

[MS-SSAS]: SQL Server Analysis Services Protocol

This topic lists the Errata found in the MS-SSAS document since it was last published. Since this topic is updated frequently, we recommend that you subscribe to these RSS or Atom feeds to receive update notifications.

Errata are subject to the same terms as the Open Specifications documentation referenced.



Errata below are for Protocols Document Version [V28.0 – 2021/08/04](#).

Errata Published*	Description																					
2022/05/24	<p>In section 2.2.4.2.2.2.1, ServerProperty, the product behavior note was updated to clarify the default value for the Memory\MemoryHeapType property.</p> <p>Changed from:</p> <table border="1" data-bbox="402 758 1356 1178"> <thead> <tr> <th>Property</th> <th>Default value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> </tr> <tr> <td>Memory\MemoryHeapType</td> <td>2 In Analysis Services in SQL Server 2005, SQL Server 2008, SQL Server 2008 R2, and SQL Server 2012 prior to SQL Server 2012 SP1, the default value is 1.</td> <td>It is advised that this advanced property not be changed, except under the guidance of Microsoft support.</td> </tr> <tr> <td>...</td> <td></td> <td></td> </tr> </tbody> </table> <p>Changed to:</p> <table border="1" data-bbox="402 1318 1356 1816"> <thead> <tr> <th>Property</th> <th>Default value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> </tr> <tr> <td>Memory\MemoryHeapType</td> <td>-1 In Analysis Services in SQL Server 2012 SP1, SQL Server 2012 SP2, SQL Server 2014, and SQL Server 2016 prior to SQL Server 2016 SP1, the default value is 2. In Analysis Services in SQL Server 2005, SQL Server 2008, SQL Server 2008 R2,</td> <td>It is advised that this advanced property not be changed, except under the guidance of Microsoft support.</td> </tr> </tbody> </table>	Property	Default value	Description	...			Memory\MemoryHeapType	2 In Analysis Services in SQL Server 2005, SQL Server 2008, SQL Server 2008 R2, and SQL Server 2012 prior to SQL Server 2012 SP1, the default value is 1.	It is advised that this advanced property not be changed, except under the guidance of Microsoft support.	...			Property	Default value	Description	...			Memory\MemoryHeapType	-1 In Analysis Services in SQL Server 2012 SP1, SQL Server 2012 SP2, SQL Server 2014, and SQL Server 2016 prior to SQL Server 2016 SP1, the default value is 2. In Analysis Services in SQL Server 2005, SQL Server 2008, SQL Server 2008 R2,	It is advised that this advanced property not be changed, except under the guidance of Microsoft support.
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...																						
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Errata Published*	Description										
		and SQL Server 2012 prior to SQL Server 2012 SP1, the default value is 1.									
	...										
2022/05/24	<p>In section 2.2.4.1.1.2.1.1.6, msxmla:NormTupleSet Complex Type, the namespace of the Members element was clarified.</p> <p>Changed from:</p> <pre data-bbox="435 562 1331 940"> <xsd:element name="NormTupleSet"> <xsd:complexType> <xsd:sequence> <xsd:element name="NormTuples" type="msxmla:NormTuplesType" minOccurs="1" maxOccurs="1"/> <xsd:element name="MembersLookup" minOccurs="1" maxOccurs="1"> <xsd:complexType> <xsd:sequence> <xsd:element name="Members" type="xmla-ds:TupleType" minOccurs="1" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType> </xsd:element> </xsd:sequence> </xsd:complexType> </xsd:element> </pre> <p>Changed to:</p> <pre data-bbox="435 1050 1331 1428"> <xsd:element name="NormTupleSet"> <xsd:complexType> <xsd:sequence> <xsd:element name="NormTuples" type="msxmla:NormTuplesType" minOccurs="1" maxOccurs="1"/> <xsd:element name="MembersLookup" minOccurs="1" maxOccurs="1"> <xsd:complexType> <xsd:sequence> <xsd:element ref="xmla-ds:Members" minOccurs="1" maxOccurs="unbounded"/> </xsd:sequence> </xsd:complexType> </xsd:element> </xsd:sequence> </xsd:complexType> </xsd:element> </pre>										
2022/05/24	<p>In section 3.1.4.2.2.1.3.57.1, Columns, a new table row defining the OBJECT_GROUP column was added, the support for it was specified, and a definition for OBJECT_GROUP was added in the code.</p> <p>Changed from:</p> <table border="1" data-bbox="402 1688 1425 1793"> <thead> <tr> <th data-bbox="402 1688 909 1738">Name</th> <th data-bbox="909 1688 1040 1738">Type</th> <th data-bbox="1040 1688 1208 1738">Restriction</th> <th data-bbox="1208 1688 1425 1738">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="402 1738 909 1793">...</td> <td data-bbox="909 1738 1040 1793"></td> <td data-bbox="1040 1738 1208 1793"></td> <td data-bbox="1208 1738 1425 1793"></td> </tr> </tbody> </table>			Name	Type	Restriction	Description	...			
Name	Type	Restriction	Description								
...											

Errata Published*	Description
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OBJECT_MEMORY_CHILD_NONSHRINKABLE <294>	xsd:long		The total amount of memory used by all the non-shrinkable objects that are directly owned by all the named objects that are directly or indirectly owned by the current object. The current value does not include the memory from the non-shrinkable objects directly owned by the current object.
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Changed to:

Name	Type	Restriction	Description
...			
OBJECT_MEMORY_CHILD_NONSHRINKABLE <294>	xsd:long		The total amount of memory used by all the non-shrinkable objects that are directly owned by all the named objects that are directly or indirectly owned by the current object. The current value does not include the memory from the non-shrinkable objects directly owned by the current object.
OBJECT_GROUP<294a (new)>	xsd:string		The name of the object group. The system tracker name is \$System.

.....
 <294a (new)> Section 3.1.4.2.2.1.3.57.1: The OBJECT_GROUP column is not supported by Analysis Services in SQL Server 2005, SQL Server 2008, SQL Server 2008 R2, and SQL Server 2012.

Errata Published*	Description								
	<p>Changed from:</p> <pre> ... <xsd:element sql:field="OBJECT_MEMORY_CHILD_SHRINKABLE" name="OBJECT_MEMORY_CHILD_SHRINKABLE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="OBJECT_MEMORY_CHILD_NONSHRINKABLE" name="OBJECT_MEMORY_CHILD_NONSHRINKABLE" type="xsd:long" minOccurs="0" /> </xsd:sequence> </xsd:complexType> ... </pre> <p>Changed to:</p> <pre> ... <xsd:element sql:field="OBJECT_MEMORY_CHILD_SHRINKABLE" name="OBJECT_MEMORY_CHILD_SHRINKABLE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="OBJECT_MEMORY_CHILD_NONSHRINKABLE" name="OBJECT_MEMORY_CHILD_NONSHRINKABLE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="OBJECT_GROUP" name="OBJECT_GROUP" type="xsd:string" minOccurs="0" /> </xsd:sequence> </xsd:complexType> ... </pre>								
2022/05/24	<p>In section 3.1.4.2.2.1.3.58.1 Columns, section 3.1.4.2.2.1.3.59.1 Columns, and section 3.1.4.2.2.1.3.60.1 Columns, the product behavior notes for MEASURE_GROUP_NAME were updated to clarify the support for its restriction.</p> <p>Changed from:</p> <p>Analysis Services ignores any restriction placed on MEASURE_GROUP_NAME.</p> <p>Changed to:</p> <p>Analysis Services in SQL Server 2005, SQL Server 2008, SQL Server 2008 R2, SQL Server 2012, and SQL Server 2014 ignores any restriction placed on MEASURE_GROUP_NAME.</p>								
2022/05/24	<p>In section 3.1.4.2.2.1.3.62.1, Columns, the two lists of possible types for the REFERENCED_OBJECT_TYPE column were updated.</p> <p>Changed from:</p> <table border="1" data-bbox="402 1650 1425 1755"> <thead> <tr> <th data-bbox="402 1650 743 1703">Name</th> <th data-bbox="743 1650 886 1703">Type</th> <th data-bbox="886 1650 1053 1703">Restriction</th> <th data-bbox="1053 1650 1425 1703">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="402 1703 743 1755">...</td> <td data-bbox="743 1703 886 1755"></td> <td data-bbox="886 1703 1053 1755"></td> <td data-bbox="1053 1703 1425 1755"></td> </tr> </tbody> </table>	Name	Type	Restriction	Description	...			
Name	Type	Restriction	Description						
...									

Errata Published*	Description		
	REFERENCED_OBJECT_TYPE	xsd:string	<p>Returns the type of the object that has a dependency on the referenced object.</p> <p>For objects that are returned by Tabular models at compatibility level 1100 or 1103, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ CALC_COLUMN: A calculated column. ▪ COLUMN: A column of data. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. <p>For objects that are returned by Tabular models at compatibility level 1200 or higher, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ COLUMN: A column of data. ▪ CALC_COLUMN: A calculated column. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. ▪ ACTIVE_RELATIONSHIP: An active relationship. ▪ TABLE: A table. ▪ CALC_TABLE: A calculated table. ▪ ATTRIBUTE_HIERARCHY: An attribute hierarchy. ▪ DETAIL_ROWS_EXPR: A detail rows definition. ▪ DATASOURCE: A data source. ▪ M_EXPRESSION: An M expression, as defined in [MS-SSAS-T]. Requires compatibility level 1400 or higher.
	...		

Errata Published*	Description														
	<p>Changed to:</p>														
	<table border="1"> <thead> <tr> <th data-bbox="402 331 743 384">Name</th> <th data-bbox="743 331 886 384">Type</th> <th data-bbox="886 331 1052 384">Restriction</th> <th data-bbox="1052 331 1425 384">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="402 384 743 436">...</td> <td data-bbox="743 384 886 436"></td> <td data-bbox="886 384 1052 436"></td> <td data-bbox="1052 384 1425 436"></td> </tr> <tr> <td data-bbox="402 436 743 1795">REFERENCED_OBJECT_TYPE</td> <td data-bbox="743 436 886 1795">xsd:string</td> <td data-bbox="886 436 1052 1795"></td> <td data-bbox="1052 436 1425 1795"> <p>Returns the type of the object that has a dependency on the referenced object.</p> <p>For objects that are returned by Tabular models at compatibility level 1100 or 1103, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ CALC_COLUMN: A calculated column. ▪ COLUMN: A column of data. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. ▪ HIERARCHY: A hierarchy. <p>For objects that are returned by Tabular models at compatibility level 1200 or higher, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ COLUMN: A column of data. ▪ CALC_COLUMN: A calculated column. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. ▪ ACTIVE_RELATIONSHIP: An active relationship. ▪ TABLE: A table. ▪ CALC_TABLE: A calculated table. ▪ ATTRIBUTE_HIERARCHY: An attribute hierarchy. ▪ DETAIL_ROWS_EXPR: A detail rows definition. </td> </tr> </tbody> </table>			Name	Type	Restriction	Description	...				REFERENCED_OBJECT_TYPE	xsd:string		<p>Returns the type of the object that has a dependency on the referenced object.</p> <p>For objects that are returned by Tabular models at compatibility level 1100 or 1103, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ CALC_COLUMN: A calculated column. ▪ COLUMN: A column of data. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. ▪ HIERARCHY: A hierarchy. <p>For objects that are returned by Tabular models at compatibility level 1200 or higher, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ COLUMN: A column of data. ▪ CALC_COLUMN: A calculated column. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. ▪ ACTIVE_RELATIONSHIP: An active relationship. ▪ TABLE: A table. ▪ CALC_TABLE: A calculated table. ▪ ATTRIBUTE_HIERARCHY: An attribute hierarchy. ▪ DETAIL_ROWS_EXPR: A detail rows definition.
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REFERENCED_OBJECT_TYPE	xsd:string		<p>Returns the type of the object that has a dependency on the referenced object.</p> <p>For objects that are returned by Tabular models at compatibility level 1100 or 1103, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ CALC_COLUMN: A calculated column. ▪ COLUMN: A column of data. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. ▪ HIERARCHY: A hierarchy. <p>For objects that are returned by Tabular models at compatibility level 1200 or higher, the following are the possible types:</p> <ul style="list-style-type: none"> ▪ COLUMN: A column of data. ▪ CALC_COLUMN: A calculated column. ▪ MEASURE: A measure. ▪ RELATIONSHIP: A relationship. ▪ ACTIVE_RELATIONSHIP: An active relationship. ▪ TABLE: A table. ▪ CALC_TABLE: A calculated table. ▪ ATTRIBUTE_HIERARCHY: An attribute hierarchy. ▪ DETAIL_ROWS_EXPR: A detail rows definition. 												

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				<ul style="list-style-type: none"> ▪ DATASOURCE: A data source. ▪ M_EXPRESSION: An M expression, as defined in [MS-SSAS-T]. Requires compatibility level 1400 or higher. ▪ HIERARCHY: A hierarchy. ▪ CALCULATION_ITEM: A calculation item. ▪ CALCULATION_ITEM_FORMAT_STRING: A calculation item format string. 																		
	...																					
2022/05/24	<p>In section 3.1.4.2.2.1.3.62.2, Additional Restrictions, the possible values for the KIND restriction were clarified.</p> <p>Changed from:</p> <table border="1" data-bbox="402 919 1425 1444"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> </tr> <tr> <td>KIND<322></td> <td>xsd:string</td> <td> <p>A string that specifies the kind of reference that is used to compute the dependency.</p> <p>The possible values are the following:</p> <ul style="list-style-type: none"> ▪ DATA – Is used for data references and applies to DAX expressions, M expressions, and metadata/structural dependencies, such as hierarchies and relationships. ▪ NAMED – Is used for explicitly named references and applies to DAX expressions and M expressions only. <p>An M expression is always both a named dependency and a data dependency. A DAX expression can be either or both.</p> <p>Values NAMED and DATA are not mutually exclusive, and many dependencies are both.</p> </td> </tr> </tbody> </table> <p>Changed to:</p> <table border="1" data-bbox="402 1556 1425 1820"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> </tr> <tr> <td>KIND<322></td> <td>xsd:string</td> <td> <p>A string that specifies the kind of reference that is used to compute the dependency.</p> <p>The possible values are the following:</p> <ul style="list-style-type: none"> ▪ DATA_DEPENDENCY – Is used for data references and applies to DAX expressions, M expressions, and </td> </tr> </tbody> </table>				Name	Type	Description	...			KIND<322>	xsd:string	<p>A string that specifies the kind of reference that is used to compute the dependency.</p> <p>The possible values are the following:</p> <ul style="list-style-type: none"> ▪ DATA – Is used for data references and applies to DAX expressions, M expressions, and metadata/structural dependencies, such as hierarchies and relationships. ▪ NAMED – Is used for explicitly named references and applies to DAX expressions and M expressions only. <p>An M expression is always both a named dependency and a data dependency. A DAX expression can be either or both.</p> <p>Values NAMED and DATA are not mutually exclusive, and many dependencies are both.</p>	Name	Type	Description	...			KIND<322>	xsd:string	<p>A string that specifies the kind of reference that is used to compute the dependency.</p> <p>The possible values are the following:</p> <ul style="list-style-type: none"> ▪ DATA_DEPENDENCY – Is used for data references and applies to DAX expressions, M expressions, and
Name	Type	Description																				
...																						
KIND<322>	xsd:string	<p>A string that specifies the kind of reference that is used to compute the dependency.</p> <p>The possible values are the following:</p> <ul style="list-style-type: none"> ▪ DATA – Is used for data references and applies to DAX expressions, M expressions, and metadata/structural dependencies, such as hierarchies and relationships. ▪ NAMED – Is used for explicitly named references and applies to DAX expressions and M expressions only. <p>An M expression is always both a named dependency and a data dependency. A DAX expression can be either or both.</p> <p>Values NAMED and DATA are not mutually exclusive, and many dependencies are both.</p>																				
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2022/05/24	<p>In section 3.1.4.2.2.1.3.63.1, Columns, a product behavior note was added to clarify the behavior of LIBRARY_NAME in SQL Server Analysis Services.</p> <p>Changed from:</p> <table border="1" data-bbox="402 726 1427 930"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Restriction</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LIBRARY_NAME</td> <td>xsd:string</td> <td>Yes</td> <td>The library that implements the function.</td> </tr> <tr> <td>...</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>Changed to:</p> <table border="1" data-bbox="402 1041 1427 1270"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Restriction</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> <td></td> </tr> <tr> <td>LIBRARY_NAME<322a (new)></td> <td>xsd:string</td> <td>Yes</td> <td>The library that implements the function.</td> </tr> <tr> <td>...</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p>.....</p> <p><322a (new)> Section 3.1.4.2.2.1.3.63.1: In SQL Server Analysis Services, when LIBRARY_NAME is specified, an empty rowset is returned.</p>			Name	Type	Restriction	Description	...				LIBRARY_NAME	xsd:string	Yes	The library that implements the function.	...				Name	Type	Restriction	Description	...				LIBRARY_NAME<322a (new)>	xsd:string	Yes	The library that implements the function.	...			
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LIBRARY_NAME	xsd:string	Yes	The library that implements the function.																																
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...																																			
LIBRARY_NAME<322a (new)>	xsd:string	Yes	The library that implements the function.																																
...																																			
2022/05/24	<p>In section 3.1.4.2.2.1.3.67.1, Columns, the list of valid values for the OBJECT_TYPE column was updated.</p> <p>Changed from:</p> <table border="1" data-bbox="402 1583 1427 1759"> <thead> <tr> <th>Name</th> <th>Type</th> <th>Restriction</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>...</td> <td></td> <td></td> <td></td> </tr> <tr> <td>OBJECT_TYPE</td> <td>xsd:string</td> <td>Yes</td> <td>The type of the object. Valid values are:</td> </tr> </tbody> </table>			Name	Type	Restriction	Description	...				OBJECT_TYPE	xsd:string	Yes	The type of the object. Valid values are:																				
Name	Type	Restriction	Description																																
...																																			
OBJECT_TYPE	xsd:string	Yes	The type of the object. Valid values are:																																

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			<ul style="list-style-type: none"> ▪ Event ▪ Action ▪ Target ▪ pred_source ▪ pred_compare ▪ Type
...			

Changed to:

Name	Type	Restriction	Description
...			
OBJECT_TYPE	xsd:string	Yes	The type of the object. Valid values are: <ul style="list-style-type: none"> ▪ Event ▪ Action ▪ Target ▪ pred_source ▪ pred_compare ▪ Type ▪ map ▪ message
...			

2022/05/24	<p>In section 3.1.4.2.2.1.3.68.1, Columns, the location of the DESCRIPTION element was updated.</p> <p>Changed from:</p> <pre> ... <xsd:complexType name="row"> <xsd:sequence> <xsd:element sql:field="NAME" name="NAME" type="xsd:string" minOccurs="0" /> /> <xsd:element sql:field="COLUMN_ID" name="COLUMN_ID" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="OBJECT_NAME" name="OBJECT_NAME" type="xsd:string" minOccurs="0" /> <xsd:element sql:field="OBJECT_PACKAGE_ID" name="OBJECT_PACKAGE_ID" type="uuid" minOccurs="0" /> <xsd:element sql:field="DESCRIPTION" name="DESCRIPTION" type="xsd:string" </pre>
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        minOccurs="0" />
    <xsd:element sql:field="TYPE_NAME" name="TYPE_NAME" type="xsd:string"
minOccurs="0" />
    <xsd:element sql:field="TYPE_PACKAGE_ID" name="TYPE_PACKAGE_ID" type="uuid"
minOccurs="0" />
    <xsd:element sql:field="COLUMN_VALUE" name="COLUMN_VALUE" type="xsd:string"
minOccurs="0" />
    <xsd:element sql:field="COLUMN_TYPE" name="COLUMN_TYPE" type="xsd:string"
minOccurs="0" />
    <xsd:element sql:field="CAPABILITIES" name="CAPABILITIES" type="xsd:int"
minOccurs="0" />
    <xsd:element sql:field="CAPABILITIES_DESC" name="CAPABILITIES_DESC"
type="xsd:string"
minOccurs="0" />
</xsd:sequence
</xsd:complexType>

```

Changed to:

```

...
<xsd:complexType name="row">
    <xsd:sequence>
        <xsd:element sql:field="NAME" name="NAME" type="xsd:string" minOccurs="0"
/>
        <xsd:element sql:field="COLUMN_ID" name="COLUMN_ID" type="xsd:int"
minOccurs="0" />
        <xsd:element sql:field="OBJECT_NAME" name="OBJECT_NAME" type="xsd:string"
minOccurs="0" />
        <xsd:element sql:field="OBJECT_PACKAGE_ID" name="OBJECT_PACKAGE_ID"
type="uuid"
minOccurs="0" />
        <xsd:element sql:field="TYPE_NAME" name="TYPE_NAME" type="xsd:string"
minOccurs="0" />
        <xsd:element sql:field="TYPE_PACKAGE_ID" name="TYPE_PACKAGE_ID" type="uuid"
minOccurs="0" />
        <xsd:element sql:field="DESCRIPTION" name="DESCRIPTION" type="xsd:string"
minOccurs="0" />
        <xsd:element sql:field="COLUMN_VALUE" name="COLUMN_VALUE" type="xsd:string"
minOccurs="0" />
        <xsd:element sql:field="COLUMN_TYPE" name="COLUMN_TYPE" type="xsd:string"
minOccurs="0" />
        <xsd:element sql:field="CAPABILITIES" name="CAPABILITIES" type="xsd:int"
minOccurs="0" />
        <xsd:element sql:field="CAPABILITIES_DESC" name="CAPABILITIES_DESC"
type="xsd:string"
minOccurs="0" />
    </xsd:sequence>
</xsd:complexType>

```

2022/05/24

In section 3.1.4.2.1.3.69.1, Columns, the names of the TOTAL_REGULAR_BUFFERS and FLAG_DESC elements were clarified.

Changed from:

Name	Type	Restriction	Description
SESSION_NAME	xsd:string		The name of the session. The name is unique across the local system.

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PENDING_BUFFERS	xsd:int		The number of full buffers that are pending processing.
TOTAL_PENDING_BUFFERS	xsd:int		The total number of regular buffers that are associated with the session.
...			
FLAGS_DESC	xsd:string		A description of the flags set on the session. Valid values include any combination of the following: <ul style="list-style-type: none"> ▪ Flush buffers on close ▪ Dedicated dispatcher ▪ Allow recursive events
...			

Changed to:

Name	Type	Restriction	Description
SESSION_NAME	xsd:string		The name of the session. The name is unique across the local system.
PENDING_BUFFERS	xsd:int		The number of full buffers that are pending processing.
TOTAL_REGULAR_BUFFERS	xsd:int		The total number of regular buffers that are associated with the session.
...			
FLAG_DESC	xsd:string		A description of the flags set on the session. Valid values include any combination of the following: <ul style="list-style-type: none"> ▪ Flush buffers on close ▪ Dedicated dispatcher ▪ Allow recursive events
...			

Changed from:

...

```
<xsd:complexType name="row">
  <xsd:sequence>
```

Errata Published*	Description
	<pre> <xsd:element sql:field="SESSION_NAME" name="SESSION_NAME" type="xsd:string" minOccurs="0" /> <xsd:element sql:field="PENDING_BUFFERS" name="PENDING_BUFFERS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="TOTAL_PENDING_BUFFERS" name="TOTAL_PENDING_BUFFERS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="REGULAR_BUFFER_SIZE" name="REGULAR_BUFFER_SIZE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="TOTAL_LARGE_BUFFERS" name="TOTAL_LARGE_BUFFERS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="LARGE_BUFFER_SIZE" name="LARGE_BUFFER_SIZE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="TOTAL_BUFFER_SIZE" name="TOTAL_BUFFER_SIZE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="BUFFER_POLICY_FLAGS" name="BUFFER_POLICY_FLAGS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="BUFFER_POLICY_DESC" name="BUFFER_POLICY_DESC" type="xsd:string" minOccurs="0" /> <xsd:element sql:field="FLAGS" name="FLAGS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="FLAGS_DESC" name="FLAGS_DESC" type="xsd:string" minOccurs="0" /> ... Changed to: ... <xsd:complexType name="row"> <xsd:sequence> <xsd:element sql:field="SESSION_NAME" name="SESSION_NAME" type="xsd:string" minOccurs="0" /> <xsd:element sql:field="PENDING_BUFFERS" name="PENDING_BUFFERS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="TOTAL_REGULAR_BUFFERS" name="TOTAL_PENDING_BUFFERS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="REGULAR_BUFFER_SIZE" name="REGULAR_BUFFER_SIZE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="TOTAL_LARGE_BUFFERS" name="TOTAL_LARGE_BUFFERS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="LARGE_BUFFER_SIZE" name="LARGE_BUFFER_SIZE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="TOTAL_BUFFER_SIZE" name="TOTAL_BUFFER_SIZE" type="xsd:long" minOccurs="0" /> <xsd:element sql:field="BUFFER_POLICY_FLAGS" name="BUFFER_POLICY_FLAGS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="BUFFER_POLICY_DESC" name="BUFFER_POLICY_DESC" type="xsd:string" minOccurs="0" /> <xsd:element sql:field="FLAGS" name="FLAGS" type="xsd:int" minOccurs="0" /> <xsd:element sql:field="FLAG_DESC" name="FLA_DESC" type="xsd:string" minOccurs="0" /> </pre>

Errata Published*	Description																								
	...																								
2021/12/17	<p>In section 2.2.4.2.2.8.1, Dimension/Attribute, the descriptions of the NameColumn, ValueColumn, SkippedLevelsColumn, and CustomRollupPropertiesColumn elements and the default value for NameColumn were clarified.</p> <p>Changed from:</p> <table border="1" data-bbox="402 527 1437 1818"> <thead> <tr> <th data-bbox="402 527 647 606">Element</th> <th data-bbox="647 527 760 606">Read-Only</th> <th data-bbox="760 527 990 606">Default value</th> <th data-bbox="990 527 1437 606">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="402 606 647 657">...</td> <td data-bbox="647 606 760 657"></td> <td data-bbox="760 606 990 657"></td> <td data-bbox="990 606 1437 657"></td> </tr> <tr> <td data-bbox="402 657 647 1171">NameColumn</td> <td data-bbox="647 657 760 1171"></td> <td data-bbox="760 657 990 1171">Defaults to KeyColumn (if non-composite) with String data type.</td> <td data-bbox="990 657 1437 1171"> A collection of objects of type DataItem. Defines column(s) that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding </td> </tr> <tr> <td data-bbox="402 1171 647 1686">ValueColumn</td> <td data-bbox="647 1171 760 1686"></td> <td data-bbox="760 1171 990 1686">Defaults to KeyColumn (if non-composite) with WChar data type.</td> <td data-bbox="990 1171 1437 1686"> A collection of objects of type DataItem. Defines column(s) that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding </td> </tr> <tr> <td data-bbox="402 1686 647 1736">...</td> <td data-bbox="647 1686 760 1736"></td> <td data-bbox="760 1686 990 1736"></td> <td data-bbox="990 1686 1437 1736"></td> </tr> <tr> <td data-bbox="402 1736 647 1818">SkippedLevelsColumn</td> <td data-bbox="647 1736 760 1818"></td> <td data-bbox="760 1736 990 1818">Empty</td> <td data-bbox="990 1736 1437 1818">A collection of objects of type DataItem that provides the details of</td> </tr> </tbody> </table>	Element	Read-Only	Default value	Description	...				NameColumn		Defaults to KeyColumn (if non-composite) with String data type.	A collection of objects of type DataItem. Defines column(s) that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding	ValueColumn		Defaults to KeyColumn (if non-composite) with WChar data type.	A collection of objects of type DataItem. Defines column(s) that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding	...				SkippedLevelsColumn		Empty	A collection of objects of type DataItem that provides the details of
Element	Read-Only	Default value	Description																						
...																									
NameColumn		Defaults to KeyColumn (if non-composite) with String data type.	A collection of objects of type DataItem. Defines column(s) that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding																						
ValueColumn		Defaults to KeyColumn (if non-composite) with WChar data type.	A collection of objects of type DataItem. Defines column(s) that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding																						
...																									
SkippedLevelsColumn		Empty	A collection of objects of type DataItem that provides the details of																						

Errata Published*	Description		
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			column(s) that stores the number of skipped (empty) levels between each member and its parent. The Source element within the DataItem MUST be one of the following types: ColumnBinding AttributeBinding
...			
CustomRollupPropertiesColumn		Empty	A collection of objects of type DataItem that defines the details of column(s) providing properties of the custom rollup. The Source element within the DataItem MUST be one of the following types: ColumnBinding AttributeBinding
...			

Changed to:

Element	Read-Only	Default value	Description
...			
NameColumn		Defaults to KeyColumn (if non-composite) with WChar data type.	An object of type DataItem. Defines the column that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding
ValueColumn		Defaults to KeyColumn (if non-composite) with WChar data type.	An object of type DataItem. Defines the column that will be used for the Names of Attribute members. The Source element within the DataItem MUST be one of the following types: AttributeBinding MeasureBinding CalculatedMeasureBinding

Errata Published*	Description			
				CubeAttributeBinding TimeAttributeBinding RowNumberBinding CubeDimensionBinding ColumnBinding RowBinding InheritedBinding
	...			
	SkippedLevelsColumn		Empty	An object of type DataItem that provides the details of a column that stores the number of skipped (empty) levels between each member and its parent. The Source element within the DataItem MUST be one of the following types: ColumnBinding AttributeBinding
	...			
	CustomRollupPropertiesColumn		Empty	An object of type DataItem that defines the details of a column providing the property of the custom rollup. The Source element within the DataItem MUST be one of the following types: ColumnBinding AttributeBinding
	...			
2021/12/17	<p>In section 3.1.4.3.2.1.1.26, UpdateCells, ResultId was clarified as an element.</p> <p>Changed from:</p> <p>The server responds to the presence of a KeepResult element in the SOAP header that it receives with a Result element in the SOAP header of the response. The Result element contains a ResultID attribute. This attribute contains the token that the client and server will use to refer to this Result in subsequent commands.</p> <p>Changed to:</p> <p>The server responds to the presence of a KeepResult element in the SOAP header that it receives with a Result element in the SOAP header of the response. The Result element contains a ResultId element. This element contains the token that the client and server will use to refer to this Result in subsequent commands.</p>			
2021/12/17	<p>In section 3.1.4.3.2.1.1.29, ImageLoad, the definition of the Data element in the XSD sample and the description of the ReadWriteMode element in the table were updated.</p> <p>Changed from:</p> <pre><xsd:complexType name="ImageLoad"></pre>			

Errata Published*	Description
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<xsd:all>
  <xsd:element ref="eng200_200:ImagePath" minOccurs="0" maxOccurs="1" />
  <xsd:element ref="eng200_200:ImageUrl" minOccurs="0" maxOccurs="1" />
  <xsd:element ref="eng200_200:ImageUniqueID" minOccurs="0" maxOccurs="1" />
  <xsd:element ref="eng200_200:ImageVersion" minOccurs="0" maxOccurs="1" />
  <xsd:element ref="eng100:ReadWriteMode" minOccurs="1" maxOccurs="1" >
    <xsd:simpleType>
      <xsd:restriction base="xsd:string" >
        <xsd:enumeration value="ReadWrite" />
        <xsd:enumeration value="ReadOnlyExclusive" />
      </xsd:restriction>
    </xsd:simpleType>
  </xsd:element>
  <xsd:element ref="eng100_100:DbStorageLocation" minOccurs="0" />
  <xsd:element name="DatabaseName" type="xsd:string" minOccurs="1"
maxOccurs="1" />
  <xsd:element name="DatabaseID" type="xsd:string" minOccurs="1"
maxOccurs="1" />
  <xsd:complexType name="Data">
    <xsd:element name="DataBlock" type="xsd:string" minOccurs="0"
maxOccurs="unbounded"/>
  </xsd:complexType>
</xsd:all>
</xsd:complexType>

```

Changed to:

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<xsd:complexType name="ImageLoad">
  <xsd:all>
    <xsd:element ref="eng200_200:ImagePath" minOccurs="0" maxOccurs="1" />
    <xsd:element ref="eng200_200:ImageUrl" minOccurs="0" maxOccurs="1" />
    <xsd:element ref="eng200_200:ImageUniqueID" minOccurs="0" maxOccurs="1" />
    <xsd:element ref="eng200_200:ImageVersion" minOccurs="0" maxOccurs="1" />
    <xsd:element ref="eng100:ReadWriteMode" minOccurs="1" maxOccurs="1" >
      <xsd:simpleType>
        <xsd:restriction base="xsd:string" >
          <xsd:enumeration value="ReadWrite" />
          <xsd:enumeration value="ReadOnlyExclusive" />
        </xsd:restriction>
      </xsd:simpleType>
    </xsd:element>
    <xsd:element ref="eng100_100:DbStorageLocation" minOccurs="0" />
    <xsd:element name="DatabaseName" type="xsd:string" minOccurs="1"
maxOccurs="1" />
    <xsd:element name="DatabaseID" type="xsd:string" minOccurs="1"
maxOccurs="1" />
    <xsd:element name="Data" minOccurs="0">
      <xsd:complexType>
        <xsd:element name="DataBlock" type="xsd:string" minOccurs="0"
maxOccurs="unbounded"/>
      </xsd:complexType>
    </xsd:element>
  </xsd:all>
</xsd:complexType>

```

Changed from:

Element	Default value	Description
...		

Errata Published*	Description		
	ReadWriteMode	Empty	<p>An enumeration value that specifies the read/write mode for the database that is to be attached.</p> <p>For the definition of eng101:ReadWriteMode, see Database.</p> <p>The possible values are as follows:</p> <ul style="list-style-type: none"> ▪ ReadWrite – Read-write access is allowed. ▪ ReadOnlyExclusive – Read-only exclusive access is allowed.
	...		
	Changed to:		
	ReadWriteMode	Empty	<p>An enumeration value that specifies the read/write mode for the database that is to be attached.</p> <p>The possible values are as follows:</p> <ul style="list-style-type: none"> ▪ ReadWrite – Read-write access is allowed. ▪ ReadOnlyExclusive – Read-only exclusive access is allowed.
	...		
2021/12/17	<p>In section 3.1.4.3.2.1.1.31, CloneDatabase, the definitions of the Object and Target elements were updated in the XSD.</p> <p>Changed from:</p> <pre> <xsd:complexType name="CloneDatabase"> <xsd:all> <xsd:complexType name="Object"> <xsd:element name="DatabaseID" type="ObjectReference" minOccurs="1" maxOccurs="1" /> </xsd:complexType> <xsd:complexType name="Target"> <xsd:element ref="eng100_100:DbStorageLocation" minOccurs="0" /> <xsd:element name="DatabaseName" type="xsd:string" minOccurs="1" maxOccurs="1"/> <xsd:element name="DatabaseID" type="xsd:string" minOccurs="1" maxOccurs="1"/> </xsd:complexType> </xsd:all> </xsd:complexType> </pre> <p>Changed to:</p> <pre> <xsd:complexType name="CloneDatabase"> <xsd:all> </pre>		

Errata Published*	Description
	<pre> <xsd:element name="Object" > <xsd:complexType> <xsd:element name="DatabaseID" type="ObjectReference" minOccurs="1" maxOccurs="1" /> </xsd:complexType> </xsd:element> <xsd:element name="Target"> <xsd:complexType> <xsd:element ref="eng100_100:DbStorageLocation" minOccurs="0" /> <xsd:element name="DatabaseName" type="xsd:string" minOccurs="1" maxOccurs="1"/> <xsd:element name="DatabaseID" type="xsd:string" minOccurs="1" maxOccurs="1"/> </xsd:complexType> </xsd:element> </xsd:all> </xsd:complexType> </pre>

*Date format: YYYY/MM/DD