202
[CloseWorkbook](#) 204
[ConnectAndGetPivotFilterItemList](#) 207
[ConnectAndGetSlicerItemList](#) 209
[DdaAddBinding](#) 421
[DdaGetAllBindings](#) 424
[DdaGetBinding](#) 426
[DdaGetBindingData](#) 429
[DdaGetSelectedData](#) 432
[DdaLoadSettings](#) 435
[DdaReleaseBinding](#) 437
[DdaSaveSettings](#) 440
[DdaSetBindingData](#) 442
[DdaSetSelectedData](#) 445
[ExpandCollapseOutline](#) 213
[ExpandPivotFieldListLevels](#) 344
[FindRange](#) 216
[GenerateWorkbookFromHtml](#) 347
[GetAutoFilterItemList](#) 219
[GetBixAnalysis](#) 354
[GetChart](#) 226
[GetChartElementData](#) 389
[GetHealthScore](#) 229
[GetImage](#) 231
[GetObjectInformation](#) 233
[GetPivotFieldListData](#) 359
[GetPivotFieldManagerData](#) 364
[GetPivotFilterItemList](#) 236
[GetPivotMenu](#) 239

[GetPivotValueFieldSettings](#) 410
[GetPublishedObjects](#) 251
[GetRange](#) 253
[GetRangeForClipboard](#) 256
[GetRangeImage](#) 367
[GetRangeValues](#) 258
[GetRangeValuesA1](#) 261
[GetScaledImage](#) 371
[GetSessionInformation](#) 265
[GetSheetNames](#) 268
[GetSlicerItemList](#) 271
[GetSparklines](#) 274
[GetTimeSlicerFilterState](#) 395
[GetTimeSlicerStrings](#) 415
[GetWorkbook](#) 277
[OpenWorkbook](#) 279
[ParseRange](#) 285
[ProcessODataRequest](#) 374
[ProcessRestRequest](#) 377
[Recalc](#) 287
[RecalcA1](#) 290
[RecalcAll](#) 292
[Refresh](#) 297
[RefreshAll](#) 300
[RemovePivotFilter](#) 303
[ResizeRowsColumns](#) 306
[SaveWorkbook](#) 309
[SaveWorkbookAs](#) 311
[SetCalculationOptions](#) 315
[SetParameters](#) 318
[SetRange](#) 323
[SetRangeA1](#) 327
[SortFilterColumn](#) 330
[TogglePivotDrill](#) 333
[UpdateSlicer](#) 419
[Overview \(synopsis\)](#) 32
[protocol operations](#) 32
[published items and results returned by this protocol](#) 33
[session-based protocol](#) 32

P

[Parameters - security index](#) 473
[PeriodicRefreshInfo complex type](#) 65
[PivotFieldListItem complex type](#) 90
[PivotFilterItem complex type](#) 65
[PivotFilterItemList complex type](#) 66
[PivotFilterType simple type](#) 157
[PivotOperationOptions complex type](#) 66
[Preconditions](#) 33
[Prerequisites](#) 33
[PresenceUserId complex type](#) 70
[PresenceUserInfo complex type](#) 71
[Product behavior](#) 596
[Protocol operations](#) 32
[Published items and results returned by this protocol](#) 33
[PublishedObjectName complex type](#) 93

R

[RangeReference simple type](#) 163
[RangeValuesA1 complex type](#) 71
[References](#) 30
 [informative](#) 32
 [normative](#) 30
[Relationship to other protocols](#) 33
[Request timeout](#)
 [timers](#) 178
[RequestLimits complex type](#) 71
[RestChartPngRequest complex type](#) 93
[RestChartPngResult complex type](#) 94
[RestODataRequest complex type](#) 94
[RestODataResult complex type](#) 95
[RestOpenWorkbookRequest complex type](#) 105
[RestOpenWorkbookResult complex type](#) 106
[RestPngResult complex type](#) 96
[RestPublishedObjectsRequest complex type](#) 96
[RestPublishedObjectsResult complex type](#) 96
[RestRangePngRequest complex type](#) 97
[RestRangeValuesRequest complex type](#) 97
[RestRangeValuesResult complex type](#) 98
[RestRangeXmlRequest complex type](#) 98
[RestRangeXmlResult complex type](#) 99
[RestRequest complex type](#) 100
[RestResult complex type](#) 100
[RestWorkbookRequest complex type](#) 100
[RestWorkbookResult complex type](#) 101

S

[Security](#)
 [implementer considerations](#) 473
 [parameter index](#) 473
[Sequencing rules](#)
 [server](#) 178
[Server](#)
 [abstract data model](#) 177
 [ApplyItemFilter operation](#) 182
 [ApplyPivot operation](#) 336
 [ApplyPivotFieldManagerHiddenState operation](#) 341
 [ApplyPivotFilter operation](#) 185
 [ApplyPivotSort operation](#) 188
 [ApplyPivotTop10Filter operation](#) 192
 [ApplyPivotValueFieldSettings operation](#) 401
 [ApplySlicerSelection operation](#) 195
 [ApplyTimeSlicerInteractivity operation](#) 405
 [ApplyTop10Filter operation](#) 199
 [AutoFit operation](#) 384
 [BixDrill operation](#) 386
 [CancelRequest operation](#) 202
 [CloseWorkbook operation](#) 204
 [ConnectAndGetPivotFilterItemList operation](#) 207
 [ConnectAndGetSlicerItemList operation](#) 209
 [DdaAddBinding operation](#) 421
 [DdaGetAllBindings operation](#) 424
 [DdaGetBinding operation](#) 426
 [DdaGetBindingData operation](#) 429
 [DdaGetSelectedData operation](#) 432
 [DdaLoadSettings operation](#) 435
 [DdaReleaseBinding operation](#) 437
 [DdaSaveSettings operation](#) 440
 [DdaSetBindingData operation](#) 442
 [DdaSetSelectedData operation](#) 445
 [ExpandCollapseOutline operation](#) 213
 [ExpandPivotFieldListLevels operation](#) 344
 [FindRange operation](#) 216
 [GenerateWorkbookFromHtml operation](#) 347
 [GetAutoFilterItemList operation](#) 219
 [GetBixAnalysis operation](#) 354
 [GetChart operation](#) 226
 [GetChartElementData operation](#) 389
 [GetHealthScore operation](#) 229
 [GetImage operation](#) 231
 [GetObjectInformation operation](#) 233
 [GetPivotFieldListData operation](#) 359
 [GetPivotFieldManagerData operation](#) 364
 [GetPivotFilterItemList operation](#) 236
 [GetPivotMenu operation](#) 239
 [GetPivotValueFieldSettings operation](#) 410
 [GetPublishedObjects operation](#) 251
 [GetRange operation](#) 253
 [GetRangeForClipboard operation](#) 256
 [GetRangeImage operation](#) 367
 [GetRangeValues operation](#) 258
 [GetRangeValuesA1 operation](#) 261
 [GetScaledImage operation](#) 371
 [GetSessionInformation operation](#) 265
 [GetSheetNames operation](#) 268
 [GetSlicerItemList operation](#) 271
 [GetSparklines operation](#) 274
 [GetTimeSlicerFilterState operation](#) 395
 [GetTimeSlicerStrings operation](#) 415
 [GetWorkbook operation](#) 277
 [initialization](#) 178
 [local events](#) 448
 [message processing](#) 178
 [OpenWorkbook operation](#) 279
 [overview](#) 176
 [ParseRange operation](#) 285
 [ProcessODataRequest operation](#) 374
 [ProcessRestRequest operation](#) 377
 [Recalc operation](#) 287
 [RecalcA1 operation](#) 290
 [RecalcAll operation](#) 292
 [Refresh operation](#) 297
 [RefreshAll operation](#) 300
 [RemovePivotFilter operation](#) 303
 [ResizeRowsColumns operation](#) 306
 [SaveWorkbook operation](#) 309
 [SaveWorkbookAs operation](#) 311
 [sequencing rules](#) 178
 [SetCalculationOptions operation](#) 315
 [SetParameters operation](#) 318
 [SetRange operation](#) 323
 [SetRangeA1 operation](#) 327
 [SortFilterColumn operation](#) 330
 [TogglePivotDrill operation](#) 333
 [UpdateSlicer operation](#) 419
 [ServerEventMetadata complex type](#) 108
 [ServerHealthInformation complex type](#) ([section 2.2.4.33](#) 72, [section 2.2.4.34](#) 72)

ServerStateFlags simple type ([section 2.2.5.19](#) 163, [section 2.2.5.20](#) 164)
Session timeout
 [timers](#) 178
[Session-based protocol](#) 32
[SessionIdentifier simple type](#) 164
[SharedPivotMenuAnchorType simple type](#) 168
[SheetCell complex type](#) 101
[SheetFlags simple type](#) 169
[SheetRange complex type](#) 73
[SheetType simple type](#) 174
[SheetVisibility simple type](#) 174
[Simple types](#) 111
 [AutoFilterCriteriaType](#) 116
 [AutoFilterDateNodeType](#) 118
 [AutoFilterOperationType](#) 119
 [AutoFilterRelationOperator](#) 120
 [CellError](#) 120
 [char](#) 170
 [CommandParameterFlags](#) 121
 [DdaBindingType](#) 171
 [DdaCoerceType](#) 172
 [DdaFilterType](#) 172
 [DdaValueType](#) 173
 [duration](#) 171
 ExcelServerMessageAppearance ([section 2.2.5.7](#) 122, [section 2.2.5.8](#) 123)
 ExcelServerMessageId ([section 2.2.5.9](#) 123, [section 2.2.5.10](#) 140)
 ExcelServerMessageSeverity ([section 2.2.5.11](#) 154, [section 2.2.5.12](#) 155)
 ExcelServerMessageType ([section 2.2.5.13](#) 155, [section 2.2.5.14](#) 156)
 [GetPublishedObjectsOptions](#) 166
 [GridRenderingOptions](#) 173
 guid ([section 2.2.5.15](#) 156, [section 2.2.5.30](#) 171)
 [NamedObjectType](#) 156
 [OpenWorkbookFlags](#) 166
 [PivotFilterType](#) 157
 [RangeReference](#) 163
 ServerStateFlags ([section 2.2.5.19](#) 163, [section 2.2.5.20](#) 164)
 [SessionIdentifier](#) 164
 [SharedPivotMenuAnchorType](#) 168
 [SheetFlags](#) 169
 [SheetType](#) 174
 [SheetVisibility](#) 174
 [WorkbookGenerationItems](#) 170
 [WorkbookType](#) 165
[SlicerFontType complex type](#) 73
[SlicerFormatElement complex type](#) 74
[SlicerFormatElementList complex type](#) 76
[SlicerItem complex type](#) 76
[SlicerItemList complex type](#) 76
[SlicerOptions complex type](#) 77
[SlicerView complex type](#) 77
[Standards assignments](#) 34
Syntax
 [messages - overview](#) 35

T

Timers
 [request timeout](#) 178
 [session timeout](#) 178
[Tracking changes](#) 602
[Transport](#) 35
[TypeExporter complex type](#) 79
Types
 [complex](#) 37
 [simple](#) 111

V

[Vendor-extensible fields](#) 34
[Versioning](#) 34
[VisibleSheetRange complex type](#) 80

W

[WebExtensionMetadata complex type](#) 109
[WorkbookGenerationItems simple type](#) 170
[WorkbookGenerationOptions complex type](#) 101
[WorkbookMetadata complex type](#) 103
[WorkbookMetadataParameter complex type](#) 103
[WorkbookMetadataResult complex type](#) 104
[WorkbookMetadataState complex type](#) 104
[WorkbookType simple type](#) 165
[WorkOnBehalf complex type](#) 85
[WorksheetChangeInfo complex type](#) 104
[WorksheetData complex type](#) 105
[WSDL](#) 474