

## **Oracle® Fusion Middleware**

XML Schema Reference for Oracle Business Intelligence  
Enterprise Edition

11g Release 1 (11.1.1)

**E23950-01**

December 2011

Describes how to use the Oracle BI Server MDS XML API and the legacy Oracle BI Server XML API, and provides reference information for each MDS and XML schema element.

Oracle Fusion Middleware XML Schema Reference for Oracle Business Intelligence Enterprise Edition, 11g Release 1 (11.1.1)

E23950-01

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# Contents

<b>Preface</b> .....	ix
Audience .....	ix
Documentation Accessibility .....	ix
Related Documents .....	x
Conventions .....	x

## Part I MDS XML Schema Elements

### 1 About the Oracle BI Server MDS XML API

1.1	About the Oracle BI Server MDS XML API .....	1-1
1.2	Generating MDS XML .....	1-2
1.2.1	Generating MDS XML from an Existing RPD Using the Administration Tool .....	1-2
1.2.2	Generating MDS XML from an Existing RPD Using a Command-Line Utility .....	1-3
1.3	Generic MDS XML Elements and Attributes .....	1-4
1.3.1	About MDS XML Object Identifiers .....	1-5
1.4	Example: Analysis of an MDS XML Logical Table Element .....	1-5
1.5	Topics of Interest in Other Guides .....	1-9
1.6	System Requirements and Certification .....	1-9

### 2 MDS XML Logical Elements

2.1	MDS XML Elements: Logical Column .....	2-1
2.2	MDS XML Elements: Business Model .....	2-3
2.3	MDS XML Elements: Logical Complex Join .....	2-4
2.4	MDS XML Elements: Logical Level .....	2-5
2.5	MDS XML Elements: Dimension .....	2-7
2.6	MDS XML Elements: Logical Table .....	2-8
2.7	MDS XML Elements: Logical Foreign Key .....	2-11
2.8	MDS XML Elements: Logical Key .....	2-12
2.9	MDS XML Elements: Logical Table Source .....	2-13
2.9.1	Column Mapping .....	2-17
2.10	MDS XML Elements: Logical Source Folder .....	2-18
2.11	MDS XML Elements: Measure Definition .....	2-19
2.12	MDS XML Elements: Aggregation Rule .....	2-19
2.13	MDS XML Elements: Override Aggregation Rule .....	2-20
2.14	MDS XML Elements: Logical Display Folder .....	2-22

### 3 MDS XML Physical Elements

3.1	MDS XML Elements: Database .....	3-1
3.2	MDS XML Elements: Physical Catalog .....	3-4
3.3	MDS XML Elements: Physical Schema .....	3-4
3.4	MDS XML Elements: Physical Display Folder .....	3-5
3.5	MDS XML Elements: Physical Table .....	3-6
3.6	MDS XML Elements: Physical Column .....	3-10
3.7	MDS XML Elements: Connection Pool .....	3-12
3.8	MDS XML Elements: Physical Key .....	3-17
3.9	MDS XML Elements: Physical Foreign Key .....	3-18
3.10	MDS XML Elements: Complex Join .....	3-19
3.11	MDS XML Elements: Cube Table .....	3-21
3.12	MDS XML Elements: Physical Dimension .....	3-24
3.13	MDS XML Elements: Physical Hierarchy .....	3-26
3.14	MDS XML Elements: Physical Level .....	3-28
3.15	MDS XML Elements: Cube Column .....	3-29
3.16	MDS XML Elements: Analytic Workspace .....	3-31
3.17	MDS XML Elements: AW Cube .....	3-31
3.18	MDS XML Elements: AW Dimension .....	3-34
3.19	MDS XML Elements: AW Hierarchy .....	3-37
3.20	MDS XML Elements: AW Level .....	3-39
3.21	MDS XML Elements: AW Column .....	3-40

### 4 MDS XML Presentation Elements

4.1	MDS XML Elements: Presentation Catalog .....	4-1
4.2	MDS XML Elements: Presentation Table .....	4-3
4.3	MDS XML Elements: Presentation Column .....	4-5
4.4	MDS XML Elements: Presentation Hierarchy .....	4-6
4.5	MDS XML Elements: Presentation Level .....	4-7

### 5 MDS XML Marketing, Security, and Other Elements

5.1	MDS XML Marketing Elements .....	5-1
5.1.1	MDS XML Elements: Catalog Link .....	5-1
5.1.2	MDS XML Elements: Target Level .....	5-2
5.1.3	MDS XML Elements: List Catalog .....	5-4
5.1.4	MDS XML Elements: Qualified List Item .....	5-4
5.1.5	MDS XML Elements: Qualifying Key .....	5-6
5.1.6	MDS XML Elements: Sampling Table .....	5-6
5.1.7	MDS XML Elements: Seg Catalog .....	5-7
5.2	MDS XML Security Elements .....	5-8
5.2.1	MDS XML Elements: Variable .....	5-8
5.2.2	MDS XML Elements: LDAP Server .....	5-9
5.2.3	MDS XML Elements: Init Block .....	5-11
5.2.4	MDS XML Elements: Custom Authenticator .....	5-14
5.2.5	MDS XML Elements: Privilege Package .....	5-15
5.2.6	MDS XML Elements: Object Privilege .....	5-18

5.2.7	MDS XML Elements: Query Privilege .....	5-20
5.2.8	MDS XML Elements: User .....	5-21
5.2.9	MDS XML Elements: Group .....	5-23
5.2.10	MDS XML Elements: DB Sign-On .....	5-24
5.3	Other MDS XML Elements .....	5-24
5.3.1	MDS XML Elements: Project .....	5-24
5.3.2	MDS XML Elements: Query Object.....	5-28

## Part II XML Schema Elements

### 6 About the Oracle BI Server XML API

6.1	About the Oracle BI Server XML API .....	6-1
6.1.1	About Using the Oracle BI Server XML API to Merge and Append Objects .....	6-2
6.2	Generating and Executing XML .....	6-2
6.2.1	Generating XML from an Existing RPD .....	6-3
6.2.2	Executing XML in Offline Mode.....	6-4
6.2.3	Executing XML Against the Oracle BI Server.....	6-5
6.3	Using the Oracle BI Server XML API.....	6-5
6.3.1	Maintaining Versions of the Metadata .....	6-6
6.3.2	Migrating Metadata from Another System.....	6-6
6.3.3	Applying a Metadata Patch Against a Running Oracle BI Server.....	6-6
6.3.4	Manipulating Metadata Programmatically .....	6-7
6.3.4.1	Example of Programmatically Creating a Repository Object Using XML.....	6-7
6.3.5	Moving from Test to Production Environments .....	6-10
6.3.6	Using XSL to Transform XML Files .....	6-12
6.4	Generic XML Elements and Attributes.....	6-14
6.4.1	About Object Identifiers.....	6-15
6.4.2	About Naming Requirements for Repository Objects .....	6-16

### 7 XML Logical Elements

7.1	XML Elements: Logical Column.....	7-1
7.2	XML Elements: Business Model .....	7-3
7.3	XML Elements: Logical Complex Join .....	7-4
7.4	XML Elements: Logical Level.....	7-5
7.5	XML Elements: Dimension .....	7-6
7.6	XML Elements: Logical Table.....	7-8
7.7	XML Elements: Logical Foreign Key.....	7-9
7.8	XML Elements: Logical Key .....	7-11
7.9	XML Elements: Logical Table Source.....	7-12
7.9.1	Column Mapping .....	7-16
7.10	XML Elements: Logical Source Folder .....	7-17
7.11	XML Elements: Measure Definition .....	7-17
7.12	XML Elements: Aggregation Rule.....	7-18
7.13	XML Elements: Override Aggregation Rule.....	7-19
7.14	XML Elements: Logical Display Folder .....	7-20

## 8 XML Physical Elements

8.1	XML Elements: Database .....	8-1
8.2	XML Elements: Physical Catalog.....	8-4
8.3	XML Elements: Physical Schema.....	8-4
8.4	XML Elements: Physical Display Folder .....	8-5
8.5	XML Elements: Physical Table.....	8-5
8.6	XML Elements: Physical Column .....	8-9
8.7	XML Elements: Connection Pool.....	8-11
8.8	XML Elements: Physical Key .....	8-16
8.9	XML Elements: Physical Foreign Key .....	8-17
8.10	XML Elements: Complex Join .....	8-18
8.11	XML Elements: Cube Table .....	8-19
8.12	XML Elements: Physical Dimension .....	8-22
8.13	XML Elements: Physical Hierarchy.....	8-23
8.14	XML Elements: Physical Level.....	8-26
8.15	XML Elements: Cube Column .....	8-26
8.16	XML Elements: Analytic Workspace .....	8-28
8.17	XML Elements: AW Cube.....	8-29
8.18	XML Elements: AW Dimension.....	8-31
8.19	XML Elements: AW Hierarchy .....	8-33
8.20	XML Elements: AW Level .....	8-35
8.21	XML Elements: AW Column.....	8-36

## 9 XML Presentation Elements

9.1	XML Elements: Presentation Catalog .....	9-1
9.2	XML Elements: Presentation Schema .....	9-3
9.3	XML Elements: Presentation Table .....	9-3
9.4	XML Elements: Presentation Column.....	9-5
9.5	XML Elements: Presentation Hierarchy .....	9-6
9.6	XML Elements: Presentation Level .....	9-8

## 10 XML Marketing, Security, and Other Elements

10.1	XML Marketing Elements.....	10-1
10.1.1	XML Elements: Catalog Link .....	10-1
10.1.2	XML Elements: Target Level.....	10-2
10.1.3	XML Elements: List Catalog.....	10-5
10.1.4	XML Elements: Qualified List Item.....	10-6
10.1.5	XML Elements: Qualifying Key.....	10-8
10.1.6	XML Elements: Sampling Table .....	10-8
10.1.7	XML Elements: Seg Catalog .....	10-9
10.2	XML Security Elements.....	10-10
10.2.1	XML Elements: Variable .....	10-10
10.2.2	XML Elements: LDAP Server.....	10-11
10.2.3	XML Elements: Init Block .....	10-13
10.2.4	XML Elements: Custom Authenticator .....	10-16
10.2.5	XML Elements: Privilege Package.....	10-17

10.2.6	XML Elements: Object Privilege .....	10-19
10.2.7	XML Elements: Query Privilege .....	10-20
10.2.8	XML Elements: User .....	10-22
10.2.9	XML Elements: Group .....	10-23
10.2.10	XML Elements: DB Sign-On .....	10-24
10.2.11	XML Elements: FMW Security .....	10-25
10.3	Other XML Elements .....	10-25
10.3.1	XML Elements: Project .....	10-25
10.3.2	XML Elements: Query Object .....	10-28

**Glossary**

**Index**





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# Preface

The Oracle Business Intelligence Foundation Suite is a complete, open, and integrated solution for all enterprise business intelligence needs, including reporting, ad hoc queries, OLAP, dashboards, scorecards, and what-if analysis. The Oracle Business Intelligence Foundation Suite includes Oracle Business Intelligence Enterprise Edition.

Oracle Business Intelligence Enterprise Edition (Oracle BI EE) is a comprehensive set of enterprise business intelligence tools and infrastructure, including a scalable and efficient query and analysis server, an ad-hoc query and analysis tool, interactive dashboards, proactive intelligence and alerts, and an enterprise reporting engine.

The components of Oracle BI EE share a common service-oriented architecture, data access services, analytic and calculation infrastructure, metadata management services, semantic business model, security model and user preferences, and administration tools. Oracle BI EE provides scalability and performance with data-source specific optimized request generation, optimized data access, advanced calculation, intelligent caching services, and clustering.

This guide contains usage and reference information about both the Oracle BI Server MDS XML API and the legacy Oracle BI Server XML API.

## Audience

This document is intended for metadata repository developers who use MDS XML or Oracle BI Server XML in their repository development processes, or for system administrators who use the Oracle BI Server XML API to programmatically interact with the Oracle BI repository.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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## Related Documents

For more information, see the following documents in the Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1) documentation set:

- The Oracle Business Intelligence chapter in *Oracle Fusion Middleware Release Notes* for your platform
- *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition*
- *Oracle Fusion Middleware Installation Guide for Oracle Business Intelligence*
- *Oracle Fusion Middleware Installation and Administration Guide for Oracle Exalytics In-Memory Machine*
- *Oracle Fusion Middleware Upgrade Guide for Oracle Business Intelligence*
- *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*
- *Oracle Fusion Middleware Enterprise Deployment Guide for Oracle Business Intelligence*
- *Oracle Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition*
- *Oracle Fusion Middleware Integrator's Guide for Oracle Business Intelligence Enterprise Edition*
- *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition*
- *Oracle Fusion Middleware Developer's Guide for Oracle Business Intelligence Enterprise Edition*
- *Oracle Fusion Middleware Scheduling Jobs Guide for Oracle Business Intelligence Enterprise Edition*

## Conventions

The following text conventions are used in this document:

<b>Convention</b>	<b>Meaning</b>
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

# Part I

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## MDS XML Schema Elements

Part I provides usage and reference information for the Oracle BI Server MDS XML API.

Part I contains the following chapters:

- [Chapter 1, "About the Oracle BI Server MDS XML API"](#)
- [Chapter 2, "MDS XML Logical Elements"](#)
- [Chapter 3, "MDS XML Physical Elements"](#)
- [Chapter 4, "MDS XML Presentation Elements"](#)
- [Chapter 5, "MDS XML Marketing, Security, and Other Elements"](#)



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# About the Oracle BI Server MDS XML API

MDS XML is an XML format that is compatible with Oracle Metadata Services, and is a supported format for the Oracle BI repository. Oracle Business Intelligence provides the ability to save Oracle BI repository metadata as a set of XML documents in MDS XML format.

Using this feature, you can integrate with third-party source control management (SCM) systems for Oracle BI repository development. For more details, see "Using a Source Control Management System for Repository Development" in *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition*.

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**Note:** MDS XML format is different from the XML format generated by the Oracle BI Server XML API, where the metadata for an Oracle BI repository is generated in a single XML file. For more information about the Oracle BI Server XML API, see [Chapter 6, "About the Oracle BI Server XML API."](#)

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This chapter contains the following topics:

- [Section 1.1, "About the Oracle BI Server MDS XML API"](#)
- [Section 1.2, "Generating MDS XML"](#)
- [Section 1.3, "Generic MDS XML Elements and Attributes"](#)
- [Section 1.4, "Example: Analysis of an MDS XML Logical Table Element"](#)
- [Section 1.5, "Topics of Interest in Other Guides"](#)
- [Section 1.6, "System Requirements and Certification"](#)

## 1.1 About the Oracle BI Server MDS XML API

The contents and structure of the Oracle BI Server MDS XML repository files are defined through the following schema element files:

- `xudml_mds_admin.xsd` and `xudml_mds.xsd`

These files contain the basic MDS XML grammar for the repository elements.

- `xudml_mds_core.xsd`

This file contains the detailed MDS XML grammar for the repository elements and attributes and the relationships between the elements.

You can find these files at:

*ORACLE\_HOME*/bifoundation/server/bin

You can view these files to see the relationships between MDS XML metadata objects, but you must *not* modify these files.

## 1.2 Generating MDS XML

You can generate MDS XML from an existing repository file either from within the Administration Tool or by using a command-line utility.

This section contains the following topics:

- [Section 1.2.1, "Generating MDS XML from an Existing RPD Using the Administration Tool"](#)
- [Section 1.2.2, "Generating MDS XML from an Existing RPD Using a Command-Line Utility"](#)

### 1.2.1 Generating MDS XML from an Existing RPD Using the Administration Tool

Perform these steps to generate MDS XML from an existing repository file using the Administration Tool:

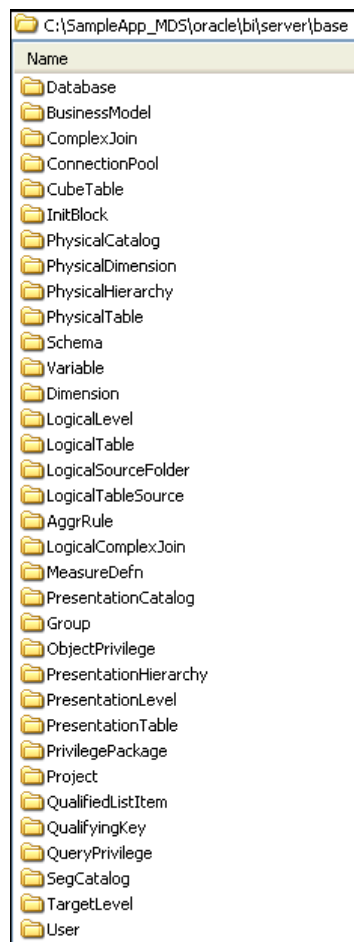
1. Open your existing repository file (RPD) in the Administration Tool in offline mode.
2. Select **File**, then select **Save As**, then select **MDS XML Documents**.
3. Select a root location for your MDS XML repository files, and then click **OK**.

The output files are generated in directories under the following path:

- *root\_location*/oracle/bi/server/base.

The number of generated directories depends on the complexity of your repository.

For example, with C:\SampleApp\_MDS selected as your root location, the output directory structure could be as shown in [Figure 1-1](#).

**Figure 1–1 Example of Directories Containing MDS XML Elements**

## 1.2.2 Generating MDS XML from an Existing RPD Using a Command-Line Utility

Oracle Business Intelligence provides the **biserverxmlgen** command-line utility to generate MDS XML output from a repository file.

Before running **biserverxmlgen**, you must first run **bi-init** to launch a command prompt or shell window that is initialized to your Oracle instance. This utility is called **bi-init.sh** on Linux and UNIX systems, **bi-init.bat** on client installations of the Administration Tool, and **bi-init.cmd** for all other Windows installation types.

For example, on Windows:

1. In Windows Explorer, go to the location appropriate for your install type:
  - Client installations:
 

```
ORACLE_HOME/bifoundation/server/bin
```
  - All other installations:
 

```
ORACLE_INSTANCE/bifoundation/OracleBIApplication/coreapplication/setup
```
2. Double-click **bi-init.cmd** (or **bi-init.bat** for client installations) to display a command prompt that is initialized to your Oracle instance.

3. At the command prompt, type `biserverxmlgen` with the desired options. You can also run `biserverxmlgen` with no arguments or parameters to see usage information.

To use `biserverxmlgen` to generate MDS XML output from an existing repository file, execute the following at the command prompt:

```
biserverxmlgen -M -R repository_pathname [-P password] -D output_directory [-8]
[-N] [-Q|-S]
```

Where:

`-M` indicates that you want MDS XML output.

`repository_pathname` is the name and location of the repository file from which you want to generate MDS XML.

`password` is the repository password.

The password argument is optional. If you do not provide a password argument, you are prompted to enter a password when you run the command. To minimize the risk of security breaches, Oracle recommends that you do not provide a password argument either on the command line or in scripts. Note that the password argument is supported for backward compatibility only, and will be removed in a future release.

`output_directory` is the name and location of the directory under which you want to generate your MDS XML output.

Specify `-8` to use UTF-8 encoding in the generated XML file. If you do not specify `-8`, the generated XML file uses ANSI ISO-8859-1 encoding by default.

Specify `-N` to generate output without upgrade ids (uids). These are the internal identifiers of objects. Use this if you want to create a new repository without the old upgrade ids.

You can use one of the two options `-Q` and `-S` to control the generation of security objects:

- Use `-Q` to generate output without security objects
- Use `-S` to generate output for only security objects

If you use both `-Q` and `-S` on the same call of `biserverxmlgen`, the second option on the call command takes precedence, and the first is ignored.

## 1.3 Generic MDS XML Elements and Attributes

This section describes generic elements and attributes that are common, like Description, name, and mdsid. In the Oracle BI Server MDS XML schema (.xsd file), these elements and attributes are defined under the `object_t` element.

The only common element is the Description element. This element can hold a text string describing a particular object. For example:

```
<Description>
  <![CDATA[ Generated by Time Series Wizard ]]>
</Description>
```

There are nine common attributes defined under the `object_t` element. [Table 1-1](#) lists these attributes.



**Table 1–1 Common MDS XML Attributes in object\_t**

Attribute Name	Description
name	The name of the object.
id	Not used for MDS XML.
msid	msid is a universally unique identifier, 37-characters long.
iconIndex	The index number for the icon of the object in the Administration Tool.
isDefaultReadable	If set to true, indicates that this object is readable by default.
isDefaultReadWriteable	If set to true, indicates that this object is both readable and writable by default.
isDefaultDeletable	If set to true, indicates that this object is deletable by default.
isDefaultGrantable	If set to true, indicates that this object is grantable by default.
isDefaultAll	If set to true, indicates that this object is readable, writable, deletable, and grantable by default.

In addition to the common attributes defined in `object_t`, an additional common attribute is defined in `ref_t`. This attribute is used when one object references another object or set of objects. For example, business model objects reference the logical display folders contained in that business model, using the sub-element `RefLogicalDisplayFolder`.

All referenced sub-elements have the same common attribute `refId` shown in [Table 1–2](#).

**Table 1–2 Common MDS XML Attribute in ref\_t**

Attribute Name	Description
refId	Consists of the mdsid of the referencing object and the mdsid of the referenced object, separated by "-".

### 1.3.1 About MDS XML Object Identifiers

Oracle BI Server MDS XML metadata objects have a single unique identifier:

- **msid**. This identifier consists of 37 characters, and is unique across the entire repository. The mdsid is created by the Oracle BI Server for the lifetime of the object.

For example: `msid="m1d08ed10-0bf4-1000-806e-0a9716a80000"`.

## 1.4 Example: Analysis of an MDS XML Logical Table Element

This section illustrates the use of MDS XML identifiers and reference attributes for a Logical Table called F2 Coupon Usages.

The logical table F2 Coupon Usages has the following properties:

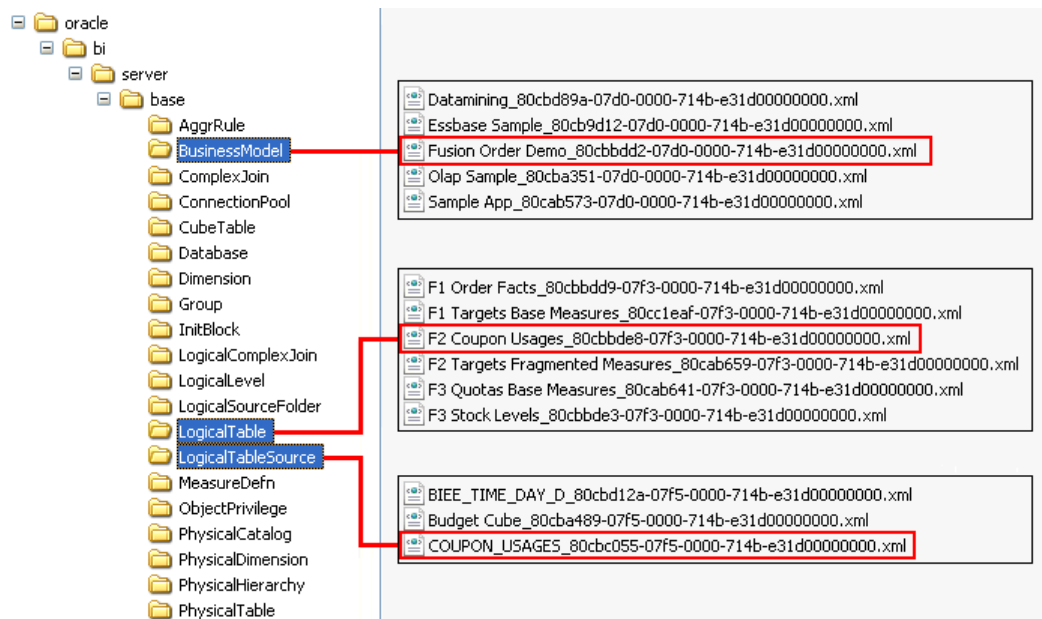
- It contains four logical columns, including the column `ORDER_ID`
- It has a logical key `CUSTOMER_ID`, that consists of the single logical column `ORDER_ID`
- It is contained within the business model Fusion Order Demo
- It has one logical table source `COUPON_USAGES`

The MDS XML elements to illustrate this example occur in three separate MDS XML files: a file that describes the logical table elements and two files that describe the associated business model and logical table source elements.

The focus of this example is the logical table file, especially the references in the file to related elements and attributes. The only details shown of the business model and logical table source files are those that illustrate relationships with the logical table.

As an overview, the following figure shows these three files highlighted within the general directory structure created when MDS XML is generated from an Oracle BI repository.

**Figure 1–2 MDS XML Example Element Files**



The contents of the main Logical Table file

F2 Coupon Usages\_80cbbde8-07f3-0000-714b-e31d00000000.xml

appear in this section, with the mdsid of the logical table highlighted (*the italicized line numbers have been inserted for easy element tag identification in the subsequent sections of this topic*).

```

1 <?xml version="1.0" encoding="UTF-8" ?>
2 <LogicalTable mdsid="m80cbbde8-07f3-0000-714b-e31d00000000"
3   name="F2 Coupon Usages"
4   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
5   xmlns="http://www.oracle.com/obis/repository"
6   x="133" y="378"
7   subjectAreaRef="/oracle/bi/server/base/BusinessModel
8     /Fusion Order Demo_80cbbdd2-07d0-0000-714b-e31d00000000.xml#
9     m80cbbdd2-07d0-0000-714b-e31d00000000">
10  <LogicalColumn mdsid="m80cbbefc-07d6-0000-714b-e31d00000000"
11    name="Applied Date" isWriteable="false">
12  </LogicalColumn>
13  <LogicalColumn mdsid="m80cbbeff-07d6-0000-714b-e31d00000000"
14    name="# of Customers" isWriteable="false">
15  </LogicalColumn>
16  <LogicalColumn mdsid="m80cbbf00-07d6-0000-714b-e31d00000000"
17    name="# of Coupons and Discounts" isWriteable="false">

```

```

18 </LogicalColumn>
19 <LogicalColumn mdsid="m80cbbf04-07d6-0000-714b-e31d00000000"
20   name="Order ID" isWriteable="false">
21 </LogicalColumn>
22 <LogicalKey mdsid="m80cbbf39-07d8-0000-714b-e31d00000000"
23   name="CUSTOMER_ID" isPrimary="true">
24   <RefColumns>
25     <RefLogicalColumn
26       refId="m80cbbf39-07d8-0000-714b-e31d00000000-
27         m80cbbf04-07d6-0000-714b-e31d00000000"
28       logicalColumnRef="/oracle/bi/server/base/LogicalTable
29         /F2 Coupon Usages_80cbbde8-07f3-0000-714b-e31d00000000.xml#
30         m80cbbf04-07d6-0000-714b-e31d00000000" />
31     </RefColumns>
32 </LogicalKey>
33 <RefTableSources>
34   <RefLogicalTableSource
35     refId="m80cbbde8-07f3-0000-714b-e31d00000000-
36       m80cbc055-07f5-0000-714b-e31d00000000"
37     logicalTableSourceRef=
38       "/oracle/bi/server/base/LogicalTableSource
39       /COUPON_USAGES_80cbc055-07f5-0000-714b-e31d00000000.xml#
40       m80cbc055-07f5-0000-714b-e31d00000000" />
41   </RefTableSources>
42 </LogicalTable>

```

### Reference from Logical Table to Business Model

The `subjectAreaRef` attribute (*lines 7 to 9*) points to the file and `mdsid` that describe the related business model:

```

7 subjectAreaRef="/oracle/bi/server/base/BusinessModel
8   /Fusion Order Demo_80cbbdd2-07d0-0000-714b-e31d00000000.xml#
9   m80cbbdd2-07d0-0000-714b-e31d00000000">

```

Note that the file name includes most of the business model `mdsid`.

The Business Model file (*full contents not shown here*) contains the `BusinessModel` tag, which includes the Business Model `mdsid` attribute:

```

<BusinessModel mdsid="m80cbbdd2-07d0-0000-714b-e31d00000000"
  name="Fusion Order Demo" ....

```

### Reference from Logical Key to Logical Column (in current Logical Table)

The logical key tag (*lines 22 to 32*) contains the `mdsid` of the logical key.

```

22 <LogicalKey mdsid="m80cbbf39-07d8-0000-714b-e31d00000000"
23   name="CUSTOMER_ID" ...

```

In general, a logical key can consist of several logical columns. In this case, the logical key, `CUSTOMER_ID`, consists of one logical column, `Order ID`.

The logical column of the logical key `CUSTOMER_ID` is referenced in the `RefColumns` tag (*lines 24 to 31*), and specifically the `RefLogicalColumn` sub-element.

```

24 <RefColumns>
25   <RefLogicalColumn
26     refId="m80cbbf39-07d8-0000-714b-e31d00000000-
27       m80cbbf04-07d6-0000-714b-e31d00000000"
28     logicalColumnRef="/oracle/bi/server/base/LogicalTable
29       /F2 Coupon Usages_80cbbde8-07f3-0000-714b-e31d00000000.xml#

```

```

30             m80cbbf04-07d6-0000-714b-e31d00000000 " />
31 </RefColumns>

```

logicalColumnRef (lines 28 to 30) points to the current Logical Table file (lines 28 to 29) and the mdsid that describe the logical column within the logical table that makes up the logical key (line 30).

The logical column mdsid (line 30) references the mdsid of the LogicalColumn tag (lines 19 to 21), that appears just before the LogicalKey tag in the current Logical Table file:

```

19 <LogicalColumn mdsid="m80cbbf04-07d6-0000-714b-e31d00000000"
20             name="Order ID" ...

```

The refId value of the RefLogicalColumn sub-element of the logical table (lines 26 to 27):

```

26 refId="m80cbbf39-07d8-0000-714b-e31d00000000-
27     m80cbbf04-07d6-0000-714b-e31d00000000"

```

consists of the mdsid of the logical key itself (line 22 of the logical table file, shown in bold at the beginning of this topic) and the mdsid of the logical column to which it refers (line 19 of the logical table file, shown in bold in the main body of this topic), separated by "-".

### Reference from Logical Table to Logical Table Source

In general, a logical table can refer to several logical table sources. In this case, the logical table F2 Coupon Usages refers to the single logical table source COUPON\_USAGES.

The RefTableSources tag (lines 33 to 41) is a child element of the LogicalTable tag. The explicit reference to the logical table source appears within the RefLogicalTableSource sub-element.

```

33 <RefTableSources>
34   <RefLogicalTableSource
35     refId="m80cbbde8-07f3-0000-714b-e31d00000000-
36         m80cbc055-07f5-0000-714b-e31d00000000"
37     logicalTableSourceRef=
38         "/oracle/bi/server/base/LogicalTableSource
39         /COUPON_USAGES_80cbc055-07f5-0000-714b-e31d00000000.xml#
40         m80cbc055-07f5-0000-714b-e31d00000000" />
41 </RefTableSources>

```

logicalTableSourceRef (lines 37 to 40) points to the file and the mdsid that describe the logical table source (note that the file name includes most of the logical table source mdsid).

The Logical Table Source file (full contents not shown here) contains the LogicalTableSource tag, which includes the mdsid of the logical table source:

```

<LogicalTableSource mdsid="m80cbc055-07f5-0000-714b-e31d00000000"
                    name="COUPON_USAGES" ...

```

The refId value of the RefLogicalTableSource sub-element of the logical table (lines 35 to 36):

```

35 refId="m80cbbde8-07f3-0000-714b-e31d00000000-
36     m80cbc055-07f5-0000-714b-e31d00000000"

```

consists of the mdsid of the logical table itself (shown in bold in line 2 of the logical table file listing, at the beginning of [Section 1.4, "Example: Analysis of an MDS XML Logical Table](#)

*Element*) and the mdsid of the logical table source (*shown in bold in the body of this topic*), separated by "-".

## 1.5 Topics of Interest in Other Guides

Some topics that may be of interest to XML schema reference users are covered in other guides. Table 1–3 lists these topics, and indicates where to go for more information.

**Table 1–3 Topics Covered in Other Guides**

Topic	Where to Go for More Information
Designing and building an Oracle BI repository using the Oracle BI Administration Tool	<i>Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition</i>
Using a source control management system for repository development	<i>Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition</i>
Starting and stopping Oracle Business Intelligence processes	<i>Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition</i>
Using the Oracle BI Server Web services	<i>Oracle Fusion Middleware Integrator's Guide for Oracle Business Intelligence Enterprise Edition</i>
Managing configuration settings that affect repository development in Fusion Middleware Control and NQSConfig.INI	<i>Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition</i>
Managing users, groups, and application roles	<i>Oracle Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition</i>
Moving from test to production environments	<i>Oracle Fusion Middleware Administrator's Guide</i>
Setting up DSNs for the Oracle BI Server	<i>Oracle Fusion Middleware Integrator's Guide for Oracle Business Intelligence Enterprise Edition</i>
Managing logging	<i>Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition</i>
General information about managing Oracle WebLogic Server	<i>Oracle Fusion Middleware Administrator's Guide</i>

## 1.6 System Requirements and Certification

Refer to the system requirements and certification documentation for information about hardware and software requirements, platforms, databases, and other information. Both of these documents are available on Oracle Technology Network (OTN).

The system requirements document covers information such as hardware and software requirements, minimum disk space and memory requirements, and required system libraries, packages, or patches:

[http://www.oracle.com/technology/software/products/ias/files/fusion\\_requirements.htm](http://www.oracle.com/technology/software/products/ias/files/fusion_requirements.htm)

The certification document covers supported installation types, platforms, operating systems, databases, JDKs, and third-party products:

[http://www.oracle.com/technology/software/products/ias/files/fusion\\_certification.html](http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html)

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## MDS XML Logical Elements

Logical elements are typically those elements that are exposed in the Business Model and Mapping layer, or in other words, the elements that appear in the center pane of the Administration Tool.

This chapter contains the following topics:

- Section 2.1, "MDS XML Elements: Logical Column"
- Section 2.2, "MDS XML Elements: Business Model"
- Section 2.3, "MDS XML Elements: Logical Complex Join"
- Section 2.4, "MDS XML Elements: Logical Level"
- Section 2.5, "MDS XML Elements: Dimension"
- Section 2.6, "MDS XML Elements: Logical Table"
- Section 2.7, "MDS XML Elements: Logical Foreign Key"
- Section 2.8, "MDS XML Elements: Logical Key"
- Section 2.9, "MDS XML Elements: Logical Table Source"
- Section 2.10, "MDS XML Elements: Logical Source Folder"
- Section 2.11, "MDS XML Elements: Measure Definition"
- Section 2.12, "MDS XML Elements: Aggregation Rule"
- Section 2.13, "MDS XML Elements: Override Aggregation Rule"
- Section 2.14, "MDS XML Elements: Logical Display Folder"

### 2.1 MDS XML Elements: Logical Column

The logical column element corresponds to the logical column object in the Business Model and Mapping layer.

The logical column element is not a top-level element - it appears as a child element of the logical table element.

The logical column tag includes the following attributes:

**Table 2-1 Logical Column Tag Attributes**

Attribute Name	Description
isDerived	When set to true, indicates that the logical column is based on a user-defined expression (for example, another logical column, a constant value, or a variable).

**Table 2–1 (Cont.) Logical Column Tag Attributes**

Attribute Name	Description
IsWriteable	When set to true, indicates that write back has been enabled for this column. This feature is typically used with ADF Business Component data sources. This option is called <b>Writeable</b> in the Administration Tool.
customSortOrderRef	If the sort order for this logical column is based on a different logical column, this attribute references that logical column.
descriptorIDRef	When multilingual columns are based on a lookup function, it is common to specify the non-translated lookup key column as the descriptor ID column of the translated column. This attribute references the descriptor ID column.

The logical column tag includes the following child elements:

**Table 2–2 Logical Column Child Elements**

Element Name	Description
Expr	Contains the expression from which the logical column should be derived. This element is only used when the <code>isDerived</code> attribute is set to true.

### Syntax

```
<LogicalColumn ...
  isDerived=""
  isWriteable=""
  customSortOrderRef=""
  descriptorIDRef="">
  <Description />
  <Expr>...</Expr>
</LogicalColumn>
```

### Example

```
<LogicalColumn mdsid="m8030eac4-07d6-0000-714b-e31d00000000"
  name="Days Closed Category"
  isDerived="true"
  isWriteable="false">
  <Description>
    <![CDATA[ "Days Closed Category by number of days closed.
      Categories are, A: <= 5, B: 6 - 30, and C: 31+" ]]>
  </Description>
  <Expr>
    <ExprText>
      <![CDATA[ CASE WHEN "%1" IS NULL THEN 'A: <=5'
        WHEN "%1" <= 5 THEN 'A: <= 5'
        WHEN "%1" <= 30 THEN 'B: 6 - 30'
        ELSE 'C: 31+' END ]]>
    </ExprText>
    <ExprTextDesc>
      <![CDATA[ CASE
        WHEN "Contact List"."Service Request"."Days Closed" IS NULL THEN 'A: <=5'
        WHEN "Contact List"."Service Request"."Days Closed" <= 5 THEN 'A: <= 5'
        WHEN "Contact List"."Service Request"."Days Closed" <= 30 THEN 'B: 6 - 30'
        ELSE 'C: 31+' END ]]>
    </ExprTextDesc>
  </Expr>
  <ObjectRefList>
```



```

    <RefObject refId="m8030eac4-07d6-0000-714b-e31d00000000-m8030eac2-07d6-
      0000-714b-e31d00000000"
      objectTypeId="2006"
      objectRef="/oracle/bi/server/base/LogicalTable/Service Request_8030ea6a-
        07f3-0000-714b-e31d00000000.xml#m8030eac2-07d6-0000-714b-e31d00000000"/>
  </ObjectRefList>
</Expr>
</LogicalColumn>

```

## 2.2 MDS XML Elements: Business Model

The business model element corresponds to the business model object in the Business Model and Mapping layer.

The business model tag includes the following attributes:

**Table 2-3 Business Model Tag Attributes**

Attribute Name	Description
isClassicStar	If set to true, indicates that the business model follows a star schema. Star schemas have one-to-many relationships between the logical dimension tables and the logical fact table.
isAvailable	If set to true, indicates that the corresponding business model is available for queries.

The business model tag includes the following child elements:

**Table 2-4 Business Model Child Elements**

Element Name	Description
RefDisplayFolders	References the display folders that belong to this business model.  Each display folder is contained in a sub-element called RefLogicalDisplayFolder.

### Syntax

```

<BusinessModel ...
  isClassicStar=" "
  isAvailable=" ">
  <Description />
  <RefDisplayFolders>
    <RefLogicalDisplayFolder logicalDisplayFolderRef=" " .../>
    <RefLogicalDisplayFolder logicalDisplayFolderRef=" " .../>
  </RefDisplayFolders>
</BusinessModel>

```

### Example

```

<BusinessModel mdsid="m1d08ed10-0bf4-1000-806e-0a9716a80000"
  name="Real-Time Activity"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isClassicStar="false"
  isAvailable="true">
  <RefDisplayFolders>
    <RefLogicalDisplayFolder refId="m1d08ed10-0bf4-1000-806e-0a9716a80000-
      m1d0ae8e0-0bf4-1000-806e-0a9716a80000"
      logicalDisplayFolderRef="/oracle/bi/server/base/LogicalDisplayFolder/F1_

```

```

1d0ae8e0-0bf4-1000-806e-0a9716a80000.xml#m1d0ae8e0-0bf4-1000-806e-
0a9716a80000" />
<RefLogicalDisplayFolder refId="m1d08ed10-0bf4-1000-806e-0a9716a80000-
m4edbf441-0bf9-1000-a1a7-0a970e580000"
logicalDisplayFolderRef="/oracle/bi/server/base/LogicalDisplayFolder/F2_
4edbf441-0bf9-1000-a1a7-0a970e580000.xml#m4edbf441-0bf9-1000-a1a7-
0a970e580000" />
</RefDisplayFolders>
</BusinessModel>

```

## 2.3 MDS XML Elements: Logical Complex Join

The logical complex join element corresponds to the logical join object in the Business Model and Mapping Layer.

The logical complex join tag includes the following attributes:

**Table 2-5 Logical Complex Join Tag Attributes**

Attribute Name	Description
type	The type of join. Valid values are Inner, LeftOuter, RightOuter, FullOuter, and FullOuterStitch.
drivingTableRef	If a driving table has been specified for the key, this attribute references that logical table.
logicalTable1Ref	References the first logical table of the join.
multiplicity1	multiplicity1 and multiplicity2 indicate the multiplicity of the tables in the join. Valid values are ([0-9])* TO ([0-9])* , ZERO TO ONE, ZERO TO MANY, ONE TO ONE, ONE TO MANY, and UNKNOWN.
isAggregate1	isAggregate1 and isAggregate2 indicate whether the corresponding table is an aggregate.
logicalTable2Ref	References the second logical table of the join.
multiplicity2	(See Description for multiplicity1.)
isAggregate2	(See Description for isAggregate1.)

### Syntax

```

<LogicalComplexJoin ...
  type=" "
  drivingTableRef=" "
  logicalTable1Ref=" "
  multiplicity1=" "
  isAggregate1=" "
  logicalTable2Ref=" "
  multiplicity2=" "
  isAggregate2=" ">
  <Description />
</LogicalComplexJoin>

```

### Example

```

<LogicalComplexJoin mdsid="m80e70525-07d4-0000-714b-e31d00000000"
  name="Relationship_2004:9974601258446906"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  type="Inner"
  logicalTable1Ref="/oracle/bi/server/base/LogicalTable/Dim Rating Model 80d6

```

```

3a05-07f3-0000-714b-e31d00000000.xml#m80d63a05-07f3-0000-714b-e31d00000000"
multiplicity1="0..1"
isAggregate1="false"
logicalTable2Ref="/oracle/bi/server/base/LogicalTable/Fact Performance Rating_
80d12881-07f3-0000-714b-e31d00000000.xml#m80d1288107f3-0000-714b-e31d00000000"
multiplicity2="0..n"
isAggregate2="false">
</LogicalComplexJoin>

```

## 2.4 MDS XML Elements: Logical Level

The logical level element corresponds to the logical level object contained in the dimensions in the Business Model and Mapping layer.

The logical level tag includes the following attributes:

**Table 2-6 Logical Level Tag Attributes**

Attribute Name	Description
isUniqueSourceKey	If set to true, indicates that this level is associated with the logical column or columns that comprise the logical key of the dimension table (or in other words, that this level is the lowest level of the dimension).
isGTA	If set to true, indicates that this level is the Grand Total level, which is a special level representing the grand total for a dimension. Each dimension can have just one Grand Total level. A grand total level does not contain dimensional attributes and does not have a level key. <b>Note:</b> GTA stands for Grand Total Alias.
isFDUC	If set to true, indicates that the logical level rolls up to its parent. This option is called <b>Supports rollup to higher level of aggregation</b> in the Administration Tool. <b>Note:</b> FDUC stands for FullDrillUpCoverage.
levelConst	The star schema level constant.
memberCount	The number of elements that exist at this logical level.

The logical level tag includes the following child elements:

**Table 2-7 Logical Level Child Elements**

Element Name	Description
Logical Key	References the parent key for this level (for dimensions with parent-child hierarchies only). The parent key is contained in a sub-element called <code>RefColumns</code> . For details, see <a href="#">Section 2.8, "MDS XML Elements: Logical Key."</a>
RefChildLevels	References the child levels that have been defined for this logical level. Each child level is contained in a sub-element called <code>RefLogicalLevel</code> .
RefPreferredDrillDown	If a drill path has been defined that is outside the normal drill path defined by the dimension level hierarchy, this element references the level to which users should drill. The preferred drill level is contained in a sub-element called <code>RefLogicalLevel</code> .

**Table 2-7 (Cont.) Logical Level Child Elements**

Element Name	Description
RefLogicalColumns	References the logical columns associated with this logical level. Each logical column is contained in a sub-element called RefLogicalColumn.

**Syntax**

The syntax here includes the summary child element entry for the logical key element. The full syntax for the logical key element appears in [Section 2.8, "MDS XML Elements: Logical Key."](#)

```
<LogicalLevel ...
  isUniqueSourceKey=""
  isGTA=""
  isFDUC=""
  levelConst=""
  memberCount=""
  dimensionOfRootRef="">
<Description />
<LogicalKey />
<RefChildLevels>
  <RefLogicalLevel logicalLevelRef="" .../>
</RefChildLevels>
<RefPreferredDrillDown>
  <RefLogicalLevel logicalLevelRef="" .../>
</RefPreferredDrillDown>
<RefLogicalColumns>
  <RefLogicalColumn logicalColumnRef="" .../>
</RefLogicalColumns>
</LogicalLevel>
```

**Example**

```
<LogicalLevel mdsid="m80334c74-07e9-0000-714b-e31d00000000"
  name="Year"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isGTA="false"
  isFDUC="true"
  memberCount="1"
  levelConst="'Year'">
  <LogicalKey mdsid="m80334d04-07d8-0000-714b-e31d00000000"
    name="Last Login Year"
    isPrimary="true"
    isForDrillDown="true">
    <RefColumns>
      <RefLogicalColumn refId="m80334d04-07d8-0000-714b-e31d00000000-m80334ca2-
        07d6-0000-714b-e31d00000000"
        logicalColumnRef="/oracle/bi/server/base/LogicalTable/Dim Last Login
          Date_80334c8e-07f3-0000-714b-e31d00000000.xml#m80334ca2-07d6-0000-714b-
            e31d00000000" />
    </RefColumns>
  </LogicalKey>
  <RefChildLevels>
    <RefLogicalLevel refId="m80334c74-07e9-0000-714b-e31d00000000_m80334c75-
      07e9-0000-714b-e31d00000000"
      logicalLevelRef="/oracle/bi/server/base/LogicalLevel/Quarter_80334c75-
        07e9-0000-714b-e31d00000000.xml#m80334c75-07e9-0000-714b-e31d00000000" />
  </RefChildLevels>
```

```

<RefLogicalColumns>
  <RefLogicalColumn refId="m80334c74-07e9-0000-714b-e31d00000000-m80334ca2-
    07d6-0000-714b-e31d00000000"
    logicalColumnRef="/oracle/bi/server/base/LogicalTable/Dim Last Login Date
    _80334c8e-07f3-0000-714b-e31d00000000.xml#m80334ca2-07d6-0000-714b-
    e31d00000000" />
</RefLogicalColumns>
</LogicalLevel>

```

## 2.5 MDS XML Elements: Dimension

The dimension element corresponds to the dimension object in the Business Model and Mapping layer.

The dimension tag includes the following attributes:

**Table 2–8 Dimension Tag Attributes**

Attribute Name	Description
isTimeDim	If set to true, indicates that this dimension is a time dimension.
isRagged	If set to true, indicates that this dimension hierarchy is unbalanced. An unbalanced hierarchy is one that contains levels that are not at the same depth.
isSkipped	If set to true, indicates that this dimension hierarchy is a skip-level hierarchy. A skip-level hierarchy is one in which there are members that do not have a value for a particular parent level.
isValueBased	If set to true, indicates that this object is a dimension with parent-child hierarchies. A parent-child hierarchy is a hierarchy of members that all have the same type. In a parent-child hierarchy, the inter-member relationships are parent-child relationships between dimension members.
defaultRootLevelRef	References the default root level of this dimension. When there are many root levels in a dimension, the default root level is the one that is used for drilldown.
subjectAreaRef	References the business model of this dimension.

### Syntax

```

<Dimension ...
  isTimeDim=" "
  isRagged=" "
  isSkipped=" "
  isValueBased=" "
  defaultRootLevelRef=" "
  subjectAreaRef=" ">
  <Description />
</Dimension>

```

### Example

```

<Dimension mdsid="m80333b15-07e3-0000-714b-e31d00000000"
  name="Hier - Account Status"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isValueBased="false"
  isRagged="false"
  isSkipped="false"

```

```

defaultRootLevelRef="/oracle/bi/server/base/LogicalLevel/All_80333b17-07e9-
0000-714b-e31d00000000.xml#m80333b17-07e9-0000-714b-e31d00000000"
subjectAreaRef="/oracle/bi/server/base/BusinessModel/Usage Accelerator_80337e85
-07d0-0000-714b-e31d00000000.xml#m80337e85-07d0-0000-714b-e31d00000000">
</Dimension>

```

## 2.6 MDS XML Elements: Logical Table

The logical table element corresponds to the logical table object in the Business Model and Mapping layer.

The logical table tag includes the following attributes:

**Table 2–9 Logical Table Tag Attributes**

Attribute Name	Description
isBridgeTable	In previous releases, this attribute was used to indicate whether the logical table is a bridge table. This attribute exists only for backward compatibility with previous releases.
isLookupTable	If set to true, indicates that this logical table is a lookup table. Lookup tables are typically used to store fields that contain translations in several languages. Queries that require multilingual data join the base table and lookup table to obtain the translated values for each row in the base table.
x	The <i>x</i> coordinate of the table when it is shown in the business model diagrams.
y	The <i>y</i> coordinate of the table when it is shown in the business model diagrams.
subjectAreaRef	References the business model for this logical table.
levelColumnRef	References the column that is used in the level that corresponds to this logical table.

The logical table tag includes the following child elements:

**Table 2–10 Logical Table Child Elements**

Element Name	Description
LogicalColumn	Specifies the logical column that belongs to this logical table. For details, see <a href="#">Section 2.1, "MDS XML Elements: Logical Column."</a>
LogicalKey	References the logical columns in this logical table that make up the logical key.  Each logical column is referenced in a sub-element called <code>RefColumns</code> . For details, see <a href="#">Section 2.8, "MDS XML Elements: Logical Key."</a>
LogicalForeignKey	References the logical key in an external logical table and the logical columns in this logical table that together make up the logical foreign key.  Each logical column is referenced in a sub-element called <code>RefColumns</code> .  For details, see <a href="#">Section 2.7, "MDS XML Elements: Logical Foreign Key."</a>

**Table 2–10 (Cont.) Logical Table Child Elements**

Element Name	Description
RefTableSources	References the logical table sources for this logical table. Each logical table source is contained in a sub-element called RefLogicalTableSource.

**Syntax**

The syntax here includes summary child element entries for the logical column, logical key, and logical foreign key elements. The full syntax for each child element appears in the appropriate section listed in the following table:

**Table 2–11 References to Child Elements of Logical Table Element**

Child Element Entry	Section Containing Child Element Syntax
LogicalColumn	<a href="#">MDS XML Elements: Logical Column</a>
LogicalKey	<a href="#">MDS XML Elements: Logical Key</a>
LogicalForeignKey	<a href="#">MDS XML Elements: Logical Foreign Key</a>

```
<LogicalTable ...
  isBridgeTable=""
  isLookupTable=""
  x=""
  y=""
  subjectAreaRef=""
  levelColumnRef="">
  <Description />
  <LogicalColumn />
  <LogicalKey />
  <LogicalForeignKey />
  <RefTableSources ...>
    <RefLogicalTableSource logicalTableSourceRef="" .../>
    <RefLogicalTableSource logicalTableSourceRef="" .../>
  </TableSources>
</LogicalTable>
```

**Example**

```
<LogicalTable mdsid="me406bc22-0bf1-1000-b290-0ae593200000"
  name="SalesPlan"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  x="170"
  y="97"
  subjectAreaRef="/oracle/bi/server/base/BusinessModel/SnowflakeSales_e406baec-
0bf1-1000-b290-0ae593200000.xml#me406baec-0bf1-1000-b290-0ae593200000">
  <LogicalColumn mdsid="me406bc23-0bf1-1000-b290-0ae593200000"
    name="Category ID" isWriteable="false">
  </LogicalColumn>
  <LogicalColumn mdsid="me406bc24-0bf1-1000-b290-0ae593200000"
    name="Country" isWriteable="false">
  </LogicalColumn>
  <LogicalColumn mdsid="me406bc25-0bf1-1000-b290-0ae593200000"
    name="Year" isWriteable="false">
  </LogicalColumn>
  <LogicalColumn mdsid="me406bc26-0bf1-1000-b290-0ae593200000"
    name="PlanRevenue" isWriteable="false">
```

```

</LogicalColumn>
<LogicalKey mdsid="me4070952-0bf1-1000-b290-0ae593200000"
  name="Category ID, Country, Year"
  isPrimary="true" isForDrillDown="true">
  <RefColumns>
    <RefLogicalColumn refId="me4070952-0bf1-1000-b290-0ae593200000-me406bc23-
      0bf1-1000-b290-0ae593200000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406bc22-
        0bf1-1000-b290-0ae593200000.xml#me406bc23-0bf1-1000-b290-0ae593200000" />
    <RefLogicalColumn refId="me4070952-0bf1-1000-b290-0ae593200000-me406bc24-
      0bf1-1000-b290-0ae593200000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406bc22-
        0bf1-1000-b290-0ae593200000.xml#me406bc24-0bf1-1000-b290-0ae593200000" />
    <RefLogicalColumn refId="me4070952-0bf1-1000-b290-0ae593200000-me406bc25-
      0bf1-1000-b290-0ae593200000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406bc22-
        0bf1-1000-b290-0ae593200000.xml#me406bc25-0bf1-1000-b290-0ae593200000" />
  </RefColumns>
</LogicalKey>
<LogicalForeignKey mdsid="me4070a81-0bf1-1000-b290-0ae593200000"
  name="SalesPlan_FKey" type="Inner"
  counterPartKeyRef="/oracle/bi/server/base/LogicalTable/Year_e406bbff-0bf1-
    1000-b290-0ae593200000.xml#me407094c-0bf1-1000-b290-0ae593200000">
  <RefColumns>
    <RefLogicalColumn refId="me4070a81-0bf1-1000-b290-0ae593200000-me406bc25-
      0bf1-1000-b290-0ae593200000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406bc22-
        0bf1-1000-b290-0ae593200000.xml#me406bc25-0bf1-1000-b290-0ae593200000" />
  </RefColumns>
</LogicalForeignKey>
<LogicalForeignKey mdsid="me4070a82-0bf1-1000-b290-0ae593200000"
  name="SalesPlan_FKey1" type="Inner"
  counterPartKeyRef="/oracle/bi/server/base/LogicalTable/Category_e406bbb2-
    0bf1-1000-b290-0ae593200000.xml#me407093e-0bf1-1000-b290-0ae593200000">
  <RefColumns>
    <RefLogicalColumn refId="me4070a82-0bf1-1000-b290-0ae593200000-me406bc23-
      0bf1-1000-b290-0ae593200000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406bc22-
        0bf1-1000-b290-0ae593200000.xml#me406bc23-0bf1-1000-b290-0ae593200000" />
  </RefColumns>
</LogicalForeignKey>
<LogicalForeignKey mdsid="me4070a83-0bf1-1000-b290-0ae593200000"
  name="SalesPlan_FKey2" type="Inner"
  counterPartKeyRef="/oracle/bi/server/base/LogicalTable/EmployeeCountry_
    e406bbe-0bf1-1000-b290-0ae593200000.xml#me4070949-0bf1-1000-b290-
    0ae593200000">
  <RefColumns>
    <RefLogicalColumn refId="me4070a83-0bf1-1000-b290-0ae593200000-me406bc24-
      0bf1-1000-b290-0ae593200000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406bc22-
        0bf1-1000-b290-0ae593200000.xml#me406bc24-0bf1-1000-b290-0ae593200000" />
  </RefColumns>
</LogicalForeignKey>
<RefTableSources>
  <RefLogicalTableSource refId="me406bc22-0bf1-1000-b290-0ae593200000-me4077d88-
    0bf1-1000-b290-0ae593200000"
    logicalTableSourceRef="/oracle/bi/server/base/LogicalTableSource/SalesPlan_
      e4077d88-0bf1-1000-b290-0ae593200000.xml#me4077d88-0bf1-1000-b290-
      0ae593200000" />
</RefTableSources>

```



```
</LogicalTable>
```

## 2.7 MDS XML Elements: Logical Foreign Key

The logical foreign key element corresponds to the logical foreign key object in the Business Model and Mapping layer.

The logical foreign key element is not a top-level element - it appears as a component element of the logical table element.

The logical foreign key tag includes the following attributes:

**Table 2–12 Logical Foreign Key Tag Attributes**

Attribute Name	Description
type	The type of join. Valid values are Inner, LeftOuter, RightOuter, FullOuter, and FullOuterStitch.
counterPartKeyRef	References the logical key in the primary key table that matches the RefColumns of this foreign key.
drivingTableRef	If a driving table has been specified for this logical foreign key, this element references that logical table.

The logical foreign key tag includes the following child elements:

**Table 2–13 Logical Foreign Key Child Elements**

Element Name	Description
RefColumns	References the logical columns (in the logical table that contains the foreign key) that match counterPartKeyRef.  Each logical column is contained in a sub-element called RefLogicalColumn.

### Syntax

```
<LogicalForeignKey ...
  type=""
  counterPartKeyRef=""
  drivingTableRef="">
  <Description />
  <RefColumns>
    <RefLogicalColumn logicalColumnRef="" .../>
    <RefLogicalColumn logicalColumnRef="" .../>
  </RefColumns>
</LogicalForeignKey>
```

### Example

```
<LogicalForeignKey mdsid="me4070a83-0bf1-1000-b290-0ae593200000"
  name="SalesPlan_FKey2" type="Inner"
  counterPartKeyRef="/oracle/bi/server/base/LogicalTable/EmployeeCountry_
e406bbe-0bf1-1000-b290-0ae593200000.xml#me4070949-0bf1-1000-b290-
0ae593200000">
  <RefColumns>
    <RefLogicalColumn refId="me4070a83-0bf1-1000-b290-0ae593200000-me406bc24-
0bf1-1000-b290-0ae593200000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406bc22-
0bf1-1000-b290-0ae593200000.xml#me406bc24-0bf1-1000-b290-0ae593200000" />
  </RefColumns>
</LogicalForeignKey>
```

## 2.8 MDS XML Elements: Logical Key

The logical key element corresponds to the logical key object in the Business Model and Mapping layer.

The logical key element is not a top-level element - it appears as a child element of the logical level and logical table elements.

The logical key tag includes the following attributes:

**Table 2–14 Logical Key Tag Attributes**

Attribute Name	Description
isPrimary	If set to true, indicates that this key is the logical primary key for the table.
isForDrillDown	If set to true, indicates that this key is the key that is displayed when a user clicks to drill down.
isChronKey	If set to true, indicates that this key is a chronological key for a time dimension.
logicalLevelRef	References the logical level for this logical key.

The logical key tag includes the following child elements:

**Table 2–15 Logical Key Child Elements**

Element Name	Description
RefColumns	References the logical columns that define the key of the logical table. Each logical column is contained in a sub-element called RefLogicalColumn.

### Syntax

```
<LogicalKey ...
  isPrimary=" "
  isForDrillDown=" "
  isChronKey=" "
  logicalLevelRef=" ">
  <Description />
  <RefColumns ...>
    <RefLogicalColumn logicalColumnRef=" " .../>
    <RefLogicalColumn logicalColumnRef=" " .../>
  </RefColumns>
</LogicalKey>
```

### Example

```
<LogicalKey mdsid="m80334d04-07d8-0000-714b-e31d00000000"
  name="Last Login Year"
  isPrimary="true"
  isForDrillDown="true">
  <RefColumns>
    <RefLogicalColumn refId="m80334d04-07d8-0000-714b-e31d00000000-m80334ca2-
      07d6-0000-714b-e31d00000000"
      logicalColumnRef="/oracle/bi/server/base/LogicalTable/Dim Login_880334c8e-
      07f3-0000-714b-e31d00000000.xml#m80334ca2-07d6-0000-714b-e31d00000000" />
  </RefColumns>
</LogicalKey>
```

## 2.9 MDS XML Elements: Logical Table Source

The logical table source element corresponds to the logical table source object in the Business Model and Mapping layer. See also the column mapping element, described in [Section 2.9.1, "Column Mapping."](#)

The logical table source tag includes the following attributes:

**Table 2–16 Logical Table Source Attributes**

Attribute Name	Description
isDistinct	This attribute is used if the values for the logical table source are unique. In the Administration Tool, this option is called <b>Select distinct values</b> in the Content tab of the Logical Table Source dialog.
isDimOnly	This attribute is not used.
isSysGen	If set to true, indicates that an internal utility such as the Aggregate Persistence Wizard has generated this logical table source.
canCombine	If set to true, indicates that this logical table source can be combined with other logical table sources to provide a full set of results. In the Administration Tool, this option is called <b>This source should be combined with other sources at this level</b> in the Content tab of the Logical Table Source dialog.
isActive	If set to true, indicates that this logical table source is active. In the Administration Tool, this attribute corresponds with the <b>Disabled</b> option in the General tab of the Logical Table Source dialog.
priorityGroup	Indicates the priority group number of this logical table source. Logical table source priority group numbers are assigned to indicate which logical table source should be used for queries for which there is more than one logical table source that can satisfy the requested set of columns.
allowUnmappedTable	Determines if the logical table source can have physical tables which are not mapped to logical columns.  This can occur with a snowflake of physical tables A->B->C, where a logical table maps to columns in A and C, but B needs to be included in the logical table source because it is in the join path between A and C.
logicalTableRef	References the logical table for this logical table source.
closureTableRef	References the parent-child table, if any.

The logical table source tag includes the following child elements:

**Table 2–17 Logical Table Source Child Elements**

Element Name	Description
ColumnMapping	For details, see <a href="#">Section 2.9.1, "Column Mapping."</a>

**Table 2–17 (Cont.) Logical Table Source Child Elements**

Element Name	Description
Link	<p>References the set of physical elements (physical tables, cube tables, AW cubes, or AW dimensions) to which the logical table source is mapped. These links are references to the physical joins that already exist. In the Administration Tool, this element corresponds with the <b>Map to these tables</b> section in the General tab of the Logical Table Source dialog.</p> <p>Each Link child element contains two sub-elements:</p> <ul style="list-style-type: none"> <li>■ The startNodeTableRef attribute references the physical element identified by this link. This can be a Cube Table, Physical Table, AW Dimension, or AW Cube, depending on your data source type.</li> <li>■ The Joins sub-element defines the joins for this link. It contains different sub-elements, depending on the type of join. For example: <ul style="list-style-type: none"> <li>RefCubeTable, RefPhysicalTable, RefAWCube, or RefAWDimension</li> <li>RefPhysicalForeignKey or RefComplexJoin</li> <li>DrivingTable, which contains a sub-element RefPhysicalTable</li> </ul> </li> </ul> <p>The Joins sub-element has two attributes: type (Inner, LeftOuter, RightOuter, FullOuter, or FullOuterStitch) and cardinality (ONE TO ONE, ZERO OR ONE TO ONE, ONE TO ZERO OR ONE, ZERO OR ONE TO ZERO OR ONE, ONE TO MANY, ZERO OR ONE TO MANY, ZERO OR ONE TO MANY, MANY TO ONE, MANY TO ZERO OR ONE, or MANY TO MANY).</p> <p>See the syntax for the logical table source element to see the complete hierarchy for the link child element.</p>
WhereClause	<p>If a WHERE clause filter has been defined, contains the WHERE clause expression that limits the number of rows the source uses in the resultant table. The expression is contained in a sub-element called Expr.</p> <p>In the Administration Tool, this option is called <b>Use this "WHERE clause" filter to limit rows returned (exclude the "WHERE")</b> in the Content tab of the Logical Table Source dialog.</p>
GroupBy	<p>Contains the expression that defines whether the aggregation is grouped by logical level or by column. The expression is contained in a sub-element called Expr.</p> <p>In the Administration Tool, this option is called <b>Aggregation content, group by</b> in the Content tab of the Logical Table Source dialog.</p>
FragmentContent	<p>Contains the expression that defines how the source is fragmented. The expression is contained in a sub-element called Expr.</p> <p>This child element is used in conjunction with the canCombine attribute. In the Administration Tool, this option is called <b>Fragmentation content</b> in the Content tab of the Logical Table Source dialog.</p>

**Syntax**

The syntax here includes the summary child element entry for the column mapping element. The full syntax for the column mapping element appears in [Section 2.9.1, "Column Mapping."](#)

```

<LogicalTableSource ...
  isDistinct=""
  isSysGen=""
  canCombine=""
  isActive=""
  priorityGroup=""
  logicalTableRef=""
  closureTableRef="">
<Description />
<ColumnMapping />
<Link>
  startNodeTableRef=""
  <Join
    type=""
    cardinality=""
    physicalTable1Ref=""
    physicalTable2Ref=""
    physicalJoinRef="" >
  </Link>
<WhereClause />
<GroupBy />
<FragmentContent />
</LogicalTableSource>

```

---

**Note:** Each of the summary syntax elements `<WhereClause />`, `<GroupBy />`, and `<Fragment Content />` have the following sub-elements:

```

<ExprText>...</ExprText>
<ExprTextDesc>...</ExprTextDesc>
<ObjectRefList>
  <RefObject objectRef="" .../>
  <RefObject objectRef="" .../>
</ObjectRefList>

```

---

### Example

```

<LogicalTableSource mdsid="m80e13d0b-07f5-0000-714b-e31d00000000"
  name="Fact_W_REVN_F_Team_Security_Resource"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isActive="true"
  logicalTableRef="/oracle/bi/server/base/LogicalTable/Dim_u0150_Security_u0150
  Opportunity_80e13d09-07f3-0000-714b-e31d00000000.xml#m80e13d09-07f3-0000-714b-
  e31d00000000">
  <ColumnMapping>
    <LogicalColumnExpr>
      <ExprText>
        <![CDATA[ "%1" ]]>
      </ExprText>
      <ExprTextDesc>
        <![CDATA[ "Core"."Dim - Security - Opportunity"."Row Wid" ]]>
      </ExprTextDesc>
    <ObjectRefList>
      <RefObject refId="m80e13d0b-07f5-0000-714b-e31d00000000-m80e13d0d-07d6-
        0000-714b-e31d00000000"
        objectTypeId="2006"
        objectRef="/oracle/bi/server/base/LogicalTable/Dim_u0150_Security
        _u0150_Opportunity80e13d09-07f3-0000-714b-e31d00000000.xml#m80e13d0d-
        07d6-0000-714b-e31d00000000" />
    </ObjectRefList>
  </ColumnMapping>
</LogicalTableSource>

```

```

    </ObjectRefList>
  </LogicalColumnExpr>
  <Expr>
    <ExprText>
      <![CDATA[ "%1"  ]]>
    </ExprText>
    <ExprTextDesc>
      <![CDATA[ "Oracle Data Warehouse"."Catalog"."dbo"."Fact_W_REVN_F".
        "ROW_WID"  ]]>
    </ExprTextDesc>
    <ObjectRefList>
      <RefObject refId="m80e13d0b-07f5-0000-714b-e31d00000000-m00228792-0bbb-
        0000-714b-e31d00000000"
        objectTypeId="3003"
        objectRef="/oracle/bi/server/base/PhysicalTable/Fact_W_REVN_F_0022613e-
          0bb9-0000-714b-e31d00000000.xml#m00228792-0bbb-0000-714b-e31d00000000"
        />
    </ObjectRefList>
  </Expr>
</ColumnMapping>
<ColumnMapping>
...
...
</ColumnMapping>
<Link startNodeTableRef="/oracle/bi/server/base/PhysicalTable/Fact_W_REVN_F_
  0022613e-0bb9-0000-714b-e31d00000000.xml#m0022613e-0bb9-0000-714b-
  e31d00000000">
  <Join type="LeftOuter" cardinality="MANY TO ONE"
    physicalTable1Ref="/oracle/bi/server/base/PhysicalTable/Fact_W_REVN_F_00226
      13e-0bb9-0000-714b-e31d00000000.xml#m0022613e-0bb9-0000-714b-e31d00000000"
    physicalTable2Ref="/oracle/bi/server/base/PhysicalTable/Dim_Team_Security_
      Opty_Resource_80e13d20-0bb9-0000-714b-e31d00000000.xml#m80e13d20-0bb9-
      0000-714b-e31d00000000"
    physicalJoinRef="/oracle/bi/server/base/PhysicalTable/Fact_W_REVN_F_
      0022613e-0bb9-0000-714b-e31d00000000.xml#m80e13d24-0bbe-0000-714b-
      e31d00000000" />
</Link>
<Link startNodeTableRef="/oracle/bi/server/base/PhysicalTable/Dim_Team_Security
  _Opty_Resource_80e13d20-0bb9-0000-714b-e31d00000000.xml#m80e13d20-0bb9-0000-
  714b-e31d00000000">
  <Join type="RightOuter" cardinality="ONE TO MANY"
    physicalTable1Ref="/oracle/bi/server/base/PhysicalTable/Dim_Team_Security_
      Opty_Resource_80e13d20-0bb9-0000-714b-e31d00000000.xml#m80e13d20-0bb9-
      0000-714b-e31d00000000"
    physicalTable2Ref="/oracle/bi/server/base/PhysicalTable/Fact_W_REVN_F_00226
      13e-0bb9-0000-714b-e31d00000000.xml#m0022613e-0bb9-0000-714b-e31d00000000"
    physicalJoinRef="/oracle/bi/server/base/PhysicalTable/Fact_W_REVN_F_
      0022613e-0bb9-0000-714b-e31d00000000.xml#m80e13d24-0bbe-0000-714b-
      e31d00000000" />
</Link>
<WhereClause>
  <ExprText />
  <ExprTextDesc />
</WhereClause>
<GroupBy>
  <ExprText>
    <![CDATA[ GROUPBYLEVEL("%1")  ]]>
  </ExprText>
  <ExprTextDesc>
    <![CDATA[ GROUPBYLEVEL("Core"."Security - Opportunity"."Detail")  ]]>
  </ExprTextDesc>

```

```

</ExprTextDesc>
<ObjectRefList>
  <RefObject refId="m80e13d0b-07f5-0000-714b-e31d00000000-m80e13d12-07e9-
    0000-714b-e31d00000000"
    objectRef="/oracle/bi/server/base/LogicalLevel/Detail_80e13d12-07e9-
    0000-714b-e31d00000000.xml#m80e13d12-07e9-0000-714b-e31d00000000" />
</ObjectRefList>
</GroupBy>
<FragmentContent>
  <ExprText />
  <ExprTextDesc />
</FragmentContent>
</LogicalTableSource>

```

## 2.9.1 Column Mapping

The column mapping element does not correspond to any metadata repository object. It is only used in conjunction with the logical table source element. The column mapping element appears on its own in the MDS XML schema (.xsd file), rather than as part of the logical table source element, so that the column mapping details are easier to read.

The column mapping tag includes the following child elements:

**Table 2–18 Column Mapping Child Elements**

Element Name	Description
LogicalColumnExpr	Contains the expression that identifies the logical column for this column mapping.
Expr	Contains the expression that identifies the physical column for this column mapping.

The column mapping tag does not include any attributes.

### Syntax

```

<ColumnMapping>
  <LogicalColumnExpr />
  <Expr />
</ColumnMapping>

```

---

**Note:** Both of the summary syntax elements <Expr /> and <LogicalColumnExpr /> have the following sub-elements:

```

<ExprText>...</ExprText>
<ExprTextDesc>...</ExprTextDesc>
<ObjectRefList>
  <RefObject objectRef=" " .../>
  <RefObject objectRef=" " .../>
</ObjectRefList>

```

---

### Example

```

<ColumnMapping>
  <LogicalColumnExpr>
    <ExprText>
      <![CDATA[ "%1" ]]>
    </ExprText>
  <ExprTextDesc>

```

```

        <![CDATA[ "Core"."Fact - CRM - Employee"."# Employees"  ]]>
    </ExprTextDesc>
    <ObjectRefList>
        <RefObject refId="m0022522d-07f5-0000-714b-e31d00000000-m00221e5b-07d6-
            0000-714b-e31d00000000"
            objectTypeId="2006"
            objectRef="/oracle/bi/server/base/LogicalTable/Fact_Employee_00224fc8-
                07f3-0000-714b-e31d00000000.xml#m00221e5b-07d6-0000-714b-e31d00000000"
            />
    </ObjectRefList>
</LogicalColumnExpr>
<Expr>
    <ExprText>
        <![CDATA[ "%1"  ]]>
    </ExprText>
    <ExprTextDesc>
        <![CDATA[ "Oracle Data Warehouse"."Catalog"."dbo"."Dim_W_EMPLOYEE_D".
            "ROW_WID"  ]]>
    </ExprTextDesc>
    <ObjectRefList>
        <RefObject refId="m0022522d-07f5-0000-714b-e31d00000000-m00228946-0bbb-
            0000-714b-e31d00000000"
            objectTypeId="3003"
            objectRef="/oracle/bi/server/base/PhysicalTable/Dim_W_EMPLOYEE_D_
                00226151-0bb9-0000-714b-e31d00000000.xml#m00228946-0bbb-0000-714b-
                e31d00000000" />
    </ObjectRefList>
</Expr>
</ColumnMapping>

```

## 2.10 MDS XML Elements: Logical Source Folder

The logical source folder element corresponds to the logical source folder object in the Business Model and Mapping layer. Logical source folders contain logical table sources.

The logical source folder tag includes the following attributes:

**Table 2–19 Logical Source Folder Tag Attributes**

Attribute Name	Description
logicalTableRef	References the logical table for this logical source folder.

### Syntax

```

<LogicalSourceFolder ...
    logicalTableRef="">
    <Description />
</LogicalSourceFolder>

```

### Example

```

<LogicalSourceFolder mdsid="m00090a43-07fe-0000-714b-e31d00000000"
    name="Sources"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns="http://www.oracle.com/obis/repository"
    logicalTableRef="/oracle/bi/server/base/LogicalTable/Fact_Purchasing
        Requisition_00090a2f-07f3-0000-714b-e31d00000000.xml#m00090a2f-07f3-0000-
        714b-e31d00000000">
</LogicalSourceFolder>

```



## 2.11 MDS XML Elements: Measure Definition

The measure definition element stores the measure definition for a measure column. A measure column is usually in a fact table, can change for each record, and can be added up or aggregated in some way.

The measure definition tag includes the following attributes:

**Table 2–20 Measure Definition Tag Attributes**

Attribute Name	Description
isCommutative	If set to true, indicates that the aggregation rule lets the server switch the order if it can increase the performance. For example, the following aggregation function is commutative: $A ( B ( x ) ) = B ( A ( x ) )$
logicalColumnRef	References the logical column for this measure definition.

The measure definition tag does not include any child elements.

### Syntax

```
<MeasureDefn ...
  isCommutative=" "
  logicalColumnRef=" ">
  <Description />
</MeasureDefn>
```

### Example

```
<MeasureDefn mdsid="m000b32f2-0800-0000-714b-e31d00000000"
  name="Measure"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isCommutative="false"
  logicalColumnRef="/oracle/bi/server/base/LogicalTable/Fact Purchasing Cycle
  Line_00090a25-07f3-0000-714b-e31d00000000.xml#m0009babc-07d6-0000-714b-
  e31d00000000">
</MeasureDefn>
```

## 2.12 MDS XML Elements: Aggregation Rule

The aggregation rule element corresponds to the aggregation rule object in the Business Model and Mapping layer.

The aggregation rule tag includes the following attributes:

**Table 2–21 Aggregation Rule Tag Attributes**

Attribute Name	Description
isDefault	If set to true, indicates that this is the default rule for aggregate calculations. This option only applies when there is more than one aggregation rule.
measureDefnRef	References the measure definition for this aggregation rule.
basedOnDimensionRef	If this aggregation rule is specific to a particular dimension, references the dimension for which this aggregation rule applies.

The aggregation rule tag includes the following child elements:

**Table 2–22 Aggregation Rule Child Elements**

Element Name	Description
Expr	Contains the expression on which this aggregation rule is based.

**Syntax**

```
<AggrRule ...
  isDefault=" "
  measureDefnRef=" "
  basedOnDimensionRef=" ">
  <Description />
  <Expr>
    <ExprText>...</ExprText>
    <ExprTextDesc>...</ExprTextDesc>
    <ObjectRefList>
      <RefObject objectRef=" " .../>
      <RefObject objectRef=" " .../>
    </ObjectRefList>
  </Expr>
</AggrRule>
```

**Example**

```
<AggrRule mdsid="m00225ee8-0802-0000-714b-e31d00000000"
  name="AggrRule_2050:343651246426797"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isDefault="true"
  measureDefnRef="/oracle/bi/server/base/MeasureDefn/Measure_00225994-0800-0000-
  714b-e31d00000000.xml#m00225994-0800-0000-714b-e31d00000000">
  <Expr>
    <ExprText>
      <![CDATA[ SUM("%1") ]]>
    </ExprText>
    <ExprTextDesc>
      <![CDATA[ SUM("Real-Time Opportunity"."Fact - Revenue"."Net Price") ]]>
    </ExprTextDesc>
    <ObjectRefList>
      <RefObject refId="m00225ee8-0802-0000-714b-e31d00000000-m00222892-07d6-
      0000-714b-e31d00000000"
        objectTypeId="2006"
        objectRef="/oracle/bi/server/base/LogicalTable/Fact Revenue_00225067-
        07f3-0000-714b-e31d00000000.xml#m00222892-07d6-0000-714b-e31d00000000"
        />
    </ObjectRefList>
  </Expr>
</AggrRule>
```

## 2.13 MDS XML Elements: Override Aggregation Rule

The override aggregation rule element corresponds to the override aggregation expression for a logical table source in the Business Model and Mapping Layer.

When you select Count Distinct as the default aggregation rule, you can specify an override aggregation expression for specific logical table sources. This option is useful when you have more than one logical table source mapped to a logical column and you want to apply a different aggregation rule to each source.

The override aggregation rule tag includes the following attributes:

**Table 2–23 Override Aggregation Rule Tag Attributes**

Attribute Name	Description
measureDefnRef	References the measure definition for this override aggregation rule.
logicalTableSourceRef	References the logical table source for this override aggregation rule.

The override aggregation rule tag includes the following child elements:

**Table 2–24 Override Aggregation Rule Child Elements**

Element Name	Description
RefLogicalTableSource	References the logical table source to which this override aggregation rule applies.
Expr	Contains the expression on which this aggregation rule is based.

### Syntax

```
<OverrideAggrRule ...
  measureDefnRef=" "
  logicalTableSourceRef=" "
  <Description />
  <RefLogicalTableSource .../>
  <Expr>
    <ExprText>...</ExprText>
    <ExprTextDesc>...</ExprTextDesc>
    <ObjectRefList>
      <RefObject objectRef=" " .../>
      <RefObject objectRef=" " .../>
    </ObjectRefList>
  </Expr>
</OverrideAggrRule>
```

### Example

```
<OverrideAggrRule mdsid="m80c95c48-0806-0000-714b-e31d00000000"
  name="OvAggrRule_2054:385771246426812"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  measureDefnRef="/oracle/bi/server/base/MeasureDefn/Measure_002258d4-0800-0000-
  714b-e31d00000000.xml#m002258d4-0800-0000-714b-e31d00000000"
  logicalTableSourceRef="/oracle/bi/server/base/LogicalTableSource/Fact_Agg_W_
  RESP_CMPOFR_A_8033657e-07f5-0000-714b-e31d00000000.xml#m8033657e-07f5-0000-
  714b-e31d00000000">
  <Expr>
    <ExprText>
      <![CDATA[ SUM("%1") ]]>
    </ExprText>
    <ExprTextDesc>
      <![CDATA[ SUM("Core"."Fact - CRM - Response"."# Responses") ]]>
    </ExprTextDesc>
    <ObjectRefList>
      <RefObject refId="m80c95c48-0806-0000-714b-e31d00000000-m00222110-07d6-
      0000-714b-e31d00000000"
        objectTypeId="2006"
        objectRef="/oracle/bi/server/base/LogicalTable/Fact Response_00224ffb-
        07f3-0000-714b-e31d00000000.xml#m00222110-07d6-0000-714b-e31d00000000"
      />
    </ObjectRefList>
  </Expr>
```

```
</OverrideAggrRule>
```

## 2.14 MDS XML Elements: Logical Display Folder

The logical display folder element corresponds to the logical display folder object in the Business Model and Mapping layer.

The logical display folder tag includes the following attributes:

**Table 2–25 Logical Display Folder Tag Attributes**

Attribute Name	Description
subjectAreaRef	References the business model for this logical display folder.

The logical display folder tag includes the following child elements:

**Table 2–26 Logical Display Folder Child Elements**

Element Name	Description
Dimensions	References the dimensions that belong to this logical display folder. Each dimension is contained in a sub-element called RefDimension.
Tables	References the logical tables that belong to this logical display folder. Each table is contained in a sub-element called RefLogicalTable.

### Syntax

```
<LogicalDisplayFolder ...
  subjectAreaRef="" >
  <Description />
  <RefDimensions>
    <RefDimension dimensionRef="" .../>
    <RefDimension dimensionRef="" .../>
  </RefDimensions>
  <RefTables>
    <RefLogicalTable logicalTableRef="" .../>
    <RefLogicalTable logicalTableRef="" .../>
  </RefTables>
</LogicalDisplayFolder>
```

### Example

```
<LogicalDisplayFolder mdsid="me4070ae0-0bf1-1000-b290-0ae593200000"
  name="Fact Tables"
  iconIndex="69"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  subjectAreaRef="/oracle/bi/server/base/BusinessModel/Time Series_e406baf8-
0bf1-1000-b290-0ae593200000.xml#me406baf8-0bf1-1000-b290-0ae593200000">
  <RefTables>
    <RefLogicalTable refId="me4070ae0-0bf1-1000-b290-0ae593200000-me406e378-0bf1-
1000-b290-0ae593200000"
      logicalTableRef="/oracle/bi/server/base/LogicalTable/SalesFacts_e406e378-
0bf1-1000-b290-0ae593200000.xml#me406e378-0bf1-1000-b290-0ae593200000" />
    <RefLogicalTable refId="me4070ae0-0bf1-1000-b290-0ae593200000-me406e456-0bf1-
```

```
1000-b290-0ae593200000"  
logicalTableRef="/oracle/bi/server/base/LogicalTable/SalesPlan_e406e456-  
0bf1-1000-b290-0ae593200000.xml#me406e456-0bf1-1000-b290-0ae593200000" />  
</RefTables>  
</LogicalDisplayFolder>
```



---

---

## MDS XML Physical Elements

Physical elements are typically those elements that are exposed in the Physical layer, or in other words, the elements that appear in the right-hand pane of the Administration Tool.

This chapter contains the following topics:

- [Section 3.1, "MDS XML Elements: Database"](#)
- [Section 3.2, "MDS XML Elements: Physical Catalog"](#)
- [Section 3.3, "MDS XML Elements: Physical Schema"](#)
- [Section 3.4, "MDS XML Elements: Physical Display Folder"](#)
- [Section 3.5, "MDS XML Elements: Physical Table"](#)
- [Section 3.6, "MDS XML Elements: Physical Column"](#)
- [Section 3.7, "MDS XML Elements: Connection Pool"](#)
- [Section 3.8, "MDS XML Elements: Physical Key"](#)
- [Section 3.9, "MDS XML Elements: Physical Foreign Key"](#)
- [Section 3.10, "MDS XML Elements: Complex Join"](#)
- [Section 3.11, "MDS XML Elements: Cube Table"](#)
- [Section 3.12, "MDS XML Elements: Physical Dimension"](#)
- [Section 3.13, "MDS XML Elements: Physical Hierarchy"](#)
- [Section 3.14, "MDS XML Elements: Physical Level"](#)
- [Section 3.15, "MDS XML Elements: Cube Column"](#)
- [Section 3.16, "MDS XML Elements: Analytic Workspace"](#)
- [Section 3.17, "MDS XML Elements: AW Cube"](#)
- [Section 3.18, "MDS XML Elements: AW Dimension"](#)
- [Section 3.19, "MDS XML Elements: AW Hierarchy"](#)
- [Section 3.20, "MDS XML Elements: AW Level"](#)
- [Section 3.21, "MDS XML Elements: AW Column"](#)

### 3.1 MDS XML Elements: Database

The database element corresponds to the database object in the Physical layer.

The database tag includes the following attributes:

**Table 3–1 Database Tag Attributes**

Attribute Name	Description
type	The type of data source, such as XMLDirect or ODBC20.
dbFlag	Stores the value of the following options: <ul style="list-style-type: none"> <li>■ <b>CRM metadata tables:</b> For legacy Siebel Systems sources only. When selected, the Administration Tool import utility looks for the table definition in Oracle's Siebel CRM-specific tables.</li> <li>■ <b>Virtual Private Database:</b> Identifies the physical database source as a virtual private database (VPD). When a VPD is used, returned data results are contingent on the user's authorization credentials. This option is used with the Security Sensitive option for session variables.</li> <li>■ <b>Allow populate queries by default:</b> When selected, allows all users to execute <code>POPULATE SQL</code>. If you want most, but not all, users to be able to execute <code>POPULATE SQL</code>, select this option and then limit queries for specific users or groups.</li> <li>■ <b>Allow direct database requests by default:</b> When selected, allows all users to execute physical queries. The Oracle BI Server will send unprocessed, user-entered, physical SQL directly to an underlying database. If you want most, but not all, users to be able to execute physical queries, select this option and then limit queries for specific users or groups.</li> </ul>
containerRef	References the container for this database.
persistConnPoolRef	References the connection pool that is used as the persist connection pool, if one has been assigned. A persist connection pool is a database property that is used for specific types of queries (typically used to support Marketing queries).

The database tag includes the following child elements:

**Table 3–2 Database Child Elements**

Element Name	Description
Features	Lists the SQL features for this database. Each feature is contained in a sub-element called <code>Feature</code> . This sub-element has two attributes: <ul style="list-style-type: none"> <li>■ <code>name</code> indicates the name of the feature, such as <code>LEFT_OUTER_JOIN_SUPPORTED</code>.</li> <li>■ <code>value</code> indicates whether this feature is supported by the database, or provides the actual value of the feature (such as "0" for <code>MAX_COLUMNS_IN_SELECT</code>).</li> </ul>
DisplayFolders	References any physical display folders that contain objects in this database. Physical display folders can be used to organize tables in a database. For example, all alias tables can be stored in a display folder called <code>Alias</code> , in addition to being present in the database.  Each display folder is contained in a sub-element called <code>RefPhysicalDisplayFolder</code> .
RefConnectionPools	References the connection pools for this database object.  Each connection pool is contained in a sub-element called <code>RefConnectionPool</code> .



**Table 3–2 (Cont.) Database Child Elements**

Element Name	Description
Properties	Custom database properties for Oracle ADF Business Component data sources that are passed to the Administration Tool from Oracle ADF BI VOs.

**Syntax**

```

<Database ...
  type=""
  dbFlag=""
  containerRef=""
  persistConnectionPoolRef="">
<Description />
<Features>
  <Feature name="" value="" />
  <Feature name="" value="" />
  ...
</Features>
<RefConnectionPools>
  <RefConnectionPool connectionPoolRef="" .../>
  <RefConnectionPool connectionPoolRef="" .../>
</RefConnectionPools>
<RefDisplayFolders>
  <RefPhysicalDisplayFolder physicalDisplayFolderRef="" .../>
  <RefPhysicalDisplayFolder physicalDisplayFolderRef="" .../>
</RefDisplayFolders>
<Properties>
  <PropertyGroup>
    category=""
    <Property>
      <Name .../>
      <Value .../>
    </Property>
  </Property Group>
</Properties>
</Database>

```

**Example**

```

<Database mdsid="m80c882ea-0bcf-0000-714b-e31d00000000"
  name="Loyalty Input Data Source"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  type="ODBC200">
  <Feature name="LEFT_OUTER_JOIN_SUPPORTED" value="true" />
  <Feature name="RIGHT_OUTER_JOIN_SUPPORTED" value="false" />
  <Feature name="FULL_OUTER_JOIN_SUPPORTED" value="false" />
  <Feature name="NESTED_OUTER_JOIN_SUPPORTED" value="false" />
  <Feature name="UNION_SUPPORTED" value="false" />
  <Feature name="UNION_ALL_SUPPORTED" value="false" />
  <Feature name="COUNT_SUPPORTED" value="true" />
  <Feature name="COUNT_DISTINCT_SUPPORTED" value="true" />
  ...
  <Feature name="SORT_ORDER_LOCALE" value="english-usa" />
  <Feature name="COMMENT_START" />
  <Feature name="COMMENT_END" />
  <RefConnectionPools>
    <RefConnectionPool refId="m80c882ea-0bcf-0000-714b-e31d00000000-m80c882ec-
      0bd5-0000-714b-e31d00000000"

```

```

        connectionPoolRef="/oracle/bi/server/base/ConnectionPool/Loyalty Input
        Connection Pool_80c882ec-0bd5-0000-714b-e31d00000000.xml#m80c882ec-0bd5-
        0000-714b-e31d00000000" />
    </RefConnectionPools>
</Database>

```

## 3.2 MDS XML Elements: Physical Catalog

The physical catalog element corresponds to the physical catalog object in the Physical layer.

The physical catalog tag includes the following attributes:

**Table 3–3 Physical Catalog Tag Attributes**

Attribute Name	Description
containerRef	References the database for this physical catalog.
dynamicNameRef	If a session variable is being used to specify the name of this physical catalog, this element references that session variable.

### Syntax

```

<PhysicalCatalog ...
    containerRef=" "
    dynamicNameRef=" ">
    <Description />
</PhysicalCatalog>

```

### Example

```

<PhysicalCatalog mdsid="m00238422-0bd1-0000-714b-e31d00000000"
    name="Catalog"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns="http://www.oracle.com/obis/repository"
    containerRef="/oracle/bi/server/base/Database/Forecasting Oracle Data Warehouse
    _00238415-0bcf-0000-714b-e31d00000000.xml#m00238415-0bcf-0000-714b-
    e31d00000000">
</PhysicalCatalog>

```

## 3.3 MDS XML Elements: Physical Schema

The physical schema element corresponds to the physical schema object in the Physical layer.

The physical schema tag includes the following attributes:

**Table 3–4 Physical Catalog Tag Attributes**

Attribute Name	Description
containerRef	References the database for this physical schema.
dynamicNameRef	If a session variable is being used to specify the name of this physical schema, this element references that session variable.

### Syntax

```

<Schema ...>
    containerRef=" "
    dynamicNameRef=" ">
    <Description />

```

```
</Schema>
```

### Example

```
<Schema mdsid="m80d02084-0bd3-0000-714b-e31d00000000"
  name="RTDUSER"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  containerRef="/oracle/bi/server/base/Database/RTD Reporting Database_80d02083-
    0bcf-0000-714b-e31d00000000.xml#m80d02083-0bcf-0000-714b-e31d00000000">
</Schema>
```

## 3.4 MDS XML Elements: Physical Display Folder

The physical display folder element corresponds to the physical display folder object in the Physical layer.

The physical display folder tag includes the following attributes:

**Table 3–5 Physical Display Folder Tag Attributes**

Attribute Name	Description
databaseRef	References the database for this physical display folder.

The physical display folder tag includes the following child elements:

**Table 3–6 Physical Display Folder Child Elements**

Element Name	Description
RefTables	References the physical tables that belong to this physical display folder.  Each physical table is contained in a sub-element called RefPhysicalTable.

### Syntax

```
<PhysicalDispFolder ... >
  databaseRef=" "
  <Description />
  <RefTables>
    <RefPhysicalTable tableRef=" " .../>
    <RefPhysicalTable tableRef=" " .../>
  </RefTables>
</Schema>
```

### Example

```
<PhysicalDisplayFolder mdsid="me40757e1-0bf1-1000-b290-0ae593200000"
  name="Opaque Views"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  databaseRef="/oracle/bi/server/base/Database/SQLDB_Northwind_e4070ae5-0bf1-
    1000-b290-0ae593200000.xml#me4070ae5-0bf1-1000-b290-0ae593200000">
  <RefTables>
    <RefPhysicalTable refId="me40757e1-0bf1-1000-b290-0ae593200000-me4072f9e-
      0bf1-1000-b290-0ae593200000"
      tableRef="/oracle/bi/server/base/PhysicalTable/Employees_Country_e4072f9e-
        0bf1-1000-b290-0ae593200000.xml#me4072f9e-0bf1-1000-b290-0ae593200000" />
    <RefPhysicalTable refId="me40757e1-0bf1-1000-b290-0ae593200000-me4072fc7-
      0bf1-1000-b290-0ae593200000"
```

```

        tableRef="/oracle/bi/server/base/PhysicalTable/Population_e4072fc7-0bf1-1000-b290-0ae593200000.xml#me4072fc7-0bf1-1000-b290-0ae593200000" />
    <RefPhysicalTable refId="me40757e1-0bf1-1000-b290-0ae593200000-me4072fcc-0bf1-1000-b290-0ae593200000"
        tableRef="/oracle/bi/server/base/PhysicalTable/Quarter_e4072fcc-0bf1-1000-b290-0ae593200000.xml#me4072fcc-0bf1-1000-b290-0ae593200000" />
    <RefPhysicalTable refId="me40757e1-0bf1-1000-b290-0ae593200000-me4072fa0-0bf1-1000-b290-0ae593200000"
        tableRef="/oracle/bi/server/base/PhysicalTable/Year_e4072fa0-0bf1-1000-b290-0ae593200000.xml#me4072fa0-0bf1-1000-b290-0ae593200000" />
</RefTables>
</PhysicalDisplayFolder>

```

## 3.5 MDS XML Elements: Physical Table

The physical table element corresponds to the physical table object in the Physical layer.

The physical table tag includes the following attributes:

**Table 3-7 Physical Table Tag Attributes**

Attribute Name	Description
type	The type of physical table. Options are as follows: <ul style="list-style-type: none"> <li>▪ select indicates that this physical table object is a SELECT statement.</li> <li>▪ sp indicates that this physical table is a stored procedure.</li> <li>▪ alias indicates that this physical table is an alias table. An alias table (alias) is a physical table that references a different physical table as its source.</li> <li>▪ none indicates that this physical table is a regular physical table.</li> </ul>
isCacheable	If set to true, indicates that this table is included in the Oracle BI Server query cache.
CacheExpiry	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.
isCacheEventTable	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
isOverrideCacheProp	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.
pollFreq	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.
x	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
y	The <i>y</i> coordinate of the table when it is shown in the physical diagram.
rowCount	The latest number of rows retrieved for this physical table.
lastUpdated	The time at which row counts were last updated for this physical table.
uri	For XML data sources only. The resource identifier for the XML data source.

**Table 3-7 (Cont.) Physical Table Tag Attributes**

Attribute Name	Description
xslPath	For XML data sources only. An XSLT file contains formatting rules written according to the XSLT standard. It defines how an XML file may be transformed.
maxConn	For XML data sources only. The maximum number of connections allowed to the same URL from different users.
xmlRefreshInterval	For XML data sources only. The time interval after which the XML data source is queried again directly, rather than using results in cache.
scriptPath	For XML data sources only. The extended gateway script path.
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this physical table.
isExtGatewayInProgress	For XML data sources only. Indicates that this physical table is the extended gateway part of the process.
extGatewayDelimiter	For XML data sources only. The row delimiter used in the metadata import process, typically the second level element in the XML document.
isSysGen	If set to true, indicates that an internal utility has generated this physical table.
isDDLAggr	Indicates whether this physical table is an aggregate table.
isDeployedView	For relational databases only. If set to true, indicates that this physical table is a deployed (opaque) view. An opaque view is a Physical layer table that consists of a SELECT statement.
containerRef	References the database, schema, or physical catalog for this physical table.
aggrConnPoolRef	If this physical table is an aggregate table, this element references the connection pool used for the aggregate.
sourceTableRef	For alias tables only. References the physical table that is being used as the source for this alias table.
variableRef	If a session variable is being used to specify the name of this physical table, this element references that session variable.
memberKeyRef	Applies to parent-child relationship tables that support parent-child hierarchies on relational sources. The name of the column that uniquely identifies members of the parent-child relationship table.
parentKeyRef	The name of the column that contains the key of the parent or ancestor member. Applies to parent-child relationship tables that support parent-child hierarchies on relational sources.
distanceColumnRef	The name of the column that records the number of levels between the member and the ancestor. Applies to parent-child relationship tables that support parent-child hierarchies on relational sources.
leafColumnRef	The name of the column that indicates whether the member has no child members (1 if the member is a leaf and has no children, 0 if the member is not a leaf and has children). Applies to parent-child relationship tables that support parent-child hierarchies on relational sources.

The physical table tag includes the following child elements:

**Table 3–8 Physical Table Child Elements**

Element Name	Description
DBMapItem	Stores the value of database-specific strings. The <DBMapItem> element contains a <name> attribute and a <Value> sub-element.
PhysicalColumn	Specifies the physical column that belongs to this physical table. For details, see <a href="#">Section 3.6, "MDS XML Elements: Physical Column."</a>
PhysicalKey	References the physical columns in this physical table that make up the physical key.  Each physical column is referenced in a sub-element called RefColumns. For details, see <a href="#">Section 3.8, "MDS XML Elements: Physical Key."</a>
PhysicalForeignKey	References the physical key in an external physical table and the physical columns in this physical table that together make up the physical foreign key.  Each physical column is referenced in a sub-element called RefColumns.  For details, see <a href="#">Section 3.9, "MDS XML Elements: Physical Foreign Key."</a>

**Syntax**

The syntax here includes summary child element entries for the physical column, physical key, and physical foreign key elements. The full syntax for each child element appears in the appropriate section listed in the following table:

**Table 3–9 References to Child Elements of Physical Table Element**

Child Element Entry	Section Containing Child Element Syntax
PhysicalColumn	<a href="#">MDS XML Elements: Physical Column</a>
PhysicalKey	<a href="#">MDS XML Elements: Physical Key</a>
PhysicalForeignKey	<a href="#">MDS XML Elements: Physical Foreign Key</a>

```
<PhysicalTable ...
  type=""
  isCacheable=""
  cacheExpiry=""
  isCacheEventTable=""
  isOverrideCacheProp=""
  pollFreq=""
  x=""
  y=""
  rowCount=""
  lastUpdated=""
  uri=""
  xslPath=""
  maxConn=""
  xmlRefreshInterval=""
  scriptPath=""
  hints=""
  isExtGatewayInProcess=""
  extGatewayDelimiter=""
  isSysGen=""
  isDDLAggr=""
  containerRef=""
```

```

    agrConnPoolRef=""
    sourceTableRef=""
    variableRef=""
    memberKeyRef=""
    parentKeyRef=""
    distanceColumnRef=""
    leafColumnRef="">
<Description />
<DBMapItem name="">
  <Value ../>
</DBMapItem>
<PhysicalColumn />
<PhysicalKey />
<PhysicalForeignKey />
</PhysicalTable>

```

### Example

```

<PhysicalTable mdsid="m00226232-0bb9-0000-714b-e31d00000000"
  name="CONTACTS_PRODUCTS_NOT_ORDERED"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  type="select"
  x="625"
  y="376"
  maxConn="0"
  containerRef="/oracle/bi/server/base/Schema/dbo_00238426-0bd3-0000-714b-
e31d00000000.xml#m00238426-0bd3-0000-714b-e31d00000000">
  <DBMapItem name="SQLServer70">
    <Value>
      <![CDATA[
        select distinct T10.ROW_WID AS CONTACT_WID, T11.ROW_WID AS PRODUCT_WID
        from VALUEOF(OLAPTBO).W_PERSON_D T10, VALUEOF(OLAPTBO).W_PRODUCT_D T11
        where Not EXISTS (
          select * from VALUEOF(OLAPTBO).W_ORDERITEM_F T1 where T1.CONTACT_WID =
          T10.ROW_WID and T1.PROD_WID = T11.ROW_WID)
        ]]>
    </Value>
  </DBMapItem>
  <DBMapItem name="DefaultMulDB">
    <Value>
      <![CDATA[
        select distinct T10.ROW_WID AS CONTACT_WID, T11.ROW_WID AS PRODUCT_WID
        from VALUEOF(OLAPTBO).W_PERSON_D T10, VALUEOF(OLAPTBO).W_PRODUCT_D T11
        where Not EXISTS (
          select * from VALUEOF(OLAPTBO).W_ORDERITEM_F T1 where T1.CONTACT_WID =
          T10.ROW_WID and T1.PROD_WID = T11.ROW_WID)
        ]]>
    </Value>
  </DBMapItem>
  <PhysicalColumn mdsid="m0022ba68-0bbb-0000-714b-e31d00000000"
    name="CONTACT_WID"
    dataType="INT" specialType="none">
  </PhysicalColumn>
  <PhysicalColumn mdsid="m0022ba69-0bbb-0000-714b-e31d00000000"
    name="PRODUCT_WID"
    dataType="INT" specialType="none">
  </PhysicalColumn>
  <PhysicalKey mdsid="m00238038-0bc0-0000-714b-e31d00000000"
    name="CONTACT_PRODUCT_KEY">
  <RefColumns>

```

```

        <RefColumn refId="m00238038-0bc0-0000-714b-e31d00000000-m0022ba68-0bbb-
            0000-714b-e31d00000000"
            columnRef="/oracle/bi/server/base/PhysicalTable/CONTACTS_PRODUCTS_NOT_
                ORDERED_00226232-0bb9-0000-714b-e31d00000000.xml#m0022ba68-0bbb-0000-
                714b-e31d00000000" />
        <RefColumn refId="m00238038-0bc0-0000-714b-e31d00000000-m0022ba69-0bbb-
            0000-714b-e31d00000000"
            columnRef="/oracle/bi/server/base/PhysicalTable/CONTACTS_PRODUCTS_NOT_
                ORDERED_00226232-0bb9-0000-714b-e31d00000000.xml#m0022ba69-0bbb-0000-
                714b-e31d00000000" />
    </RefColumns>
</PhysicalKey>
<PhysicalForeignKey mdsid="m002377f8-0bbe-0000-714b-e31d00000000"
    name="CONTACTS_PRODUCTS_NOT_ORDERED_FKey"
    counterPartKeyRef="/oracle/bi/server/base/PhysicalTable/Dim_W_PARTY_PER_D_
        Contact_002261ab-0bb9-0000-714b-e31d00000000.xml#m00237fa7-0bc0-0000-714b-
        e31d00000000">
    <RefColumns>
        <RefColumn refId="m002377f8-0bbe-0000-714b-e31d00000000-m0022ba68-0bbb-
            0000-714b-e31d00000000"
            columnRef="/oracle/bi/server/base/PhysicalTable/CONTACTS_PRODUCTS_NOT_
                ORDERED_00226232-0bb9-0000-714b-e31d00000000.xml#m0022ba68-0bbb-0000-
                714b-e31d00000000" />
    </RefColumns>
</PhysicalForeignKey>
<PhysicalForeignKey mdsid="m002377f9-0bbe-0000-714b-e31d00000000"
    name="CONTACTS_PRODUCTS_NOT_ORDERED_FKey1"
    counterPartKeyRef="/oracle/bi/server/base/PhysicalTable/Dim_W_PRODUCT_D_
        0022612d-0bb9-0000-714b-e31d00000000.xml#m00237f18-0bc0-0000-
        714b-e31d00000000">
    <RefColumns>
        <RefColumn refId="m002377f9-0bbe-0000-714b-e31d00000000-m0022ba69-0bbb-
            0000-714b-e31d00000000"
            columnRef="/oracle/bi/server/base/PhysicalTable/CONTACTS_PRODUCTS_NOT_
                ORDERED_00226232-0bb9-0000-714b-e31d00000000.xml#m0022ba69-0bbb-0000-
                714b-e31d00000000" />
    </RefColumns>
</PhysicalForeignKey>
</PhysicalTable>

```

### 3.6 MDS XML Elements: Physical Column

The physical column element corresponds to the physical column object in the Physical layer.

The physical column element is not a top-level element - it appears as a child element of the physical table element.

The physical column tag includes the following attributes:

**Table 3–10 Physical Column Tag Attributes**

Attribute Name	Description
extName	<p>The external name for the physical column. This attribute is required if the same name (such as STATE) is used in multiple hierarchies.</p> <p>This attribute is optional for XML documents. For XML, the extName attribute stores the fully qualified name of a column.</p>



**Table 3–10 (Cont.) Physical Column Tag Attributes**

Attribute Name	Description
dataType	The data type of the physical column, such as VARCHAR. This option is called <b>Type</b> in the Physical Column dialog in the Administration Tool.
nullable	If set to true, indicates that null values are allowed for the column. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the column.
scale	The scale of the data type of the column.
rowCount	The latest number of rows retrieved for this physical column.
lastUpdated	The time at which row counts were last updated for this physical column.
valueType	Applies to Siebel OM data sources only. Indicates the cardinality of the value of the column. Valid values include: <ul style="list-style-type: none"> <li>■ One to One (Default/Unknown/Single-valued)</li> <li>■ Many to One (Picklist)</li> <li>■ One to Many (Multi-valued)</li> <li>■ Many to Many (Multi-valued)</li> </ul>
mappedColumn	Applies to Siebel OM data sources only. The name of the mapped column. Corresponds to the field of the same name for the multi-valued group (MVG) business component.
MVLinkName	Applies to Siebel OM data sources only. The name of the link used in the Siebel business component.
specialType	Valid values are LUD or None. LUD stands for "Last Update Date."  This attribute is currently used only for ADF data sources. It is used to indicate that the column should be checked when performing ETL operations.
dynamicNameRef	If a session variable is being used to specify the name of this physical column, this element references that session variable.
sourceColumnRef	For physical columns in an alias table only. References the physical column that is being used as the source for this column.

The physical column tag does not include any child elements:

### Syntax

```
<PhysicalColumn ...
  extName=" "
  dataType=" "
  length=" "
  nullable=" "
  precision=" "
  scale=" "
  rowCount=" "
  lastUpdated=" "
  valueType=" "
  mappedColumn=" "
  MVLinkName=" "
  specialType=" "
```

```

        dynamicNameRef=""
        sourceColumnRef="">
    <Description />
</PhysicalColumn>

```

### Example

```

<PhysicalColumn mdsid="m80e86ae3-0bbb-0000-714b-e31d00000000"
    name="ReportDate"
    dataType="TIMESTAMP" scale="-127" specialType="none"
    sourceColumnRef="/oracle/bi/server/base/PhysicalTable/FscmTopModelAM.Gregorian
    CalendarAM.FndCalDay_80d8ff44-0bb9-0000-714b-e31d00000000.xml#m80d759cf-0bbb-
    0000-714b-e31d00000000">
</PhysicalColumn>

```

## 3.7 MDS XML Elements: Connection Pool

The connection pool element corresponds to the connection pool object in the Physical layer.

The connection pool tag includes the following attributes:

**Table 3–11 Connection Pool Tag Attributes**

Attribute Name	Description
bulkInsertBufferSize	Used for limiting the number of bytes each time data is inserted in a database table. The value is given in kilobytes (KB).
transactionBoundary	Controls the batch size for an insert in a database table.
unicodeDB	This attribute is typically set to true when working with columns of an explicit Unicode data type, such as NCHAR, in an Unicode database.
tempTablePrefix	The first two characters in a temporary table name. The default value is TT.
tempTableOwner	Table owner name used to qualify a temporary table name in a SQL statement, for example to create the table owner.tablename.
tempTableDatabase	Database where the temporary table will be created. This property applies only to IBM OS/390, because IBM OS/390 requires the database name qualifier to be part of the CREATE TABLE statement.
tempTableSpace	Tablespace where the temporary table will be created. This property applies only to IBM OS/390, because IBM OS/390 requires the tablespace name qualifier to be part of the CREATE TABLE statement.
user	The user name for the data source.
password	The password for the data source. Note that passwords are encrypted.

**Table 3–11 (Cont.) Connection Pool Tag Attributes**

Attribute Name	Description
timeout	The amount of time that a connection to the data source will remain open after a request completes. During this time, new requests use this connection rather than open a new one (up to the number specified for the maximum connections). The time is reset after each completed connection request.  If you set the timeout to 0 (the default), connection pooling is disabled. In other words, each connection to the data source terminates immediately when the request completes. Any new connections either use another connection pool or open a new connection.
maxConnDiff	The maximum number of total connections allowed to this connection pool across all users.
dataSource	The data source name that is configured to access the database to which you want to connect. The data source name must contain valid logon information for the data source.
reqQualifiedTableName	If set to true, indicates that this database requires fully qualified table names. The fully qualified names are based on the physical object names in the repository.
isSharedLogin	If set to true, all users whose queries use the connection pool will access the underlying database using the same user name and password.
isConcurrentQueriesInConnection	An option that enables a single database connection to remain open for the specified time for use by future query requests. If you do not select this option, each query sent to the database opens a new connection.  In the Administration Tool, this option corresponds to a value of "selected" for <b>Enable connection pooling</b> in the General tab of the Connection Pool dialog.
isCloseAfterEveryRequest	If set to true, indicates that the connection pool gets closed after every query.  In the Administration Tool, this option corresponds to a value of "not selected" for <b>Enable connection pooling</b> in the General tab of the Connection Pool dialog.
isAsyncExecution	An option that indicates that the data source supports asynchronous queries.
executeOnCmd	A command that is to be executed by the Oracle BI Server each time a connection is made to the database. The command may be any command accepted by the database.
xslPath	For XML data sources only. An XSLT file contains formatting rules written according to the XSLT standard. It defines how an XML file may be transformed. Specifying the XSLT file in the connection pool applies it to all the XML physical tables in the connection pool. Used when <code>outputType</code> is set to XML.
maxConn	The maximum number of total connections allowed to this connection pool for a given user.
xmlRefreshInterval	For XML data sources only. The time interval after which the XML data source is queried again directly, rather than using results in cache.
scriptPath	The connection method Search script. This option is used for XML Server data sources.

**Table 3–11 (Cont.) Connection Pool Tag Attributes**

Attribute Name	Description
outputType	<p>For XML data sources only. The query output format (delimited, xml, or fixed).</p> <p>In the Administration Tool, this option is called <b>Query output format</b> in the XML tab of the Connection Pool dialog.</p> <p>If this option is not set, the query output format is assumed to be a custom format, and the value for convertScriptPath is used.</p>
gwDelim	The delimiting characters for the query output format. Used when outputType is set to delimited.
xpath	An XPath expression is a simple XSLT transformation rule that fits into one line. Used when outputType is set to xml.
convertScriptPath	Used when outputType is not set. The path to the .exe file to be used to convert the query output to a custom output format (such as HTML).
ignoreFirstLine	If set to true, indicates that the first line of the output file is ignored.
xmlHeaderPath	The path to the header file, if any, used as a query input supplement. Used for XML Server data sources.
trailerPath	The path to the trailer file, if any, used as a query input supplement. Used for XML Server data sources.
supportParams	Indicates whether the data source supports parameters. If set to false, and the database features table supports parameters, special code executes that enables the Oracle BI Server to push filters (or calculations) with parameters to the database.
isolationLevel	<p>For ODBC and DB2 gateways. Sets the transaction isolation level on each connection to the back-end database. The isolation level setting controls the default transaction locking behavior for all statements issued by a connection. Options are as follows:</p> <ul style="list-style-type: none"> <li>▪ default uses the default transaction locking behavior of the data source.</li> <li>▪ readCommitted specifies that shared locks are held while the data is read to avoid dirty reads.</li> <li>▪ readUncommitted implements dirty read (isolation level 0 locking). When this option is set, it is possible to read uncommitted or dirty data, change values in the data, and have rows appear or disappear in the data set before the end of the transaction.</li> <li>▪ repeatableRead places locks on all data that is used in a query, preventing other users from updating the data.</li> <li>▪ serializable places a range lock on the data set, preventing other users from updating or inserting rows into the data set until the transaction is complete.</li> </ul>
xmlaInfo	The vendor-specific information used to connect to the multidimensional data source.
xmlaCatalog	The list of catalogs available. The cube tables correspond to the catalog you use in the connection pool.
xmlaUseSession	If set to true, causes queries go through a common session.

**Table 3–11 (Cont.) Connection Pool Tag Attributes**

Attribute Name	Description
multiThreaded	If set to true, indicates that the connection pool supports multi-threading, or in other words, that one connection pool can support multiple queries. If this option is set to false, each query is tied to a single database connection.
type	The call interface type.
appServerName	The name of the ADF application server.
appServerPort	The port number of the ADF application server.
appID	The ADF application ID.
appEJBBean	The name of the ADF application Enterprise Java Bean.
javaHostServiceName	The name of the JavaHost service. The JavaHost is used as a connector between the Oracle BI Server and data sources that use Java, such as ADF.
isSiebelJDBSecured	For Siebel OM data sources only. Indicates whether the connection between the Oracle BI Server and the Siebel data source is encrypted.
csfKey	This attribute is not currently used.
isAW	This attribute is not currently used.
useCert	This attribute stands for "Use Certificate." It is used for ADF data sources and indicates whether to use a certificate when securing the connection.
databaseRef	References the database for this connection pool.
relationalConnectionPoolRef	This attribute is not used.
relationalDataFolderRef	This attribute is not used.
sqlBypassDBRef	For Oracle ADF data sources only. References the SQL Bypass database, if one has been specified.  The SQL Bypass feature directly queries the database so that aggregations and other transformations are pushed down where possible, reducing the amount of data streamed and worked on in Oracle Business Intelligence.

The connection pool tag includes the following child elements:

**Table 3–12 Connection Pool Child Elements**

Element Name	Description
AfterQueryString	Contains a connection script that is executed after the query is run.
BeforeQueryString	Contains a connection script that is executed before the query is run.
PostConnectString	Contains SQL queries executed after the connection is closed.
PreDisconnectString	Contains SQL queries executed before the connection is established.

### Syntax

```
<ConnectionPool ...
  bulkInsertBufferSize=" "
  transactionBoundary=" "
```

```
unicodeDB=" "  
tempTablePrefix=" "  
tempTableOwner=" "  
tempTableDatabase=" "  
tempTableSpace=" "  
user=" "  
password=" "  
timeout=" "  
maxConnDiff=" "  
dataSource=" "  
reqQualifiedTableName=" "  
isSharedLogin=" "  
isConcurrentQueriesInConnection=" "  
isCloseAfterEveryRequest=" "  
isAsyncExecution=" "  
executeOnCmd=" "  
xslPath=" "  
maxConn=" "  
xmlRefreshInterval=" "  
scriptPath=" "  
outputType=" "  
gwDelim=" "  
xpath=" "  
convertScriptPath=" "  
ignoreFirstLine=" "  
xmlHeaderPath=" "  
trailerPath=" "  
supportParams=" "  
isolationLevel=" "  
xmlaInfo=" "  
xmlaCatalog=" "  
xmlaUseSession=" "  
multiThreaded=" "  
type=" "  
appServerName=" "  
appServerPort=" "  
appID=" "  
appEJBBean=" "  
javaHostServiceName=" "  
isSiebelJDBSecured=" "  
csfKey=" "  
useCert=" "  
databaseRef=" "  
sqlBypassDBRef=" ">  
<Description />  
<AfterQueryString isEnabled="">  
  <Value .../>  
</AfterQueryString>  
<BeforeQueryString isEnabled="">  
  <Value .../>  
</BeforeQueryString>  
<PostConnectString isEnabled="">  
  <Value .../>  
</PostConnectString>  
<PreDisconnectString isEnabled="">  
  <Value .../>  
</PreDisconnectString>  
</ConnectionPool>
```

**Example**

```

<ConnectionPool mdsid="m80b43a95-0bd5-0000-714b-e31d00000000"
  name="Oracle EBS OLTP Connection Pool"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  user="VALUEOF(ORA_EBS_OLTP_USER) "
  password="6C6F0BE01FC4111F3AC2236A364D912E0284EB262305E146621D44D6B80DC27D4E248
  07068A0EA49C11EFF4E9741BB7046FB2852F64F0B86F08378C4012BFA56769A9CF97FA4051F08C
  9679B3C5486E"
  timeout="300"
  maxConnDiff="10"
  maxConn="64"
  dataSource="VALUEOF(ORA_EBS_OLTP_DSN) "
  type="Default"
  reqQualifiedTableName="false"
  isSharedLogin="true"
  isConcurrentQueriesInConnection="false"
  isCloseAfterEveryRequest="false"
  outputType="xml"
  ignoreFirstLine="false"
  bulkInsertBufferSize="32768"
  tempTablePrefix="TT"
  transactionBoundary="10"
  xmlaUseSession="false"
  isolationLevel="readUncommitted"
  isSiebelJDBSecured="false"
  databaseRef="/oracle/bi/server/base/Database/Oracle EBS OLTP_80b43a93-0bcf-
  0000-714b-e31d00000000.xml#m80b43a93-0bcf-0000-714b-e31d00000000">
<Description>
  <![CDATA[
    User Name is VALUEOF(ORACLE_OLTP_USER)
    Data source name: VALUEOF(ORA_EBS_OLTP_DSN) ]]>
</Description>
<PostConnectString
  isEnabled="true">
  <Value>
    <![CDATA[ call /* valueof(NQ_SESSION.ACF) */ APP_SESSION.validate_icx_
      session('valueof(NQ_SESSION.ICX_SESSION_COOKIE) ') ]]>
  </Value>
</PostConnectString>
</ConnectionPool>

```

### 3.8 MDS XML Elements: Physical Key

The physical key element corresponds to the physical key object in the Physical layer.

The physical key element is not a top-level element - it appears as a child element of the physical table element.

The physical key tag includes the following child elements:

**Table 3–13 Physical Key Child Elements**

Element Name	Description
RefColumns	References the column that defines this physical key. The column is contained in a sub-element, either RefPhysicalColumn or RefCubeColumn.

The physical key element does not include any attributes.

**Syntax**

```
<PhysicalKey ...>
  <Description />
  <RefColumns>
    <RefColumn columnRef=" " .../>
    <RefColumn columnRef=" " .../>
  </RefColumns>
</PhysicalKey>
```

**Example**

```
<PhysicalKey mdsid="m00238038-0bc0-0000-714b-e31d00000000"
  name="CONTACT_PRODUCT_KEY">
  <RefColumns>
    <RefColumn refId="m00238038-0bc0-0000-714b-e31d00000000-m0022ba68-0bbb-0000-
      714b-e31d00000000"
      columnRef="/oracle/bi/server/base/PhysicalTable/CONTACTS_PRODUCTS_NOT_
        ORDERED_00226232-0bb9-0000-714b-e31d00000000.xml#m0022ba68-0bbb-0000-
        714b-e31d00000000" />
    <RefColumn refId="m00238038-0bc0-0000-714b-e31d00000000-m0022ba69-0bbb-0000-
      714b-e31d00000000"
      columnRef="/oracle/bi/server/base/PhysicalTable/CONTACTS_PRODUCTS_NOT_
        ORDERED_00226232-0bb9-0000-714b-e31d00000000.xml#m0022ba69-0bbb-0000-
        714b-e31d00000000" />
  </RefColumns>
</PhysicalKey>
```

## 3.9 MDS XML Elements: Physical Foreign Key

The physical foreign key element corresponds to the physical foreign key object in the Physical layer.

The physical foreign key element is not a top-level element - it appears as a child element of the physical table element.

The physical foreign key tag includes the following attributes:

**Table 3–14 Physical Foreign Key Tag Attributes**

Attribute Name	Description
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this physical foreign key.
counterPartKeyRef	References the physical key in the primary key table, that matches the RefColumns of this foreign key.

The physical foreign key tag includes the following child elements:

**Table 3–15 Physical Foreign Key Child Elements**

Element Name	Description
RefColumns	References the physical columns (in the physical table that contains the foreign key) that match counterPartKeyRef. Each physical column is contained in a sub-element called either RefPhysicalColumn or RefCubeColumn.

**Syntax**

```
<PhysicalForeignKey ...
```



```

    hints=" "
    counterPartKeyRef="">
<Description />
<RefColumns>
  <RefColumn columnRef="" .../>
  <RefColumn columnRef="" .../>
</RefColumns>
</PhysicalForeignKey>

```

### Example

```

<PhysicalForeignKey mdsid="m002377f9-0bbe-0000-714b-e31d00000000"
  name="CONTACTS_PRODUCTS_NOT_ORDERED_FKey1"
  counterPartKeyRef="/oracle/bi/server/base/PhysicalTable/Dim_W_PRODUCT_D_
    0022612d-0bb9-0000-714b-e31d00000000.xml#m00237f18-0bc0-0000-
    714b-e31d00000000">
<RefColumns>
  <RefColumn refId="m002377f9-0bbe-0000-714b-e31d00000000-m0022ba69-0bbb-0000-
    714b-e31d00000000"
    columnRef="/oracle/bi/server/base/PhysicalTable/CONTACTS_PRODUCTS_NOT_
      ORDERED_00226232-0bb9-0000-714b-e31d00000000.xml#m0022ba69-0bbb-0000-
      714b-e31d00000000" />
</RefColumns>
</PhysicalForeignKey>

```

## 3.10 MDS XML Elements: Complex Join

The complex join element corresponds to the complex join object in the Physical layer.

The complex join tag includes the following attributes:

**Table 3–16 Complex Join Tag Attributes**

Attribute Name	Description
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this complex join.
cardinality	Indicates the cardinality of the join. Valid values are: ONE TO ONE, ZERO OR ONE TO ONE, ONE TO ZERO OR ONE, ZERO OR ONE TO ZERO OR ONE, ONE TO MANY, ZERO OR ONE TO MANY, ZERO OR ONE TO MANY, MANY TO ONE, MANY TO ZERO OR ONE, or MANY TO MANY.
extName	The external name for the join.
table1Ref	References the first physical table of the join.
table2Ref	References the second physical table of the join.

The complex join tag includes the following child elements:

**Table 3–17 Complex Join Child Elements**

Element Name	Description
Expr	Contains the expression that defines the relationship between the two tables.
ExternalExpr	Contains the external expression used for ADF Business Component data sources.

**Syntax**

```

<ComplexJoin ...
  hints=""
  cardinality=""
  extName=""
  table1Ref=""
  table2Ref="">
  <Description />
  <Expr />
  <ExternalExpr />
</ComplexJoin>

```

---

**Note:** Both of the summary syntax elements `<Expr />` and `<ExternalExpr />` have the following sub-elements:

```

<ExprText>...</ExprText>
<ExprTextDesc>...</ExprTextDesc>
<ObjectRefList>
  <RefObject objectRef="" />
  <RefObject objectRef="" />
</ObjectRefList>

```

---

**Example**

```

<ComplexJoin mdsid="m00238388-0bc4-0000-714b-e31d00000000"
  name="W_ORG_D (Account)_W_PARTY_LOGIN"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  table1Ref="/oracle/bi/server/base/PhysicalTable/W_PARTY_LOGIN _u0040
  Account)_00226660-0bb9-0000-714b-e31d00000000.xml#m00226660-0bb9-0000-714b-
  e31d00000000"
  table2Ref="/oracle/bi/server/base/PhysicalTable/W_PARTY_D _u0040
  Account)_002266ad-0bb9-0000-714b-e31d00000000.xml#m002266ad-0bb9-0000-714b-
  e31d00000000">
  <Expr>
    <ExprText>
      <![CDATA[ "%1" = "%2" ]]>
    </ExprText>
    <ExprTextDesc>
      <![CDATA[ "Forecasting Oracle Data Warehouse"."Catalog"."dbo"."W_PARTY_D
      (Account)". "VIS_PR_POS_ID" = "Forecasting Oracle Data Warehouse".
      "Catalog"."dbo"."W_PARTY_LOGIN (Account)". "PARTY_ID" ]]>
    </ExprTextDesc>
    <ObjectRefList>
      <RefObject refId="m00238388-0bc4-0000-714b-e31d00000000-m00234fdf-0bbb-
      0000-714b-e31d00000000"
        objectTypeId="3003"
        objectRef="/oracle/bi/server/base/PhysicalTable/W_PARTY_D _u0040
        Account)_002266ad-0bb9-0000-714b-e31d00000000.xml#m00234fdf-0bbb-0000-
        714b-e31d00000000" />
      <RefObject refId="m00238388-0bc4-0000-714b-e31d00000000-m00234624-0bbb-
      0000-714b-e31d00000000"
        objectTypeId="3003"
        objectRef="/oracle/bi/server/base/PhysicalTable/W_PARTY_LOGIN _u0040
        Account)_00226660-0bb9-0000-714b-e31d00000000.xml#m00234624-0bbb-0000-
        714b-e31d00000000" />
    </ObjectRefList>
  </Expr>
</ComplexJoin>

```

### 3.11 MDS XML Elements: Cube Table

The cube table element corresponds to the physical cube table object in the Physical layer.

The cube table tag includes the following attributes:

**Table 3–18 Cube Table Tag Attributes**

Attribute Name	Description
extName	The external name for the data source.
type	The type of physical cube table. Options are as follows: <ul style="list-style-type: none"> <li>■ <code>select</code> indicates that this physical table object is a <code>SELECT</code> statement.</li> <li>■ <code>sp</code> indicates that this physical cube table is a stored procedure.</li> <li>■ <code>alias</code> indicates that this physical cube table is an alias table to a logical table source.</li> <li>■ <code>none</code> indicates that this physical cube table is a regular physical cube table.</li> </ul>
isCacheable	If set to true, indicates that this table is included in the Oracle BI Server query cache.
CacheExpiry	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.
isCacheEventTable	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
pollFreq	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.
x	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
y	The <i>y</i> coordinate of the table when it is shown in the physical diagram.
rowCount	The latest number of rows retrieved for this physical cube table.
lastUpdated	The time at which row counts were last updated for this physical cube table.
scriptPath	For XML data sources only. The extended gateway script path.
isSysGen	If set to true, indicates that an internal utility has generated this physical cube table.
isOverrideCacheProp	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.
hints	This attribute is not used.
isDDLAggr	Indicates whether this cube table is an aggregate table.
memberReference	For Essbase data sources only. Indicates the cube property (for example, Member Name).  An Essbase cube can have multiple aliases, and the value of <code>memberReference</code> is one of the alias names. The query engine will generate a query against the alias set for <code>memberReference</code> .

**Table 3–18 (Cont.) Cube Table Tag Attributes**

Attribute Name	Description
dateFormat	For Essbase only. Defines the format of date member, for example, 'yyyy-MM-dd.' The value is automatically set during import.
isMemberAliasUnique	This is used for query performance. If you know that all the member names in your backend are unique, you can set it to true by checking the checkbox "Use unqualified member name for better performance".
containerRef	References the database for this cube table.
aliasTableVarRef	For Essbase data sources only. Each AliasTableVar represents an Essbase alias table.

The cube table tag includes the following child elements:

**Table 3–19 Cube Table Child Elements**

Element Name	Description
Alias	For Essbase data sources only. For any alias tables for this Essbase cube, lists the alias to use (such as default, LongNames, French, and so on).
DBMapItem	Stores the value of database-specific strings. The <DBMapItem> element contains a <name> attribute and a <Value> sub-element.

**Table 3–19 (Cont.) Cube Table Child Elements**

Element Name	Description
CubeVar	<p>For SAP/BW data sources only. Cube variables are used as a means of parameterizing queries.</p> <p>Each cube variable is contained in a sub-element called CubeVar. This sub-element has the following attributes:</p> <ul style="list-style-type: none"> <li>■ name: Name of the cube variable.</li> <li>■ caption: A description (label or caption) associated with the cube variable, mainly used for display purposes.</li> <li>■ type: The type of cube variable (SAP_VAR_TYPE_MEMBER, SAP_VAR_TYPE_HIERARCHY, or SAP_VAR_TYPE_NUMERIC).</li> <li>■ selectionType: The selection type of the cube variable, for cube variables of type SAP_VAR_TYPE_MEMBER (SAP_VAR_SEL_TYPE_VALUE, SAP_SEL_TYPE_INTERVAL, or SAP_VAR_SEL_TYPE_COMPLEX).</li> <li>■ entryType: Indicates whether replacing variables is optional or mandatory. Values include SAP_VAR_INPUT_TYPE_OPTIONAL, SAP_VAR_INPUT_TYPE_MANDATORY, or SAP_VAR_INPUT_TYPE_MANDATORY_NOT_INITIAL.</li> <li>■ refDimension: The reference dimension. This column contains a DIMENSION_UNIQUE_NAME for the parameter type SAP_VAR_TYPE_HIERARCHY.</li> <li>■ refHierarchy: The reference hierarchy. This column contains a HIERARCHY_UNIQUE_NAME for the variable type SAP_VAR_TYPE_MEMBER.</li> <li>■ defaultLow: Contains a default value for the variable, or is zero.</li> <li>■ defaultHigh: Contains a default value for the variable, or is zero. This property is only important for variables with the selection type SAP_VAR_SEL_TYPE_INTERVAL and SAP_VAR_SEL_TYPE_SELECTION.</li> <li>■ overrideLow: The default value for the cube variable (used if defaultLow is zero).</li> <li>■ overrideHigh: The default value for the cube variable (used if defaultHigh is zero).</li> </ul>
CubeColumn	Specifies the cube column that belongs to this cube table. For details, see <a href="#">Section 3.15, "MDS XML Elements: Cube Column."</a>

**Syntax**

The syntax here includes the summary child element entry for the cube column element. The full syntax for the cube column element appears in [Section 3.15, "MDS XML Elements: Cube Column."](#)

```

<CubeTable ...
  extName=" "
  type=" "
  isCacheable=" "
  cacheExpiry=" "
  isCacheEventTable=" "
  pollFreq=" "
  x=" "
  y=" "
  rowCount=" "
  lastUpdated=" "
  scriptPath=" "

```

```

        isSysGen=""
        isOverrideCacheProp=""
        hints=""
        isDDLAggr=""
        memberReference=""
        dateFormat=""
        isMemberAliasUnique=""
        containerRef=""
        aliasTabVarRef="">
<Description />
<Alias name="" />
<CubeVar />
<DBMapItem name="">
    <Value .../>
</DBMapItem>
<CubeColumn />
</CubeTable>

```

### Example

```

<CubeTable mdsid="me40756b1-0bf1-1000-b290-0ae593200000"
  name="OpaqueSales"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  type="select"
  extName="select { [Measures].[Unit Sales], [Measures].[Store Cost] } on
  COLUMNS, { [Time].[Year].members } on ROWS from [Sales]"
  isCacheable="false"
  isMemberAliasUnique="true"
  containerRef="/oracle/bi/server/base/Database/FoodMart_e4070ae8-0bf1-1000-
  b290-0ae593200000.xml#me4070ae8-0bf1-1000-b290-0ae593200000">
<DBMapItem name="DefaultMulDB">
  <Value>
    <![CDATA[ select { [Measures].[Unit Sales], [Measures].[Store Cost] } on
      COLUMNS, { [Time].[Year].members } on ROWS from [Sales] ]]>
  </Value>
</DBMapItem>
<CubeColumn mdsid="me40756b2-0bf1-1000-b290-0ae593200000"
  name="[Time].[Year]"
  extName="[Time].[Year]"
  dataType="VARCHAR" precision="4" nullable="true" dimPropType="none">
</CubeColumn>
<CubeColumn mdsid="me40756b3-0bf1-1000-b290-0ae593200000"
  name="Unit Sales"
  extName="Unit Sales" dataType="DOUBLE" nullable="true" dimPropType="none">
</CubeColumn>
<CubeColumn mdsid="me40756b4-0bf1-1000-b290-0ae593200000"
  name="Store Cost"
  extName="Store Cost" dataType="DOUBLE" nullable="true" dimPropType="none">
</CubeColumn>
</CubeTable>

```

## 3.12 MDS XML Elements: Physical Dimension

The physical dimension element corresponds to the physical dimension object in the Physical layer.

The physical dimension tag includes the following attributes:

**Table 3–20 Physical Dimension Tag Attributes**

Attribute Name	Description
defaultMember	The default member for this physical dimension.
cubeTableRef	References the cube table for this physical dimension.

The physical dimension tag includes the following child elements:

**Table 3–21 Physical Dimension Child Elements**

Element Name	Description
RefUserAttributes	References the dimension properties for this physical dimension.  Each dimension property is contained in a sub-element called RefCubeColumn.
AlternateHierarchyName	For Essbase physical dimension objects, lists the names of any alternate hierarchies that belong to this dimension.

### Syntax

```
<PhysicalDimension ...
  defaultMember=" "
  cubeTableRef=" ">
  <Description />
  <RefUserAttributes>
    <RefCubeColumn cubeColumnRef=" " .../>
    <RefCubeColumn cubeColumnRef=" " .../>
  </RefUserAttributes>
  <AlternateHierarchyName .../>
</PhysicalDimension>
```

### Example

```
<PhysicalDimension mdsid="m80cb9c61-0bf8-0000-714b-e31d00000000"
  name="Months"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  cubeTableRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-714b-
e31d00000000.xml#m80cb9c63-0bdf-0000-714b-e31d00000000">
  <RefUserAttributes>
    <RefCubeColumn refId="m80cb9c61-0bf8-0000-714b-e31d00000000-m80cb9cce-0be3-
0000-714b-e31d00000000"
      cubeColumnRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-
714b-e31d00000000.xml#m80cb9cce-0be3-0000-714b-e31d00000000" />
    <RefCubeColumn refId="m80cb9c61-0bf8-0000-714b-e31d00000000-m80cb9ccf-0be3-
0000-714b-e31d00000000"
      cubeColumnRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-
714b-e31d00000000.xml#m80cb9ccf-0be3-0000-714b-e31d00000000" />
  </RefUserAttributes>
  <AlternateHierarchyName>
    <![CDATA[ Calendar ]]>
  </AlternateHierarchyName>
  <AlternateHierarchyName>
    <![CDATA[ Fiscal ]]>
  </AlternateHierarchyName>
</PhysicalDimension>
```

### 3.13 MDS XML Elements: Physical Hierarchy

The physical hierarchy element corresponds to the physical hierarchy object in the Physical layer.

The physical hierarchy tag includes the following attributes:

**Table 3–22 Physical Hierarchy Tag Attributes**

Attribute Name	Description
memberType	Values are Unknown, Regular, All, Formula, Measure. Default value is Unknown.
extName	The external name for the physical hierarchy.
type	The type of physical hierarchy. Options include FULLY BALANCED, UNBALANCED, RAGGED BALANCED, and NETWORK. This option corresponds to the <b>Hierarchy Type</b> option in the Physical Hierarchy dialog in the Administration Tool.
dimType	The dimension type (for example, Measure Dimension) for the dimension to which this hierarchy belongs.
rowCount	The latest number of rows retrieved for this physical hierarchy.
isTimeDim	If set to true, indicates that this physical dimension is a time dimension.
dimUniqueName	The name of the dimension to which this hierarchy belongs.
isMemberAliasUnique	Indicates whether member names (including aliases) are unique in a given hierarchy so that the Oracle BI Server can take advantage of specific MDX syntax to optimize performance. This option corresponds to the <b>Use unqualified member name for better performance</b> option in the Physical Hierarchy dialog in the Administration Tool.
cubeTableRef	References the cube table for this physical hierarchy.
dimensionRef	References the physical dimension for this physical hierarchy.
memberKeyRef	For parent-child (value) hierarchies. References the cube column that is the member key for this hierarchy.
parentKeyRef	For parent-child (value) hierarchies. References the cube column that is the parent key for this hierarchy.

The physical hierarchy tag includes the following child elements:

**Table 3–23 Physical Hierarchy Child Elements**

Element Name	Description
RefColumns	References the set of cube columns that belong to this physical hierarchy. Each cube column is contained in a sub-element called RefCubeColumn.
PhysicalLevel	For level-based hierarchies. References the set of physical levels that belong to this physical hierarchy. Each level is contained in a sub-element called RefPhysicalLevel. For more details, see <a href="#">Section 3.14, "MDS XML Elements: Physical Level."</a>



**Syntax**

The syntax here includes the summary child element entry for the physical level element. The full syntax for the physical level element appears in [Section 3.14, "MDS XML Elements: Physical Level."](#)

```
<PhysicalHierarchy ...
  memberType=" "
  extName=" "
  type=" "
  dimType=" "
  rowCount=" "
  isTimeDim=" "
  dimUniqueName=" "
  isMemberAliasUnique=" "
  cubeTableRef=" "
  dimensionRef=" "
  memberKeyRef=" "
  parentKeyRef=" ">
<Description />
<RefColumns>
  <RefCubeColumn cubeColumnRef=" " .../>
  <RefCubeColumn cubeColumnRef=" " .../>
</RefColumns>
<PhysicalLevel />
</PhysicalHierarchy>
```

**Example**

```
<PhysicalHierarchy mdsid="m80cb9c58-0be1-0000-714b-e31d00000000"
  name="Employees"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  memberType="all"
  extName="Employees"
  type="VALUE"
  dimType="Other"
  dimUniqueName="Employees"
  cubeTableRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-714b-
e31d00000000.xml#m80cb9c63-0bdf-0000-714b-e31d00000000"
  dimensionRef="/oracle/bi/server/base/PhysicalDimension/Employees_80cb9c5d-0bf8-
0000-714b-e31d00000000.xml#m80cb9c5d-0bf8-0000-714b-e31d00000000"
  memberKeyRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-714b-
e31d00000000.xml#m80cb9c9c-0be3-0000-714b-e31d00000000"
  parentKeyRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-714b-
e31d00000000.xml#m80cb9cda-0be3-0000-714b-e31d00000000">
<RefColumns>
  <RefCubeColumn refId="m80cb9c58-0be1-0000-714b-e31d00000000-m80cb9c9c-0be3-
0000-714b-e31d00000000"
    cubeColumnRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-
714b-e31d00000000.xml#m80cb9c9c-0be3-0000-714b-e31d00000000" />
  <RefCubeColumn refId="m80cb9c58-0be1-0000-714b-e31d00000000-m80cb9c9e-0be3-
0000-714b-e31d00000000"
    cubeColumnRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-
714b-e31d00000000.xml#m80cb9c9e-0be3-0000-714b-e31d00000000" />
  <RefCubeColumn refId="m80cb9c58-0be1-0000-714b-e31d00000000-m80cb9c9f-0be3-
0000-714b-e31d00000000"
    cubeColumnRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-
714b-e31d00000000.xml#m80cb9c9f-0be3-0000-714b-e31d00000000" />
  <RefCubeColumn refId="m80cb9c58-0be1-0000-714b-e31d00000000-m80cb9cda-0be3-
0000-714b-e31d00000000"
    cubeColumnRef="/oracle/bi/server/base/CubeTable/Sample_80cb9c63-0bdf-0000-
```

```

        714b-e31d0000000.xml#m80cb9cda-0be3-0000-714b-e31d00000000" />
    </RefColumns>
    <PhysicalLevel mdsid="m80cb9d03-0be5-0000-714b-e31d00000000"
        name="All Employees"
        levelNum="0"
        extName="All Employees"
        levelKeyRef="/oracle/bi/server/base/CubeTable/Sample80cb9c63-0bdf-0000-714b-
            e31d00000000.xml#m80cb9c8d-0be3-0000-714b-e31d00000000">
    </PhysicalLevel>
    <PhysicalLevel mdsid="m80cb9d04-0be5-0000-714b-e31d00000000"
        name="Employee L1"
        levelNum="1"
        extName="Employee L1"
        levelKeyRef="/oracle/bi/server/base/CubeTable/Sample80cb9c63-0bdf-0000-714b-
            e31d00000000.xml#m80cb9c90-0be3-0000-714b-e31d00000000">
    </PhysicalLevel>
    <PhysicalLevel mdsid="m80cb9d05-0be5-0000-714b-e31d00000000"
        name="Employee L2"
        levelNum="2"
        extName="Employee L2"
        levelKeyRef="/oracle/bi/server/base/CubeTable/Sample80cb9c63-0bdf-0000-714b-
            e31d00000000.xml#m80cb9c94-0be3-0000-714b-e31d00000000">
    </PhysicalLevel>
    <PhysicalLevel mdsid="m80cb9d06-0be5-0000-714b-e31d00000000"
        name="Employee L3"
        levelNum="3"
        extName="Employee L3"
        levelKeyRef="/oracle/bi/server/base/CubeTable/Sample80cb9c63-0bdf-0000-714b-
            e31d00000000.xml#m80cb9c98-0be3-0000-714b-e31d00000000">
    </PhysicalLevel>
    <PhysicalLevel mdsid="m80cb9d07-0be5-0000-714b-e31d00000000"
        name="Employee Names"
        levelNum="4"
        extName="Employee Names"
        levelKeyRef="/oracle/bi/server/base/CubeTable/Sample80cb9c63-0bdf-0000-714b-
            e31d00000000.xml#m80cb9c9c-0be3-0000-714b-e31d00000000">
    </PhysicalLevel>
</PhysicalHierarchy>

```

### 3.14 MDS XML Elements: Physical Level

The physical level element corresponds to the hierarchical levels for a physical cube table object in the Physical layer.

The physical level element is not a top-level element - it appears as a child element of the physical hierarchy element.

The physical level tag includes the following attributes:

**Table 3–24 Physical Level Tag Attributes**

Attribute Name	Description
levelNum	Identifies the order of this physical level in the hierarchy.
extName	Fully qualified name for the level.
rowCount	The latest number of rows retrieved for this physical level.
levelKeyRef	References the key column for this physical level.

**Syntax**

```
<PhysicalLevel ...
  levelNumber=" "
  extName=" "
  rowCount=" "
  levelKeyRef=" ">
  <Description />
</PhysicalLevel>
```

**Example**

```
<PhysicalLevel mdsid="m80cb9d03-0be5-0000-714b-e31d00000000"
  name="All Employees"
  levelNum="0"
  extName="All Employees"
  levelKeyRef="/oracle/bi/server/base/CubeTable/Sample80cb9c63-0bdf-0000-714b-
  e31d00000000.xml#m80cb9c8d-0be3-0000-714b-e31d00000000">
</PhysicalLevel>
```

## 3.15 MDS XML Elements: Cube Column

The cube column element corresponds to the cube column of a physical cube object in the Physical layer.

The cube column element is not a top-level element - it appears as a child element of the cube table element.

The cube column tag includes the following attributes:

**Table 3–25** *Cube Column Tag Attributes*

Attribute Name	Description
extName	The external name for the cube column. This attribute is required if the same name (such as STATE) is used in multiple hierarchies.
aggrType	The type of aggregation on the column, if any.
dataType	The data type of the cube column, such as VARCHAR.
nullable	If set to true, indicates that null values are allowed for the column. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the cube column.
scale	The scale of the data type of the column.
rowCount	The latest number of rows retrieved for this cube column.
lastUpdated	The time at which row counts were last updated for this cube column.

**Table 3–25 (Cont.) Cube Column Tag Attributes**

Attribute Name	Description
dimPropType	<p>For Essbase dimensional columns only. Indicates the property type of the cube column. Valid values are:</p> <ul style="list-style-type: none"> <li>▪ uda: User Defined Attribute (UDA) type.</li> <li>▪ memnor: Memnor type, used for outline sorts in the logical layer. Imported at the lowest level of each dimension. Called <b>Outline Sort</b> in the Administration Tool.</li> <li>▪ attribute: Attribute type, for attribute dimensions.</li> <li>▪ other: The type is different than those listed, or unknown.</li> <li>▪ none: The column does not have a property type. Note that this type is mapped to <b>Member Alias</b> in the Administration Tool.</li> <li>▪ ancestorRef: References the ancestor of a dimension.</li> <li>▪ memberKey: The column is a member key.</li> <li>▪ levelNumber: The column is the lowest member of the hierarchy. Called <b>Leaf</b> in the Administration Tool.</li> <li>▪ genNumber: The column is the root member of the hierarchy. Called <b>Root</b> in the Administration Tool.</li> <li>▪ parentRef: References the parent of a dimension.</li> </ul>
attributeHierarchyRef	References the physical hierarchy to which this cube column belongs.
physicalLevelRef	References the physical level to which this cube column belongs.

**Syntax**

```

<CubeColumn ...
  extName=" "
  aggrType=" "
  dataType=" "
  nullable=" "
  precision=" "
  rowCount=" "
  lastUpdated=" "
  scale=" ">
  dimPropType=" "
  attributeHierarchyRef=" "
  physicalLevelRef=" ">
  <Description />
</CubeColumn>

```

**Example**

```

<CubeColumn mdsid="m80cbf77f-0be3-0000-714b-e31d00000000"
  name="Product Types - Ancestor Ref"
  extName="Ancestor_Names"
  dataType="VARCHAR" precision="128" dimPropType="ancestorRef"
  physicalLevelRef="/oracle/bi/server/base/PhysicalHierarchy/Products_80cbf730-
  0be1-0000-714b-e31d00000000.xml#m80cbf7ef-0be5-0000-714b-e31d00000000">
</CubeColumn>

```

## 3.16 MDS XML Elements: Analytic Workspace

The Analytic Workspace element corresponds to the Oracle OLAP Analytic Workspace (AW) object in the Physical layer.

The Analytic Workspace tag includes the following attributes:

**Table 3–26 Analytic Workspace Tag Attributes**

Attribute Name	Description
version	The version of the Analytic Workspace.
containerRef	References the physical catalog for this Analytic Workspace.
dynamicNameRef	If a session variable is being used to specify the name of this Analytic Workspace, this element references that session variable.

### Syntax

```
<AnalyticWorkspace ...
  version=" "
  containerRef=" "
  dynamicNameRef=" ">
  <Description />
</AnalyticWorkspace>
```

### Example

```
<AnalyticWorkspace mdsid="m000000ae-0be9-0000-714b-e31d00000000"
  name="GLOBAL"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  version="10"
  containerRef="/oracle/bi/server/base/PhysicalCatalog/GLOBAL_000000ad-0bd1-0000-714b-e31d00000000.xml#m000000ad-0bd1-0000-714b-e31d00000000">
</AnalyticWorkspace>
```

## 3.17 MDS XML Elements: AW Cube

The AW cube element corresponds to the Oracle OLAP cube object in the Physical layer.

The AW cube tag includes the following attributes:

**Table 3–27 AW Cube Tag Attributes**

Attribute Name	Description
extName	The physical name that is used when referencing the cube in physical SQL queries.
isCacheable	If set to true, indicates that this table is included in the Oracle BI Server query cache.
CacheExpiry	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.
isCacheEventTable	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
pollFreq	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.

**Table 3–27 (Cont.) AW Cube Tag Attributes**

Attribute Name	Description
x	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
y	The <i>y</i> coordinate of the table when it is shown in the physical diagram.
rowCount	The latest number of rows retrieved for this Oracle OLAP cube.
lastUpdated	The time at which row counts were last updated for this Oracle OLAP cube.
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this physical table.
isExtGatewayInProgress	For XML data sources only. Indicates that this physical table is the extended gateway part of the process.
isOverrideCacheProperties	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.
isDDLAggr	Indicates whether this Oracle OLAP cube is an aggregate table.
isSysGen	If set to true, indicates that an internal utility has generated this Oracle OLAP cube.
isPartitioned	If set to true, indicates that the cube is partitioned by one or more dimensions.
densityStatus	For Oracle OLAP 10g cubes only. Indicates whether the cube is dense or sparse. If neither dense nor sparse is specified, the Oracle BI Server assumes the data is sparse. Valid values are <i>dense</i> , <i>sparse</i> , and <i>unknown</i> .
materializationStatus	For Oracle OLAP 10g cubes only. Indicates whether the cube is fully materialized. Valid values are <i>fully</i> , <i>not fully</i> , and <i>unknown</i> .
aggrConnPoolRef	If this Oracle OLAP cube is an aggregate table, this element references the connection pool used for the aggregate.
containerRef	References the Analytic Workspace for this AW cube.

The AW cube tag includes the following child elements:

**Table 3–28 AW Cube Child Elements**

Element Name	Description
CompositeInfo	References dimensions for the cube. Contains the sub-element called <i>Composite</i> , which has one attribute called <i>name</i> and a sub-element called <i>Dimension</i> . Each dimension is contained in the <i>Dimension</i> sub-element.
AWColumn	References the Oracle OLAP columns that belong to this Oracle OLAP cube. For more details, see <a href="#">Section 3.21, "MDS XML Elements: AW Column."</a>

## Syntax

The syntax here includes the summary child element entry for the AW column element. The full syntax for the AW column element appears in [Section 3.21, "MDS XML Elements: AW Column."](#)

```
<AWCube ...
  extName=" "
  isCacheable=" "
  cacheExpiry=" "
  isCacheEventTable=" "
  pollFreq=" "
  x=" "
  y=" "
  rowCount=" "
  lastUpdated=" "
  hints=" "
  isExtGatewayInProgress=" "
  isOverrideCacheProp=" "
  isDDLAggr=" "
  isSysGen=" "
  isPartitioned=" "
  densityStatus=" "
  materializationStatus=" "
  aggrConnPoolRef=" "
  containerRef=" ">
<Description />
<CompositeInfo>
  <Composite name=" ">
    <Dimension .../>
  </Composite>
</CompositeInfo>
<AWColumn />
</AWCube>
```

## Example

```
<AWCube mdsid="m000000b0-0bee-0000-714b-e31d00000000"
  name="Time Channel Cube"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  extName="Time Channel Cube"
  isPartitioned="true"
  containerRef="/oracle/bi/server/base/AnalyticWorkspace/GLOBAL_000000ae-0be9-
0000-714b-e31d00000000.xml#m000000ae-0be9-0000-714b-e31d00000000">
<CompositeInfo>
  <Composite name="TIME_CHANNEL_CUBE_102_PRTCOMP">
    <Dimension>
      <![CDATA[ CHANNEL ]]>
    </Dimension>
  </Composite>
  <Composite name="TIME_CHANNEL_CUBE_119_PRTCOMP">
    <Dimension>
      <![CDATA[ CHANNEL ]]>
    </Dimension>
  </Composite>
  ...
  ...
</CompositeInfo>
<AWColumn mdsid="m000000d4-0bf4-0000-714b-e31d00000000"
  name="Units"
  extName="TIME_CHANNEL_CUBE_UNITS"
```

```

        dataType="DOUBLE" nullable="true">
    </AWColumn>
    <AWColumn mdsid="m000000d5-0bf4-0000-714b-e31d00000000"
        name="Sales"
        extName="TIME_CHANNEL_CUBE_SALES"
        dataType="DOUBLE" nullable="true">
    </AWColumn>
    <AWColumn mdsid="m000000d6-0bf4-0000-714b-e31d00000000"
        name="Cost"
        extName="TIME_CHANNEL_CUBE_COST"
        dataType="DOUBLE" nullable="true">
    </AWColumn>
    <AWColumn mdsid="m000000d7-0bf4-0000-714b-e31d00000000"
        name="Measure1"
        extName="TIME_CHANNEL_CUBE_MEASURE1"
        dataType="DOUBLE" nullable="true">
    </AWColumn>
    <AWColumn mdsid="m000000d8-0bf4-0000-714b-e31d00000000"
        name="SALES_5_QUARTERS_AGO"
        extName="TIME_CHANNEL_CUBE_SALES_5_QUARTERS_AGO"
        dataType="DOUBLE" nullable="true">
    </AWColumn>
</AWCube>

```

### 3.18 MDS XML Elements: AW Dimension

The AW dimension element corresponds to the Oracle OLAP dimension object in the Physical layer.

The AW dimension tag includes the following attributes:

**Table 3–29 AW Dimension Tag Attributes**

Attribute Name	Description
type	The dimension type.
isCacheable	If set to true, indicates that this dimension is included in the Oracle BI Server query cache.
CacheExpiry	If set to true, indicates that this dimension is included in the Oracle BI Server query cache.
isCacheEventTable	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.
isOverrideCacheProp	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.
pollFreq	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
x	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.
y	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
rowCount	The <i>y</i> coordinate of the table when it is shown in the physical diagram.
lastUpdated	The time at which row counts were last updated for this Oracle OLAP dimension.



**Table 3–29 (Cont.) AW Dimension Tag Attributes**

Attribute Name	Description
hints	This attribute is not used.
isSysGen	If set to true, indicates that an internal utility has generated this Oracle OLAP dimension.
isDDLAggr	Indicates whether this Oracle OLAP dimension is an aggregate table.
isTimeDim	If set to true, indicates that this Oracle OLAP dimension is a time dimension.
extName	The physical name that is used when referencing the dimension in physical SQL queries.
aggrConnPoolRef	If this AW dimension is an aggregate table, this element references the connection pool used for the aggregate.
containerRef	References the Analytic Workspace for this AW dimension.

The AW dimension tag includes the following child elements:

**Table 3–30 AW Dimension Child Elements**

Element Name	Description
AWObject	References the Oracle OLAP objects, such a list of hierarchies, associated with this dimension.  The AWObject element includes the following attributes: <ul style="list-style-type: none"> <li>▪ name</li> <li>▪ type</li> <li>▪ dataType</li> <li>▪ nullable</li> <li>▪ precision</li> <li>▪ scale</li> </ul>
AWColumn	References the AW columns that belong to this AW dimension.  For more details, see <a href="#">Section 3.21, "MDS XML Elements: AW Column."</a>

### Syntax

The syntax here includes the summary child element entry for the AW column element. The full syntax for the AW column element appears in [Section 3.21, "MDS XML Elements: AW Column."](#)

```
<AWDimension ...
  type=" "
  isCacheable=" "
  cacheExpiry=" "
  isCacheEventTable=" "
  isOverrideCacheProp=" "
  pollFreq=" "
  x=" "
  y=" "
  rowCount=" "
  lastUpdated=" "
  isSysGen=" "
  isDDLAggr=" "
```

```

        hints=""
        isTimeDim=""
        extName=""
        aggrConnPoolRef=""
        containerRef="">
    <Description />
    <AWObject name="" type="" dataType=""
        nullable="" precision="" scale="" />
    <AWColumn />
</AWDimension>

```

### Example

```

<AWDimension mdsid="m000000b2-0bec-0000-714b-e31d00000000"
    name="Channel" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns="http://www.oracle.com/obis/repository"
    type="none"
    extName="CHANNEL"
    containerRef="/oracle/bi/server/base/AnalyticWorkspace/GLOBAL_000000ae-0be9-
    0000-714b-e31d00000000.xml#m000000ae-0be9-0000-714b-e31d00000000">
    <AWObject type="HIER_LIST" name="CHANNEL_HIERLIST"
        dataType="VARCHAR" precision="100" />
    <AWObject type="LEVEL_LIST" name="CHANNEL_LEVELLIST"
        dataType="VARCHAR" precision="100" />
    <AWObject type="IN_HIER" name="CHANNEL_INHIER"
        dataType="VARCHAR" precision="100" />
    <AWObject type="PARENT_REL" name="CHANNEL_PARENTREL"
        dataType="VARCHAR" precision="100" />
    <AWObject type="LEVEL_REL" name="CHANNEL_LEVELREL"
        dataType="VARCHAR" precision="100" />
    <AWObject type="FAMILY_REL" name="CHANNEL_FAMILYREL"
        dataType="VARCHAR" precision="100" />
    <AWColumn mdsid="m000000fc-0bf4-0000-714b-e31d00000000"
        name="Total Channel - Long Description"
        extName="CHANNEL_LONG_DESCRIPTION"
        dataType="VARCHAR" precision="100"
        awLevelRef="/oracle/bi/server/base/AWHierarchy/Primary_0000012f-0bf0-0000-
        714b-e31d00000000.xml#m0000013b-0bf2-0000-714b-e31d00000000">
    </AWColumn>
    <AWColumn mdsid="m000000fd-0bf4-0000-714b-e31d00000000"
        name="Total Channel - Short Description"
        extName="CHANNEL_SHORT_DESCRIPTION"
        dataType="VARCHAR" precision="100"
        awLevelRef="/oracle/bi/server/base/AWHierarchy/Primary_0000012f-0bf0-0000-
        714b-e31d00000000.xml#m0000013b-0bf2-0000-714b-e31d00000000">
    </AWColumn>
    <AWColumn mdsid="m000000fe-0bf4-0000-714b-e31d00000000"
        name="Total Channel"
        extName="CHANNEL"
        dataType="VARCHAR" precision="100"
        awLevelRef="/oracle/bi/server/base/AWHierarchy/Primary_0000012f-0bf0-0000-
        714b-e31d00000000.xml#m0000013b-0bf2-0000-714b-e31d00000000">
    </AWColumn>
    <AWColumn mdsid="m000000ff-0bf4-0000-714b-e31d00000000"
        name="Channel - Long Description"
        extName="CHANNEL_LONG_DESCRIPTION"
        dataType="VARCHAR" precision="100"
        awLevelRef="/oracle/bi/server/base/AWHierarchy/Primary_0000012f-0bf0-0000-
        714b-e31d00000000.xml#m0000013c-0bf2-0000-714b-e31d00000000">
    </AWColumn>
    <AWColumn mdsid="m00000100-0bf4-0000-714b-e31d00000000"

```

```

name="Channel - Short Description"
extName="CHANNEL_SHORT_DESCRIPTION"
dataType="VARCHAR" precision="100"
awLevelRef="/oracle/bi/server/base/AWHierarchy/Primary_0000012f-0bf0-0000-
714b-e31d00000000.xml#m0000013c-0bf2-0000-714b-e31d00000000">
</AWColumn>
<AWColumn mdsid="m00000101-0bf4-0000-714b-e31d00000000"
name="Channel"
extName="CHANNEL"
dataType="VARCHAR" precision="100"
awLevelRef="/oracle/bi/server/base/AWHierarchy/Primary_0000012f-0bf0-0000-
714b-e31d00000000.xml#m0000013c-0bf2-0000-714b-e31d00000000">
</AWColumn>
</AWDimension>

```

### 3.19 MDS XML Elements: AW Hierarchy

The AW hierarchy element corresponds to the Oracle OLAP hierarchy object in the Physical layer.

The AW hierarchy tag includes the following attributes:

**Table 3–31 AW Hierarchy Tag Attributes**

Attribute Name	Description
type	The type of Oracle OLAP hierarchy (value or level).
isDefault	If set to true, indicates that this is the default hierarchy for the Oracle OLAP dimension.
extName	The physical name that is used when referencing the hierarchy in physical SQL queries.
dataType	The data type of the Oracle OLAP hierarchy, such as VARCHAR.
nullable	If set to true, indicates that null values are allowed for the Oracle OLAP hierarchy. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the Oracle OLAP hierarchy.
scale	The scale of the data type of the Oracle OLAP hierarchy.
memberKeyRef	References the member key (for parent-child hierarchies).
dimensionRef	References the AW dimension for this Oracle OLAP hierarchy.

The AW hierarchy tag includes the following child elements:

**Table 3–32 AW Hierarchy Child Elements**

Attribute Name	Description
AWLevel	For level-based hierarchies only. References the AW level for this Oracle OLAP dimension.  For more details, see <a href="#">Section 3.20, "MDS XML Elements: AW Level."</a>

#### Syntax

The syntax here includes the summary child element entry for the AW level element. The full syntax for the AW level element appears in [Section 3.20, "MDS XML Elements: AW Level."](#)

```

<AWHierarchy ...
  type=""
  isDefault=""
  extName=""
  dataType=""
  nullable=""
  precision=""
  scale=""
  memberKeyRef=""
  dimensionRef="">
<Description />
<AWLevel />
</AWHierarchy>

```

### Example

```

<AWHierarchy mdsid="m0000012d-0bf0-0000-714b-e31d00000000"
  name="Calendar Year"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isDefault="true"
  extName="CALENDAR_YEAR"
  dataType="UNKNOWN"
  dimensionRef="/oracle/bi/server/base/AWDimension/Time_000000b1-0bec-0000-714b-
e31d00000000.xml#m000000b1-0bec-0000-714b-e31d00000000">
  <AWLevel mdsid="m00000133-0bf2-0000-714b-e31d00000000"
    name="All Years"
    extName="ALL_YEARS"
    dataType="UNKNOWN"
    levelKeyRef="/oracle/bi/server/base/AWDimension/Time_000000b1-0bec-0000-714b-
e31d00000000.xml#m000000da-0bf4-0000-714b-e31d00000000"
    awHierarchyRef="/oracle/bi/server/base/AWHierarchy/Calendar Year_0000012d-
0bf0-0000-714b-e31d00000000.xml#m0000012d-0bf0-0000-714b-e31d00000000">
  </AWLevel>
  <AWLevel mdsid="m00000134-0bf2-0000-714b-e31d00000000"
    name="Year"
    extName="YEAR"
    dataType="UNKNOWN"
    levelKeyRef="/oracle/bi/server/base/AWDimension/Time_000000b1-0bec-0000-714b-
e31d00000000.xml#m000000df-0bf4-0000-714b-e31d00000000"
    awHierarchyRef="/oracle/bi/server/base/AWHierarchy/Calendar Year_0000012d-
0bf0-0000-714b-e31d00000000.xml#m0000012d-0bf0-0000-714b-e31d00000000">
  </AWLevel>
  <AWLevel mdsid="m00000135-0bf2-0000-714b-e31d00000000"
    name="Quarter"
    extName="QUARTER"
    dataType="UNKNOWN"
    levelKeyRef="/oracle/bi/server/base/AWDimension/Time_000000b1-0bec-0000-714b-
e31d00000000.xml#m000000e5-0bf4-0000-714b-e31d00000000"
    awHierarchyRef="/oracle/bi/server/base/AWHierarchy/Calendar Year_0000012d-
0bf0-0000-714b-e31d00000000.xml#m0000012d-0bf0-0000-714b-e31d00000000">
  </AWLevel>
  <AWLevel mdsid="m00000136-0bf2-0000-714b-e31d00000000"
    name="Month"
    extName="MONTH"
    dataType="UNKNOWN"
    levelKeyRef="/oracle/bi/server/base/AWDimension/Time_000000b1-0bec-0000-714b-
e31d00000000.xml#m000000eb-0bf4-0000-714b-e31d00000000"
    awHierarchyRef="/oracle/bi/server/base/AWHierarchy/Calendar Year_0000012d-
0bf0-0000-714b-e31d00000000.xml#m0000012d-0bf0-0000-714b-e31d00000000">
  </AWLevel>

```

```
</AWHierarchy>
```

## 3.20 MDS XML Elements: AW Level

The AW level element corresponds to the Oracle OLAP level object in the Physical layer.

The AW level element is not a top-level element - it appears as a child element of the AW hierarchy element.

The AW level tag includes the following attributes:

**Table 3-33 AW Level Tag Attributes**

Attribute Name	Description
extName	The physical name that is used when referencing the level in physical SQL queries.
dataType	The data type of the Oracle OLAP level, such as VARCHAR.
nullable	If set to true, indicates that null values are allowed for the Oracle OLAP level. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the Oracle OLAP level.
scale	The scale of the data type of the Oracle OLAP level.
levelKeyRef	References the key column for this Oracle OLAP level.
awHierarchyRef	References the AW hierarchy for this Oracle OLAP level.

The AW level tag does not include any child elements.

### Syntax

```
<AWLevel ...
  extName=" "
  dataType=" "
  nullable=" "
  precision=" "
  scale=" "
  levelKeyRef=" "
  awHierarchyRef=" ">
  <Description />
</AWLevel>
```

### Example

```
<AWLevel mdsid="m00000133-0bf2-0000-714b-e31d00000000"
  name="All Years"
  extName="ALL_YEARS"
  dataType="UNKNOWN"
  levelKeyRef="/oracle/bi/server/base/AWDimension/Time_000000b1-0bec-0000-714b-
e31d00000000.xml#m000000da-0bf4-0000-714b-e31d00000000"
  awHierarchyRef="/oracle/bi/server/base/AWHierarchy/Calendar_Year_0000012d-
0bf0-0000-714b-e31d00000000.xml#m0000012d-0bf0-0000-714b-e31d00000000">
</AWLevel>
```

## 3.21 MDS XML Elements: AW Column

The AW column element corresponds to the AW column object in the Physical layer.

The AW column element is not a top-level element - it appears as a child element of the AW cube and AW dimension elements.

The AW column tag includes the following attributes:

**Table 3–34 AW Column Tag Attributes**

Attribute Name	Description
extName	The physical name that is used when referencing the column in physical SQL queries.
isParentKey	Indicates whether this Oracle OLAP column is a parent key for a level.
dataType	The data type of the Oracle OLAP column, such as VARCHAR.
scale	The scale of the data type of the Oracle OLAP column.
nullable	If set to true, indicates that null values are allowed for the Oracle OLAP column. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the Oracle OLAP column.
awHierarchyRef	For value-based hierarchies, references the AW hierarchy for this Oracle OLAP column.
awLevelRef	References the hierarchy level for this Oracle OLAP column.

The AW column tag does not include any child elements.

### Syntax

```
<AWColumn ...
  extName=" "
  isParentKey=" "
  dataType=" "
  nullable=" "
  precision=" "
  scale=" "
  awHierarchyRef=" "
  awLevelRef=" " />
  <Description />
</AWColumn>
```

### Example

```
<AWColumn mdsid="m000000fe-0bf4-0000-714b-e31d00000000"
  name="Total Channel"
  extName="CHANNEL"
  dataType="VARCHAR" precision="100"
  awLevelRef="/oracle/bi/server/base/AWHierarchy/Primary_0000012f-0bf0-0000-
  714b-e31d00000000.xml#m0000013b-0bf2-0000-714b-e31d00000000">
</AWColumn>
```

---



---

## MDS XML Presentation Elements

Presentation elements are typically those elements that are exposed in the Presentation layer, or in other words, the elements that appear in the left-hand pane of the Administration Tool.

This chapter contains the following topics:

- [Section 4.1, "MDS XML Elements: Presentation Catalog"](#)
- [Section 4.2, "MDS XML Elements: Presentation Table"](#)
- [Section 4.3, "MDS XML Elements: Presentation Column"](#)
- [Section 4.4, "MDS XML Elements: Presentation Hierarchy"](#)
- [Section 4.5, "MDS XML Elements: Presentation Level"](#)

### 4.1 MDS XML Elements: Presentation Catalog

The presentation catalog element corresponds to the subject area object in the Presentation layer.

The presentation catalog tag includes the following attributes:

**Table 4–1 Presentation Catalog Tag Attributes**

Attribute Name	Description
isExportKeys	If set to true, indicates that logical keys for this subject area are exposed to other applications.
isAutoAggr	If set to true, indicates that auto aggregation is enabled. Auto aggregation is the process by which the Oracle BI Server infers the GROUP BY from the attributes projected in the query. Typically auto aggregation is always enabled for queries against the presentation layer.
hasDispName	Indicates whether this subject area has a custom display name.
dispName	The value of the custom display name, if one exists for this subject area.
hasDispDescription	Indicates whether this subject area has a custom description.
dispDescription	The value of the custom description, if one exists for this subject area.
containerRef	References the container for this presentation catalog.
subjectAreaRef	References the business model for this subject area.

**Table 4–1 (Cont.) Presentation Catalog Tag Attributes**

Attribute Name	Description
defaultFactColRef	References the implicit fact column for this subject area, if one has been set. This column is used to specify a default join path between dimension tables when there are several possible alternatives or contexts.

The presentation catalog tag includes the following child elements:

**Table 4–2 Presentation Catalog Child Elements**

Element Name	Description
Alias	Lists any aliases that have been defined for this subject area. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries. Each alias has an attribute called name.
RefTables	References the presentation tables that belong to this subject area. Each presentation table is contained in a sub-element called RefPresentationTable.

### Syntax

```
<PresentationCatalog ...
  isExportKeys=" "
  isAutoAggr=" "
  hasDispName=" "
  dispName=" "
  hasDispDescription=" "
  dispDescription=" "
  containerRef=" "
  subjectAreaRef=" "
  defaultFactColumnRef=" ">
  <Description />
  <Alias name=" " />
  <RefTables>
    <RefPresentationTable presentationTableRef=" " .../>
    <RefPresentationTable presentationTableRef=" " .../>
  </RefTables>
</PresentationCatalog>
```

### Example

```
<PresentationCatalog mdsid="m80d0301d-0fa4-0000-714b-e31d00000000"
  name="Inventory Org Real Time"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  hasDispName="false"
  hasDispDescription="false"
  subjectAreaRef="/oracle/bi/server/base/BusinessModel/Core_0021f84a-07d0-0000-714b-e31d00000000.xml#m0021f84a-07d0-0000-714b-e31d00000000"
  defaultFactColumnRef="/oracle/bi/server/base/LogicalTable/Fact_u0150 InvOrg_u0150 Dummy Fact for dimension browsing_80d55585-07f3-0000-714b-e31d00000000.xml#m80d5558b-07d6-0000-714b-e31d00000000">
  <Description>
    <![CDATA[ Provides information about inventory organization. ]]>
  </Description>
```



```

<Alias name="Oracle Inventory Real Time" />
<Alias name="OTBI - Oracle Inventory" />
<RefTables>
  <RefPresentationTable refId="m80d0301d-0fa4-0000-714b-e31d00000000-m80d0301f-
    0fa8-0000-714b-e31d00000000"
    presentationTableRef="/oracle/bi/server/base/PresentationTable/Inventory
      Organization 80d0301f-0fa8-0000-714b-e31d00000000.xml#m80d0301f-0fa8-0000-
      714b-e31d00000000" />
  <RefPresentationTable refId="m80d0301d-0fa4-0000-714b-e31d00000000-m80d030b7-
    0fa8-0000-714b-e31d00000000"
    presentationTableRef="/oracle/bi/server/base/PresentationTable/Subinventory
      _80d030b7-0fa8-0000-714b-e31d00000000.xml#m80d030b7-0fa8-0000-714b-
      e31d00000000" />
  <RefPresentationTable refId="m80d0301d-0fa4-0000-714b-e31d00000000-m80d031aa-
    0fa8-0000-714b-e31d00000000"
    presentationTableRef="/oracle/bi/server/base/PresentationTable/Locator_
      80d031aa-0fa8-0000-714b-e31d00000000.xml#m80d031aa-0fa8-0000-714b-
      e31d00000000" />
  <RefPresentationTable refId="m80d0301d-0fa4-0000-714b-e31d00000000-m80d65acb-
    0fa8-0000-714b-e31d00000000"
    presentationTableRef="/oracle/bi/server/base/PresentationTable/Fact _u0150
      InvOrg _u0150 Dummy Fact for dimension browsing_80d65acb-0fa8-0000-714b-
      e31d00000000.xml#m80d65acb-0fa8-0000-714b-e31d00000000" />
</RefTables>
</PresentationCatalog>

```

## 4.2 MDS XML Elements: Presentation Table

The presentation table element corresponds to the presentation table object in the Presentation layer.

The presentation table tag includes the following attributes:

**Table 4–3 Presentation Table Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this presentation table has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation table.
hasDispDescription	Indicates whether this presentation table has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation table.
containerRef	References the presentation catalog for this presentation table.

The presentation table tag includes the following child elements:

**Table 4–4 Presentation Table Child Elements**

Element Name	Description
Alias	Lists any aliases that have been defined for this presentation table. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries. Each alias has an attribute called name.

**Table 4–4 (Cont.) Presentation Table Child Elements**

Element Name	Description
PresentationColumn	References the presentation columns that belong to this presentation table. For details, see <a href="#">Section 4.3, "MDS XML Elements: Presentation Column."</a>
RefHierarchies	References the hierarchies for this presentation table. Each hierarchy is contained in a sub-element called RefPresentationHierarchy.

**Syntax**

The syntax here includes the summary child element entry for the presentation column element. The full syntax for the presentation column element appears in [Section 4.3, "MDS XML Elements: Presentation Column."](#)

```
<PresentationTable ...
  hasDispName=""
  dispName=""
  hasDispDescription=""
  dispDescription=""
  containerRef="">
<Description />
<Alias name="" />
<PresentationColumn />
<RefHierarchies>
  <RefPresentationHierarchy presentationHierarchyRef="" .../>
  <RefPresentationHierarchy presentationHierarchyRef="" .../>
</RefHierarchies>
</PresentationTable>
```

**Example**

```
<PresentationTable mdsid="m80ebeeef8-0fa8-0000-714b-e31d00000000"
  name="Class"
  iconIndex="93"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  hasDispName="false"
  hasDispDescription="false"
  containerRef="/oracle/bi/server/base/PresentationCatalog/OTBI HCM Stock
  Details_80ebeeef7-0fa4-0000-714b-e31d00000000.xml#m80ebeeef7-0fa4-0000-714b-
  e31d00000000">
<Alias name="Dim - Class" />
<PresentationColumn mdsid="m80ebefb7-0faa-0000-714b-e31d00000000"
  name="Class"
  hasDispName="false"
  hasDispDescription="false"
  overrideLogicalName="false"
  logicalColumnRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Class_
  80dc7e5c-07f3-0000-714b-e31d00000000.xml#m80dbc57a-07d6-0000-714b-
  e31d00000000">
</PresentationColumn>
<PresentationColumn mdsid="m80ebefb9-0faa-0000-714b-e31d00000000"
  name="ClassType"
  hasDispName="false"
  hasDispDescription="false"
  overrideLogicalName="false"
  logicalColumnRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Class_
  80dc7e5c-07f3-0000-714b-e31d00000000.xml#m80dbc580-07d6-0000-714b-
```

```

    e31d00000000">
  </PresentationColumn>
  <RefHierarchies>
    <RefPresentationHierarchy refId="m80ebeeef8-0fa8-0000-714b-e31d00000000-
      m80ebeeef9-0fbc-0000-714b-e31d00000000"
      presentationHierarchyRef="/oracle/bi/server/base/PresentationHierarchy/
        Class_80ebeeef9-0fbc-0000-714b-e31d00000000.xml#m80ebeeef9-0fbc-0000-714b-
          e31d00000000" />
    </RefHierarchies>
  </PresentationTable>

```

### 4.3 MDS XML Elements: Presentation Column

The presentation column element corresponds to the presentation column object in the Presentation layer.

The presentation column element is not a top-level element - it appears as a child element of the presentation table element.

The presentation column tag includes the following attributes:

**Table 4–5 Presentation Column Tag Attributes**

Attribute Name	Description
overrideLogicalName	Indicates whether the presentation column has been configured to always use the logical column name.  This option corresponds to <b>Use Logical Column Name</b> in the Administration Tool. A <code>false</code> value for this attribute indicates that this option has been selected.
hasDispName	Indicates whether this presentation column has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation column.
hasDispDescription	Indicates whether this presentation column has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation column.
logicalColumnRef	References the logical column upon which this presentation column is based.

The presentation column tag includes the following child elements:

**Table 4–6 Presentation Column Child Elements**

Attribute Name	Description
Alias	Lists any aliases that have been defined for this presentation column. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries.  Each alias has an attribute called <code>name</code> .

#### Syntax

```

<PresentationColumn ...
  overrideLogicalName=" "
  hasDispName=" "
  dispName=" "

```

```

        hasDispDescription=""
        dispDescription=""
        logicalColumnRef="">
    <Description />
    <Alias name="" />
</PresentationColumn>

```

**Example**

```

<PresentationColumn mdsid="m80ebefb7-0faa-0000-714b-e31d00000000"
  name="Class"
  hasDispName="false"
  hasDispDescription="false"
  overrideLogicalName="false"
  logicalColumnRef="/oracle/bi/server/base/LogicalTable/Dim_u0150_Class_
  80dc7e5c-07f3-0000-714b-e31d00000000.xml#m80dbc57a-07d6-0000-714b-
  e31d00000000">
</PresentationColumn>

```

## 4.4 MDS XML Elements: Presentation Hierarchy

The presentation hierarchy element corresponds to the presentation hierarchy object in the Presentation layer.

The presentation hierarchy tag includes the following attributes:

**Table 4-7 Presentation Hierarchy Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this presentation hierarchy has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation hierarchy.
hasDispDescription	Indicates whether this presentation hierarchy has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation hierarchy.
containerRef	References the presentation table for this presentation hierarchy.
logicalDimensionRef	References the logical dimension upon which this presentation hierarchy is based.

The presentation hierarchy tag includes the following child elements:

**Table 4-8 Presentation Hierarchy Child Elements**

Element Name	Description
RefLevels	References the presentation levels for this presentation hierarchy. Each presentation level is contained in a sub-element called RefPresentationLevel.
Alias	Lists any aliases that have been defined for this presentation hierarchy. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries. Each alias has an attribute called name.

**Table 4–8 (Cont.) Presentation Hierarchy Child Elements**

Element Name	Description
RefDisplayColumns	For parent-child hierarchies only. This element references the columns designated to be used for display for this parent-child hierarchy. Each display column is contained in a sub-element called RefPresentationColumn.

**Syntax**

```

<PresentationHierarchy ...
  hasDisplayName=" "
  displayName=" "
  hasDispDescription=" "
  dispDescription=" "
  containerRef=" "
  logicalDimensionRef=" " />
<Description />
<RefLevels>
  <RefPresentationLevel presentationLevelRef=" " />
  <RefPresentationLevel presentationLevelRef=" " />
</RefLevels>
<Alias name=" " />
<RefDisplayColumns>
  <RefPresentationColumn presentationColumnRef=" " .../>
  <RefPresentationColumn presentationColumnRef=" " .../>
</RefDisplayColumns>
</PresentationHierarchy>

```

**Example**

```

<PresentationHierarchy mdsid="m80ebe037-0fbc-0000-714b-e31d00000000"
  name="Freight Terms"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  hasDispName="false"
  hasDispDescription="false"
  containerRef="/oracle/bi/server/base/PresentationTable/Freight Terms_80ebe021-
0fa8-0000-714b-e31d00000000.xml#m80ebe021-0fa8-0000-714b-e31d00000000"
  logicalDimensionRef="/oracle/bi/server/base/Dimension/Freight Terms_0015594f-
07e3-0000-714b-e31d00000000.xml#m0015594f-07e3-0000-714b-e31d00000000">
<RefLevels>
  <RefPresentationLevel refId="m80ebe037-0fbc-0000-714b-e31d00000000-m80ebe049-
0fbe-0000-714b-e31d00000000"
    presentationLevelRef="/oracle/bi/server/base/PresentationLevel/Dim _u0150
Freight Terms Total_80ebe049-0fbe-0000-714b-e31d00000000.xml#m80ebe049-
0fbe-0000-714b-e31d00000000" />
  <RefPresentationLevel refId="m80ebe037-0fbc-0000-714b-e31d00000000-m80ebe04a-
0fbe-0000-714b-e31d00000000"
    presentationLevelRef="/oracle/bi/server/base/PresentationLevel/Dim _u0150
Freight Terms Detail_80ebe04a-0fbe-0000-714b-e31d00000000.xml#m80ebe04a-
0fbe-0000-714b-e31d00000000" />
</RefLevels>
</PresentationHierarchy>

```

## 4.5 MDS XML Elements: Presentation Level

The presentation level element corresponds to the presentation level object in the Presentation layer.

The presentation level tag includes the following attributes:

**Table 4–9 Presentation Level Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this presentation level has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation level.
hasDispDescription	Indicates whether this presentation level has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation level.
containerRef	References the presentation hierarchy to which this presentation level belongs.
logicalLevelRef	References the logical level upon which this presentation level is based.

The presentation level tag includes the following child elements:

**Table 4–10 Presentation Level Child Elements**

Element Name	Description
RefDrillTo	References the levels for cross-dimension drill-down operations, as in the case of a Region dimension with a City level that can have a "drill to" level Year in the Time dimension.
RefDisplayColumns	References the columns that have been designated to be used for display for this presentation level (on drill-down). Each column is contained in a sub-element called RefPresentationColumn.
Alias	Lists any aliases that have been defined for this presentation level. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries. Each alias has an attribute called name.

### Syntax

```
<PresentationLevel ...
  hasDisplayName=" "
  displayName=" "
  hasDispDescription=" "
  dispDescription=" "
  containerRef=" "
  logicalLevelRef=" "/>
<Description />
<RefDrillTo>
  <RefPresentationLevel presentationLevelRef=" " .../>
  <RefPresentationLevel presentationLevelRef=" " .../>
</RefDrillTo>
<RefDisplayColumns>
  <RefPresentationColumn presentationColumnRef=" " .../>
  <RefPresentationColumn presentationColumnRef=" " .../>
</RefDisplayColumns>
<Alias name=" " />
</PresentationLevel>
```

**Example**

```
<PresentationLevel mdsid="m80de558f-0fbe-0000-714b-e31d00000000"
  name="Position Type"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  hasDispName="false"
  hasDispDescription="false"
  containerRef="/oracle/bi/server/base/PresentationHierarchy/HR Positions_80de
558d-0fbc-0000-714b-e31d00000000.xml#m80de558d-0fbc-0000-714b-e31d00000000"
  logicalLevelRef="/oracle/bi/server/base/LogicalLevel/Position Type_002e58f1-
07e9-0000-714b-e31d00000000.xml#m002e58f1-07e9-0000-714b-e31d00000000">
  <RefDisplayColumns>
    <RefPresentationColumn refId="m80de558f-0fbe-0000-714b-e31d00000000-
m80de5584-0faa-0000-714b-e31d00000000"
      presentationColumnRef="/oracle/bi/server/base/PresentationTable/HR
Position_80de558c-0fa8-0000-714b-e31d00000000.xml#m80de5584-0faa-0000-
714b-e31d00000000" />
    <RefPresentationColumn refId="m80de558f-0fbe-0000-714b-e31d00000000-
m80de5585-0faa-0000-714b-e31d00000000"
      presentationColumnRef="/oracle/bi/server/base/PresentationTable/HR
Position_80de558c-0fa8-0000-714b-e31d00000000.xml#m80de5585-0faa-0000-
714b-e31d00000000" />
  </RefDisplayColumns>
</PresentationLevel>
```





---

---

# MDS XML Marketing, Security, and Other Elements

This chapter describes the MDS XML API elements for Oracle Marketing Segmentation objects, security objects, and miscellaneous objects that do not fall in other categories.

This chapter contains the following topics:

- [Section 5.1, "MDS XML Marketing Elements"](#)
- [Section 5.2, "MDS XML Security Elements"](#)
- [Section 5.3, "Other MDS XML Elements"](#)

## 5.1 MDS XML Marketing Elements

Marketing elements are typically those elements that are related to features for the Oracle Marketing Segmentation product. For information about features and options related to Oracle Marketing Segmentation, see the administrator documentation for the Oracle Marketing Segmentation application.

Marketing elements include:

- [Section 5.1.1, "MDS XML Elements: Catalog Link"](#)
- [Section 5.1.2, "MDS XML Elements: Target Level"](#)
- [Section 5.1.3, "MDS XML Elements: List Catalog"](#)
- [Section 5.1.4, "MDS XML Elements: Qualified List Item"](#)
- [Section 5.1.5, "MDS XML Elements: Qualifying Key"](#)
- [Section 5.1.6, "MDS XML Elements: Sampling Table"](#)
- [Section 5.1.7, "MDS XML Elements: Seg Catalog"](#)

### 5.1.1 MDS XML Elements: Catalog Link

The catalog link element corresponds to the conforming dimension link object in the Marketing metadata. A conforming dimension links a fact that contains target-level IDs to a fact that does not contain target-level IDs by navigating along a dimension that is shared by both fact tables.

The catalog link tag includes the following attributes:

**Table 5–1 Catalog Link Tag Attributes**

Attribute Name	Description
inColumnRef	References the presentation column that represents the primary key of the subject area from which the dimension link originates.
outColumnRef	References the presentation column that represents the primary key of the subject area to which the dimension link points.

**Syntax**

```
<CatalogLink ...
  inColumnRef=" "
  outColumnRef=" ">
  <Description />
</CatalogLink>
```

**Example**

```
<CatalogLink mdsid="m8033142f-0fac-0000-714b-e31d00000000"
  name="Customer Profile->Opportunity Contact"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  inColumnRef="/oracle/bi/server/base/PresentationTable/_u0150 Contact Profile_80
2b468d-0fa8-0000-714b-e31d00000000.xml#m80312fa3-0faa-0000-714b-e31d00000000"
  outColumnRef="/oracle/bi/server/base/PresentationTable/_u0150 Contact Profile_
80330ba0-0fa8-0000-714b-e31d00000000.xml#m80330b9e-0faa-0000-714b-e31d00000000
">
  <Description>
    <![CDATA[ Used by Account Target Level to navigate to Opportunity Contact ]]>
  </Description>
</CatalogLink>
```

**5.1.2 MDS XML Elements: Target Level**

The target level element corresponds to the target level object in the Marketing metadata. A target level is the entity that a marketer wants to count, typically customer types like individuals, businesses, or households.

The target level tag includes the following attributes:

**Table 5–2 Target Level Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this target level has a custom display name.
dispName	The value of the custom display name, if one exists for this target level.
hasDispDescription	Indicates whether this target level has a custom description.
dispDescription	The value of the custom description, if one exists for this target level.
primaryQLIRef	References the primary qualified list item for this target level.
primaryCatalogRef	References the primary segmentation catalog for this target level.
staticSegmentCatalogRef	References the set of segmentation catalogs for this target level.
staticSegmentTargetColumnRef	References the Target Id presentation column.

**Table 5–2 (Cont.) Target Level Tag Attributes**

Attribute Name	Description
staticSegmentNodeColumnRef	References the GUID presentation column.
staticSegmentPhysicalTableRef	References the physical table that stores the result sets for this target level.
staticSegmentConnectionPoolRef	References the connection pool in which this target level is mapped.

The target level tag includes the following child elements:

**Table 5–3 Target Level Child Elements**

Element Name	Description
HeaderSQL	Contains the physical SQL to insert the Saved Result Header. Used when users save a result set.
DelHeaderSQL	Contains the physical SQL to delete the saved result set header. Used when users purge saved result sets.
DelDataSQL	Contains the physical SQL to delete the saved result data set. Used when users purge saved result sets.

### Syntax

```
<TargetLevel ...
  hasDispName=" "
  dispName=" "
  hasDispDescription=" "
  dispDescription=" "
  primaryQLIRef=" "
  primaryCatalogRef=" "
  staticSegmentCatalogRef=" "
  staticSegmentTargetColumnRef=" "
  staticSegmentNodeColumnRef=" "
  staticSegmentPhysicalTableRef=" "
  staticSegmentConnectionPoolRef=" ">
  <Description />
  <HeaderSQL ... />
  <DelHeaderSQL ... />
  <DelDataSQL ... />
</TargetLevel>
```

### Example

```
<TargetLevel mdsid="m802ba17b-0fae-0000-714b-e31d00000000"
  name="Contacts"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  hasDispName="false"
  primaryQLIRef="/oracle/bi/server/base/QualifiedListItem/Contacts_802ba17c-0fb2-0000-714b-e31d00000000.xml#m802ba17c-0fb2-0000-714b-e31d00000000"
  primaryCatalogRef="/oracle/bi/server/base/PresentationCatalog/Customer Profile_segmentation_802b44df-0fa4-0000-714b-e31d00000000.xml#m802b44df-0fa4-0000-714b-e31d00000000"
  staticSegmentTargetColumnRef="/oracle/bi/server/base/PresentationTable/_u0150 Contact Results Data_802ba2d1-0fa8-0000-714b-e31d00000000.xml#m802ba2cd-0faa-0000-714b-e31d00000000"
  staticSegmentNodeColumnRef="/oracle/bi/server/base/PresentationTable/_u0150
```

```

Contact Results Data_802ba2d1-0fa8-0000-714b-e31d00000000.xml#m802ba2cf-0faa-
0000-714b-e31d00000000"
staticSegmentPhysicalTableRef="/oracle/bi/server/base/PhysicalTable/M_SR_
CONTACT_802ba200-0bb9-0000-714b-e31d00000000.xml#m802ba200-0bb9-0000-714b-
e31d00000000">
<HeaderSQL>
  <![CDATA[ INSERT INTO M_SR_HEADER (GUID, SEGMENT_PATH, SR_CUSTOM_LABEL,
    PRIORITY, NODE_PATH, NODE_LABEL, TARGET_LEVEL, CREATED_BY, "COUNT", DATE_
    TIME, SR_PATH, CONNECTION_POOL) VALUES ('@{guid}', '{@segmentPath}',
    '{@srCustomLabel}', @priority, '{@nodePath}', '{@nodeLabel}',
    '{@targetLevel}', '@createdBy', @count, '@createdTime', '{@srPath}',
    '{@connectionPool}') ]]>
</HeaderSQL>
<DelHeaderSQL>
  <![CDATA[ DELETE FROM M_SR_HEADER WHERE GUID IN (@{guids}) ]]>
</DelHeaderSQL>
<DelDataSQL>
  <![CDATA[ DELETE FROM M_SR_CONTACT WHERE GUID IN (@{guids}) ]]>
</DelDataSQL>
</TargetLevel>

```

### 5.1.3 MDS XML Elements: List Catalog

The list catalog element corresponds to the list catalog object in the Marketing metadata. A list catalog is an object that is used to generate a list of data at the target level.

The list catalog key tag includes the following attributes:

**Table 5-4 List Catalog Tag Attributes**

Attribute Name	Description
presentationCatalogRef	References the subject area for this list catalog. The name of the subject area is used as the name of the list catalog.

The list catalog tag does not include any child elements.

#### Syntax

```

<ListCatalog ...
  presentationCatalogRef="">
  <Description />
</ListCatalog>

```

#### Example

```

<ListCatalog mdsid="m8032fe28-0fb0-0000-714b-e31d00000000"
  name="Marketing Contact List"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  presentationCatalogRef="/oracle/bi/server/base/PresentationCatalog/Marketing
  Contact List_8031263b-0fa4-0000-714b-e31d00000000.xml#m8031263b-0fa4-0000-
  714b-e31d00000000">
</ListCatalog>

```

### 5.1.4 MDS XML Elements: Qualified List Item

The qualified list item element corresponds to the qualified list item object in the Marketing metadata. A qualified list item is an entity that is evaluated against segment criteria so that the information related to that entity can be exported in a list file.

The qualified list item tag includes the following attributes:

**Table 5–5 Qualified List Item Tag Attributes**

Attribute Name	Description
cacheTable	Indicates whether this qualified list item is cached.
cacheCatalogRef	References the subject area for the cache for this qualified list item.
cacheConnPoolRef	References the connection pool for the cached table.
cacheTargetColumnRef	References the Target Id presentation column.
cacheNodeColumnRef	References the GUID presentation column.
cachePhysicalTableRef	References the physical table that stores the cached qualified list item.

The qualified list item tag includes the following child elements:

**Table 5–6 Qualified List Item Child Elements**

Element Name	Description
DeleteSQL	Contains the physical SQL used to delete the cached results.

### Syntax

```
<QualifiedListItem ...
  cacheTable=" "
  cacheCatalogRef=" "
  cacheConnPoolRef=" "
  cacheTargetColumnRef=" "
  cacheNodeColumnRef=" "
  cachePhysicalTableRef=" ">
  <DeleteSQL>
    <![CDATA[...]]>
  </DeleteSQL>
</QualifiedListItem>
```

### Example

```
<QualifiedListItem mdsid="m80331498-0fb2-0000-714b-e31d00000000"
  name="Ordered Products"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  cacheTable="M_C_GENERIC"
  cacheCatalogRef="/oracle/bi/server/base/PresentationCatalog/Marketing
  Segmentation Cache and Saved Results_802ba2ad-0fa4-0000-714b-e31d00000000.
  xml#m802ba2ad-0fa4-0000-714b-e31d00000000"
  cacheConnPoolRef="/oracle/bi/server/base/ConnectionPool/Oracle Data Warehouse
  Connection Pool_00238434-0bd5-0000-714b-e31d00000000.xml#m00238434-0bd5-0000-
  714b-e31d00000000"
  cacheTargetColumnRef="/oracle/bi/server/base/PresentationTable/_u0150 Generic
  Item Cache_80331490-0fa8-0000-714b-e31d00000000.xml#m8033148e-0faa-0000-714b-
  e31d00000000"
  cacheNodeColumnRef="/oracle/bi/server/base/PresentationTable/_u0150 Generic
  Item Cache_80331490-0fa8-0000-714b-e31d00000000.xml#m8033148c-0faa-0000-714b-
  e31d00000000"
  cachePhysicalTableRef="/oracle/bi/server/base/PhysicalTable/M_C_GENERIC_8033
  1468-0bb9-0000-714b-e31d00000000.xml#m80331468-0bb9-0000-714b-e31d00000000">
  <DeleteSQL>
```

```

    <![CDATA[ DELETE FROM M_C_GENERIC WHERE GUID = '@{guid}'  ]]>
  </DeleteSQL>
</QualifiedListItem>

```

### 5.1.5 MDS XML Elements: Qualifying Key

The qualifying key element corresponds to the qualifying keys that are used in list catalog or segmentation catalog objects in the Marketing metadata. Qualifying keys map qualified list items to presentation columns.

The qualifying key tag includes the following attributes:

**Table 5–7 Qualifying Key Tag Attributes**

Attribute Name	Description
listCatalogRef	References the list catalog to which this qualifying key belongs.
segmentationCatalogRef	References the segmentation catalog to which this qualifying key belongs.
keyColumnRef	References the presentation column for this qualifying key.
qualifiedListItemRef	References the qualified list item for this qualifying key.

#### Syntax

```

<QualifyingKey ...
  listCatalogRef=" "
  segmentationCatalogRef=" "
  keyColumnRef=" "
  qualifiedListItemRef=" ">
  <Description />
</QualifyingKey>

```

#### Example

```

<QualifyingKey mdsid="m80c10f04-0fb4-0000-714b-e31d00000000"
  name="MKTG_QK_4020:4722171188242192"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  segmentationCatalogRef="/oracle/bi/server/base/SegCatalog/Accounts_Pharma Sales
  Effectiveness_Segmentation_80c10f0a-0fba-0000-714b-e31d00000000.xml#m80c10f0a-
  0fba-0000-714b-e31d00000000"
  keyColumnRef="/oracle/bi/server/base/PresentationTable/Accounts_80c0ef0d-0fa8-
  0000-714b-e31d00000000.xml#m80c0ef09-0faa-0000-714b-e31d00000000"
  qualifiedListItemRef="/oracle/bi/server/base/QualifiedListItem/Accounts_802b
  a1a6-0fb2-0000-714b-e31d00000000.xml#m802ba1a6-0fb2-0000-714b-e31d00000000">
</QualifyingKey>

```

### 5.1.6 MDS XML Elements: Sampling Table

The sampling table element corresponds to the sampling table object in the Marketing metadata. Sampling tables are created and managed as part of target level objects.

The sampling table tag includes the following attributes:

**Table 5–8 Sampling Table Tag Attributes**

Attribute Name	Description
factor	The sampling factor (for example, 10%).
targetLevelRef	References the target level for the sampling table.

**Table 5–8 (Cont.) Sampling Table Tag Attributes**

Attribute Name	Description
physicalTableRef	References the physical table being used as the sampling table.

**Syntax**

```
<SamplingTable ...
  factor=" "
  targetLevelRef=" "
  physicalTableRef=" ">
  <Description />
</SamplingTable>
```

**Example**

```
<SamplingTable mdsid="m80342e77-0fb8-0000-714b-e31d00000000"
  name="M_10A_ASSET_D"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  factor="0.1"
  targetLevelRef="/oracle/bi/server/base/TargetLevel/Assets_80341f24-0fae-0000-
714b-e31d00000000.xml#m80341f24-0fae-0000-714b-e31d00000000"
  physicalTableRef="/oracle/bi/server/base/PhysicalTable/W_ASSET_D_00226101-0bb9-
0000-714b-e31d00000000.xml#m00226101-0bb9-0000-714b-e31d00000000">
</SamplingTable>
```

**5.1.7 MDS XML Elements: Seg Catalog**

The seg catalog element corresponds to the segmentation catalog object in the Marketing metadata. Segmentation catalogs are Oracle BI subject areas that are enabled for segmentation. Segmentation catalogs provides a set of dimensions and fact measures that can be used to create segment criteria.

The seg catalog tag includes the following attributes:

**Table 5–9 Seg Catalog Tag Attributes**

Attribute Name	Description
targetLevelRef	References the target level for the segmentation catalog.
presentationCatalogRef	References the subject area for this segmentation catalog.

**Syntax**

```
<SegCatalog ...
  targetLevelRef=" "
  presentationCatalogRef=" ">
  <Description />
</SegCatalog>
```

**Example**

```
<SegCatalog mdsid="m802ba19b-0fba-0000-714b-e31d00000000"
  name="Contacts_Quotes_segmentation"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  targetLevelRef="/oracle/bi/server/base/TargetLevel/Contacts_802ba17b-0fae-
0000-714b-e31d00000000.xml#m802ba17b-0fae-0000-714b-e31d00000000"
  presentationCatalogRef="/oracle/bi/server/base/PresentationCatalog/Quotes_
segmentation_802b5904-0fa4-0000-714b-e31d00000000.xml#m802b5904-0fa4-0000-
```

```
714b-e31d00000000">
</SegCatalog>
```

## 5.2 MDS XML Security Elements

Security elements are typically those elements that are related to Oracle Business Intelligence security features, such as those related to variables, authentication, privileges, users, and application roles. Security elements include:

- [Section 5.2.1, "MDS XML Elements: Variable"](#)
- [Section 5.2.2, "MDS XML Elements: LDAP Server"](#)
- [Section 5.2.3, "MDS XML Elements: Init Block"](#)
- [Section 5.2.4, "MDS XML Elements: Custom Authenticator"](#)
- [Section 5.2.5, "MDS XML Elements: Privilege Package"](#)
- [Section 5.2.6, "MDS XML Elements: Object Privilege"](#)
- [Section 5.2.7, "MDS XML Elements: Query Privilege"](#)
- [Section 5.2.8, "MDS XML Elements: User"](#)
- [Section 5.2.9, "MDS XML Elements: Group"](#)
- [Section 5.2.10, "MDS XML Elements: DB Sign-On"](#)

### 5.2.1 MDS XML Elements: Variable

The variable element corresponds to the variable object in the Physical layer of the repository.

The variable tag includes the following attributes:

**Table 5–10 Variable Tag Attributes**

Attribute Name	Description
securityMask	<p>For session variables only. This attribute stores the value of the following options:</p> <ul style="list-style-type: none"> <li>■ <b>Enable any user to set the value.</b> When selected, lets session variables be set after the initialization block has populated the value (at user login) by calling the ODBC store procedure <code>NQSSetSessionValue()</code>. For example, this option lets non-administrators set this variable for sampling.</li> <li>■ <b>Security Sensitive.</b> When selected, identifies the variable as sensitive to security for virtual private databases (VPDs). When filtering cache table matches, the Oracle BI Server looks at the parent database of each column or table that is referenced in the logical request projection list. If the physical database source is a VPD, the Oracle BI Server matches a list of security-sensitive variables to each prospective cache hit. Cache hits would only occur on cache entries that included and matched all security-sensitive variables.</li> </ul>
isSessionVar	<p>If set to true, indicates that this variable is a session variable. Session variables are created and assigned a value when each user logs on, unlike repository variables, which have static values.</p>



The variable tag includes the following child elements:

**Table 5-11 Variable Child Elements**

Element Name	Description
Expr	Contains the expression that forms the definition of this variable.

### Syntax

```
<Variable name=" "
  securityMask=" "
  isSessionVar=" " >
  <Description />
  <Expr>
    <ExprText>...</ExprText>
    <ExprTextDesc>...</ExprTextDesc>
    <ObjectRefList>
      <RefObject objectRef=" " .../>
      <RefObject objectRef=" " .../>
    </ObjectRefList>
  </Expr>
</Variable>
```

### Example

```
<Variable mdsid="m804054aa-0bd7-0000-714b-e31d00000000"
  name="CURRENT_DAY"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository">
  <Description>
    <![CDATA[ Returns the value of Current Date in the MM/DD/YYYY format. ]]>
  </Description>
  <Expr>
    <ExprText>
      <![CDATA[ VALUEOF("%1") ]]>
    </ExprText>
    <ExprTextDesc>
      <![CDATA[ VALUEOF("Warehouse Refresh Date"."LAST_REFRESH_DT") ]]>
    </ExprTextDesc>
    <ObjectRefList>
      <RefObject refId="m804054aa-0bd7-0000-714b-e31d00000000-m0023848c-0bd7-
        0000-714b-e31d00000000"
        objectRef="/oracle/bi/server/base/Variable/LAST_REFRESH_DT_0023848c-0bd7-
        0000-714b-e31d00000000.xml#m0023848c-0bd7-0000-714b-e31d00000000" />
    </ObjectRefList>
  </Expr>
</Variable>
```

## 5.2.2 MDS XML Elements: LDAP Server

The LDAP server element corresponds to the LDAP server object in the Identity Manager dialog in the Administration Tool.

The LDAP server tag includes the following attributes:

**Table 5-12 LDAP Server Tag Attributes**

Attribute Name	Description
hostName	The host name of the LDAP server.

**Table 5–12 (Cont.) LDAP Server Tag Attributes**

Attribute Name	Description
port	The port number of the LDAP server (for example, 389).
baseDN	The base distinguished name (DN) that identifies the starting point of the authentication search.
bindDN	The optional DN that is required to bind to the LDAP server. This option is required if <code>isADSI</code> is set to true.
userNameAttrType	A value that uniquely identifies a user, such as the user ID, the RDN (relative distinguished name), or (for ADSI) <code>sAMAccountName</code> .
domainID	A domain identifier that uniquely identifies the domain for which the LDAP object is responsible. This is especially useful when there are multiple LDAP objects.
password	The user password associated with the Bind DN. This option is required if <code>isADSI</code> is set to true. Note that passwords are encrypted.
timeout	The time period after which Administration Tool import attempts or Oracle BI Server user authentication attempts against this LDAP server will time out.
cacheExpiry	The interval at which the authentication cache entry in the LDAP cache for a logged on user is refreshed.  This option corresponds to <b>Cache refresh interval</b> in the Repository tab of the Options dialog in the Administration Tool.
isADSI	If set to true, indicates that this is an Active Directory LDAP server.
useSSL	If set to true, indicates that the connection to the LDAP server uses Secure Sockets Layer (SSL).
keyFile	The name of the key file that holds the client certificate and Certificate Authority (CA) certificate. Required if <code>useSSL</code> is set to true.  This option corresponds to <b>Key file name</b> in the Repository tab of the Options dialog in the Administration Tool.
version	The LDAP version number of the LDAP server, either 2 or 3. The default is 3.
cacheEntries	The maximum number of entries in the authentication cache, preallocated when the Oracle BI Server starts. If the number of users exceeds this limit, cache entries are replaced using the LRU algorithm. If this value is 0, then the authentication cache is disabled.  This option corresponds to <b>Number of Cache Entries</b> in the Repository tab of the Options dialog in the Administration Tool.

The LDAP server tag does not include any child elements.

### Syntax

```
<LDAPServer ...
  hostName=" "
  port=" "
  baseDN=" "
  bindDN=" "
  userNameAttrType=" "
  domainID=" "
```

```

    password=""
    timeout=""
    cacheExpiry=""
    entities=""
    isADSI=""
    useSSL=""
    keyFile=""
    version=""
    cacheEntries="">
<Description />
</LDAPServer>

```

### Example

```

<LDAPServer mdsid="mbd837790-0bf6-1000-806e-0a97078d0000"
  name="LDAP01"
  isDefaultReadable="false"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  hostName="sdacns05"
  port="389"
  version="3"
  baseDN="name1"
  bindDN="name2"
  userNameAttrType="sAMAccountName"
  password="6C6F0BE01FC4111F3AC2236A364D912EEBFE551E0A2AC2F5352A18F9228901AA7D896
  E3DA56ECB22F248B15B1759E26A638B148E7051643B2E72CAAC984A64515B58DEA74F85662056F
  795206529ADEF"
  timeout="60"
  cacheExpiry="86400"
  cacheEntries="1000"
  isADSI="true"
  useSSL="false"
  keyPassword="E3130008E1C4CAD47041E4AE68B048E67C2E35213306F12832914CBE7A9DD9556
  1D771DED06484112B1FC6F27B6D0D58">
</LDAPServer>

```

## 5.2.3 MDS XML Elements: Init Block

The init block element corresponds to the initialization block object in the Physical layer. Initialization blocks are used to initialize dynamic repository variables, system session variables, and nonsystem session variables.

The init block tag includes the following attributes:

**Table 5–13** *Init Block Tag Attributes*

Attribute Name	Description
isSessionVar	If set to true, indicates that this initialization block is a session initialization block. Session initialization blocks are used with session variables.  The default value is false.
refreshPeriod	The refresh interval for this initialization block, in seconds. For repository initialization blocks only.  The default value is 0.
baseTime	The start date and time for this initialization block. For repository initialization blocks only.  The default value is 2001-01-01 00:00:00.

**Table 5–13 (Cont.) Init Block Tag Attributes**

Attribute Name	Description
isRowWiseInit	If set to true, indicates that row-wise initialization has been enabled. Row-wise initialization lets you create session variables dynamically and set their values when a session begins. For session initialization blocks only.  The default value is false.
isRowWiseCacheEnabled	If set to true, indicates that the <b>Use caching</b> option has been enabled. This option directs the Oracle BI Server to store the results of the query in a main memory cache. This option is only available if row-wise initialization has been enabled.  The default value is true.
isSuccRequired	Indicates that the <b>Required for Authentication</b> option has been selected for this initialization block in the Administration Tool.  If this option is selected, this initialization block must succeed for users to log in. In other words, users will be denied access to Oracle BI EE if the initialization block fails to execute. Failure to execute can occur if the wrong credentials have been defined in the initialization block, or if there is an error in the default initialization string.  The default value is false.
isEnabled	If set to true, indicates that this initialization block is enabled. For session initialization blocks only.  The default value is true.
isDeferredExecution	If set to true, indicates that deferred execution of this initialization block is enabled.  Deferred execution is used to speed up the server startup time, by preventing the execution of the SQL for the initialization block when the server starts. The SQL is issued and the variables are initialized only when one of the variables is used.
isDBIndependentSQL	If set to true, indicates that database independent SQL is enabled.  The SQL is logical SQL, and it is translated by Oracle BI server to database specific SQL.
connectionPoolRef	References the connection pool for this initialization block.  This element is only used if the data source type for this initialization block is Database or XML.

The init block tag includes the following child elements:

**Table 5–14 Init Block Child Elements**

Element Name	Description
DBMapItem	Stores the value of database-specific strings. The <DBMapItem> element contains a <name> attribute and a <Value> sub-element.
RefPredecessors	References the initialization blocks, if any, that are initialized before this initialization block  Each initialization block is contained in a sub-element called RefInitBlock.
RefVariables	References the variables that are associated with this initialization block.  Each variable is contained in a sub-element called RefVariable.

**Table 5-14 (Cont.) Init Block Child Elements**

Element Name	Description
InitString	The SQL initialization string needed to populate the variables. This element is only used if the data source type for this initialization block is Database or XML.
RefLDAPServers	References the LDAP servers that are associated with this initialization block. Each LDAP server is contained in a sub-element called RefLDAPServer. This element is only used if the data source type for this initialization block is LDAP.

**Syntax**

```

<InitBlock ...
  isSessionVar=""
  refreshPeriod=""
  baseTime=""
  isRowWiseInit=""
  isRowWiseCacheEnabled=""
  isSuccRequired=""
  isEnabled=""
  isDeferredExecution=""
  isDBIndependentSQL=""
  connectionPoolRef="">
  <Description />
  <DBMapItem name="">
    <Value .../>
  </DBMapItem>
  <RefPredecessors>
    <RefInitBlock predecessorRef="" .../>
    <RefInitBlock predecessorRef="" .../>
  </RefPredecessors>
  <RefVariables>
    <RefVariable variableRef="" .../>
    <RefVariable variableRef="" .../>
  </RefVariables>
  <InitString .../>
  <RefLDAPServers>
    <RefLDAPServer ldapServerRef="" .../>
    <RefLDAPServer ldapServerRef="" .../>
  </RefLDAPServers>
</InitBlock>

```

**Example**

```

<InitBlock mdsid="m002384be-0bd9-0000-714b-e31d00000000"
  name="Primary Owner ID"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  isSessionVar="true"
  isRowWiseCacheEnabled="false"
  isEnabled="false"
  connectionPoolRef="/oracle/bi/server/base/ConnectionPool/Siebel OLTP Connection
  Pool_00238431-0bd5-0000-714b-e31d00000000.xml#m00238431-0bd5-0000-714b-
  e31d00000000">
  <DBMapItem name="DefaultMulDB">
    <Value>

```

```

        <![CDATA[
            select PAR_ROW_ID
            from VALUEOF(TBO) .S_USER
            where LOGIN = ':USER' ]]>
    </Value>
</DBMapItem>
<RefPredecessors>
    <RefInitBlock refId="m002384be-0bd9-0000-714b-e31d00000000-m002384ac-0bd9-
        0000-714b-e31d00000000"
        predecessorRef="/oracle/bi/server/base/InitBlock/Authentication_002384ac-
            0bd9-0000-714b-e31d00000000.xml#m002384ac-0bd9-0000-714b-e31d00000000" />
</RefPredecessors>
<RefVariables>
    <RefVariable refId="m002384be-0bd9-0000-714b-e31d00000000-m0023845e-0bd7-
        0000-714b-e31d00000000"
        variableRef="/oracle/bi/server/base/Variable/PR_OWNER_ID_0023845e-0bd7-
            0000-714b-e31d00000000.xml#m0023845e-0bd7-0000-714b-e31d00000000" />
</RefVariables>
<InitString>
    <![CDATA[
        select PAR_ROW_ID
        from VALUEOF(TBO) .S_USER
        where LOGIN = ':USER' ]]>
</InitString>
</InitBlock>

```

## 5.2.4 MDS XML Elements: Custom Authenticator

The Custom Authenticator element corresponds to the Custom Authenticator object in the Identity Manager dialog in the Administration Tool.

The Custom Authenticator tag includes the following attributes:

**Table 5–15 Custom Authenticator Tag Attributes**

Attribute Name	Description
cacheExpiry	The interval at which the authentication cache entry for a logged on user is refreshed for this custom authenticator.
path	The path and name of the authenticator plug-in dll.
configParam	Lists any parameters for this custom authenticator that have been explicitly exposed for configuration.
hiddenParam	Lists any parameters for this custom authenticator that have been encrypted, such as passwords.
cacheEntries	The maximum number of entries in the authentication cache for this custom authenticator, preallocated when the Oracle BI Server starts. If the number of users exceeds this limit, cache entries are replaced using the LRU algorithm. If this value is 0, then the authentication cache is disabled.
csfKey	This attribute is not used.
initBlockRef	References the init block for the custom authenticator.

The Custom Authenticator element does not include any child elements.

### Syntax

```

<CustomAuthenticator ...
    isDefaultReadable=""

```

```

        cacheExpiry=" "
        path=" "
        configParam=" "
        hiddenParam=" "
        cacheEntries=" "
        initBlockRef=" ">
    <Description />
</CustomAuthenticator>

```

### Example

```

<CustomAuthenticator mdsid="mbdf488e1-0bf6-1000-806e-0a97078d0000"
    name="CA01"
    isDefaultReadable="false"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns="http://www.oracle.com/obis/repository"
    cacheExpiry="86400"
    cacheEntries="1000"
    path="authenticate.dll"
    configParam="ABC"
    hiddenParam="D7EDED84BC624A917F5B462A4DCA05CDCE256EEEEEDC97D5D885270569A16AB6">
</CustomAuthenticator>

```

## 5.2.5 MDS XML Elements: Privilege Package

The privilege package element is a container for other privileges. It corresponds to a set of permissions that applies to a particular user or application role object in the repository metadata. The privilege package element contains the information available on the Object Permissions, Data Filters, and Query Limits tabs of the User/Application Role Permissions dialog in the Administration Tool.

Because privilege packages can be associated with more than one user or application role, the total number of privilege packages may not equal the total number of users and application roles.

The privilege package tag includes the following attributes:

**Table 5–16 Privilege Package Tag Attributes**

Attribute Name	Description
userRef	References any users that have the privilege package.
roleRef	References any application roles that have the privilege package.

The privilege package tag includes the following child elements:

**Table 5–17 Privilege Package Child Elements**

Element Name	Description
QueryPrivilegeMapping	References any query privileges that belong to this privilege package, along with the corresponding database. Contains two attributes: <code>databaseRef</code> , which references the database name, and <code>queryPrivilegeRef</code> , which references the query privilege.

**Table 5–17 (Cont.) Privilege Package Child Elements**

Element Name	Description
FilterMapping	<p>References any data filters that belong to this privilege package by mapping an object name with the filter expression.</p> <p>Contains the following attributes and sub-elements:</p> <ul style="list-style-type: none"> <li>■ Status. Valid values are Enabled, Disabled, and Ignored</li> <li>■ objectRef, which references the metadata object name</li> <li>■ Expr, which contains the filter expression</li> </ul>

**Syntax**

```

<PrivilegePackage ...
  userRef=""
  roleRef="">
  <Description />
  <QueryPrivilegeMapping
    databaseRef=""
    queryPrivilegeRef="">
  <FilterMapping
    status=""
    objectTypeID=""
    objectRef="">
    <Expr>
      <ExprText>...</ExprText>
      <ExprTextDesc>...</ExprTextDesc>
      <ObjectRefList>
        <RefObject objectRef="" .../>
        <RefObject objectRef="" .../>
      </ObjectRefList>
    </Expr>
  </FilterMapping>
</PrivilegePackage>

```

**Example**

```

<PrivilegePackage mdsid="m808626e7-1071-0000-714b-e31d00000000"
  name="PrivPack_4209:3417381144981469"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  roleRef="/oracle/bi/server/base/Group/Purchasing Buyer_0041592c-106e-0000-714b-
e31d00000000.xml#m0041592c-106e-0000-714b-e31d00000000">
  <QueryPrivilegeMapping
    databaseRef="/oracle/bi/server/base/Database/Oracle Data Warehouse_0023840a-
0bcf-0000-714b-e31d00000000.xml#m0023840a-0bcf-0000-714b-e31d00000000"
    queryPrivilegeRef="/oracle/bi/server/base/QueryPrivilege/QueryPriv_4204_
u0058_3417391144981469_808626e8-106c-0000-714b-e31d00000000.xml#m808626e8-
106c-0000-714b-e31d00000000" />
  <FilterMapping status="disable" objectTypeId="2035"
    objectRef="/oracle/bi/server/base/LogicalTable/Fact_u0150 Sourcing_u0150
Response_80d105ed-07f3-0000-714b-e31d00000000.xml#m80d105ed-07f3-0000-714b-
e31d00000000">
    <Expr>
      <ExprText>
        <![CDATA[ cast("%1" AS DOUBLE) = valueof(NQ_SESSION.PRC_BU_MANAGE_NEG)
          AND ("%2" = valueof(NQ_SESSION."%3") OR cast("%1" AS DOUBLE)=
            valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers)) ]]>
      </ExprText>
      <ExprTextDesc>

```



```

        <![CDATA[ cast("Core"."Dim - Procurement Business Unit"."Key Id" AS
            DOUBLE) = valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND ("Core"."Dim -
            Purchase Buyer"."Purchase Buyer Login" = valueof(NQ_SESSION."USER")
            OR cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE) =
            valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))  ]]>
    </ExprTextDesc>
    <ObjectRefList>
        <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m000b17e8-07d6-
            0000-714b-e31d00000000"
            objectTypeId="2006"
            objectRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Procurement
            Business Unit_000b17df-07f3-0000-714b-e31d00000000.xml#m000b17e8-07d6-
            0000-714b-e31d00000000" />
        <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m80ea6449-07d6-
            0000-714b-e31d00000000"
            objectTypeId="2006"
            objectRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Purchase
            Buyer_805fe01a-07f3-0000-714b-e31d00000000.xml#m80ea6449-07d6-0000-
            714b-e31d00000000" />
        <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m00238445-0bd7-
            0000-714b-e31d00000000"
            objectRef="/oracle/bi/server/base/Variable/USER_00238445-0bd7-0000-
            714b-e31d00000000.xml#m00238445-0bd7-0000-714b-e31d00000000" />
    </ObjectRefList>
</Expr>
</FilterMapping>
<FilterMapping status="disable" objectTypeId="2035"
    objectRef="/oracle/bi/server/base/LogicalTable/Fact_u0150 Sourcing_u0150
    Negotiation Award_80d105fe-07f3-0000-714b-e31d00000000.xml#m80d105fe-07f3-
    0000-714b-e31d00000000">
    <Expr>
        <ExprText>
            <![CDATA[ cast("%1" AS DOUBLE)= valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND
                ("%2" = valueof(NQ_SESSION."%3") OR cast("%1" AS DOUBLE) =
                valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))  ]]>
        </ExprText>
        <ExprTextDesc>
            <![CDATA[ cast("Core"."Dim - Procurement Business Unit"."Key Id" AS
                DOUBLE)= valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND ("Core"."Dim -
                Purchase Buyer"."Purchase Buyer Login" = valueof(NQ_SESSION."USER"
                OR cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE) =
                valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))  ]]>
        </ExprTextDesc>
        <ObjectRefList>
            <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m000b17e8-07d6-
                0000-714b-e31d00000000"
                objectTypeId="2006"
                objectRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Procurement
                Business Unit_000b17df-07f3-0000-714b-e31d00000000.xml#m000b17e8-07d6-
                0000-714b-e31d00000000" />
            <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m80ea6449-07d6-
                0000-714b-e31d00000000"
                objectTypeId="2006"
                objectRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Purchase
                Buyer_805fe01a-07f3-0000-714b-e31d00000000.xml#m80ea6449-07d6-0000-
                714b-e31d00000000" />
            <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m00238445-0bd7-
                0000-714b-e31d00000000"
                objectRef="/oracle/bi/server/base/Variable/USER_00238445-0bd7-0000-
                714b-e31d00000000.xml#m00238445-0bd7-0000-714b-e31d00000000" />
        </ObjectRefList>
    </FilterMapping>

```

```

        </ObjectRefList>
    </Expr>
</FilterMapping>
<FilterMapping status="disable" objectTypeId="2035"
  objectRef="/oracle/bi/server/base/LogicalTable/Fact_u0150 Sourcing_u0150
  Negotiation_80d10624-07f3-0000-714b-e31d00000000.xml#m80d10624-07f3-0000-
  714b-e31d00000000">
  <Expr>
    <ExprText>
      <![CDATA[ cast("%1" AS DOUBLE)= valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND
        ("%2" = valueof(NQ_SESSION."%3") OR cast("%1" AS DOUBLE) =
          valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))  ]]>
    </ExprText>
    <ExprTextDesc>
      <![CDATA[ cast("Core"."Dim - Procurement Business Unit"."Key Id" AS
        DOUBLE)= valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND ("Core"."Dim -
        Purchase Buyer"."Purchase Buyer Login" = valueof(NQ_SESSION."USER")
        OR cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE) =
          valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))  ]]>
    </ExprTextDesc>
    <ObjectRefList>
      <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m000b17e8-07d6-
        0000-714b-e31d00000000"
        objectTypeId="2006"
        objectRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Procurement
        Business Unit_000b17df-07f3-0000-714b-e31d00000000.xml#m000b17e8-07d6-
        0000-714b-e31d00000000" />
      <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m80ea6449-07d6-
        0000-714b-e31d00000000"
        objectTypeId="2006"
        objectRef="/oracle/bi/server/base/LogicalTable/Dim_u0150 Purchase
        Buyer_805fe01a-07f3-0000-714b-e31d00000000.xml#m80ea6449-07d6-0000-
        714b-e31d00000000" />
      <RefObject refId="m808626e7-1071-0000-714b-e31d00000000-m00238445-0bd7-
        0000-714b-e31d00000000"
        objectRef="/oracle/bi/server/base/Variable/USER_00238445-0bd7-0000-
        714b-e31d00000000.xml#m00238445-0bd7-0000-714b-e31d00000000" />
    </ObjectRefList>
  </Expr>
</FilterMapping>
</PrivilegePackage>

```

## 5.2.6 MDS XML Elements: Object Privilege

The object privilege element corresponds to the set of object permissions you can apply to metadata objects such as logical or presentation columns. In the Administration Tool, you can set object permissions in the Presentation layer, or in the Object Permissions tab of the User/Application Role Permissions dialog.

The object privilege tag includes the following attributes:

**Table 5–18 Object Privilege Tag Attributes**

Attribute Name	Description
type	<p>Contains the type of privilege applied to the objects. Valid values are:</p> <ul style="list-style-type: none"> <li>▪ read: corresponds to the <b>Read</b> privilege in the Administration Tool</li> <li>▪ readWrite: corresponds to the <b>Read/Write</b> privilege in the Administration Tool</li> <li>▪ none: corresponds to the <b>No Access</b> privilege in the Administration Tool</li> </ul> <p>This attribute can contain the following other values: delete, write, grant, and all. These other values are for internal use.</p>
privilegePackageRef	References the privilege package block for the object privilege.

The object privilege tag includes the following child elements:

**Table 5–19 Object Privilege Child Elements**

Element Name	Description
RefObjects	<p>References the set of objects for which this privilege type applies.</p> <p>Each object is contained in a sub-element called RefObject.</p>

### Syntax

```
<ObjectPrivilege ...
  type=""
  privilegePackageRef="">
  <Description />
  <RefObjects>
    <RefObject objectRef="" .../>
    <RefObject objectRef="" .../>
  </RefObjects>
</ObjectPrivilege>
```

### Example

```
<ObjectPrivilege mdsid="m80343298-05dc-0000-714b-e31d00000000"
  name="ObjPriv_1500:1678341098389037"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  type="none"
  privilegePackageRef="/oracle/bi/server/base/PrivilegePackage/PrivPack_4209_
u0058_1278041021507837_0023e21b-1071-0000-714b-e31d00000000.xml#m0023e21b-
1071-0000-714b-e31d00000000">
  <RefObjects>
    <RefObject refId="m80343298-05dc-0000-714b-e31d00000000-m80343156-0fa8-0000-
714b-e31d00000000"
      objectTypeId="4008"
      objectRef="/oracle/bi/server/base/PresentationTable/Fact_u0150 Contact_
80343156-0fa8-0000-714b-e31d00000000.xml#m80343156-0fa8-0000-714b-
e31d00000000" />
    <RefObject refId="m80343298-05dc-0000-714b-e31d00000000-m8034314d-0fa8-0000-
714b-e31d00000000"
      objectTypeId="4008"
      objectRef="/oracle/bi/server/base/PresentationTable/Fact_u0150 Contact_
8034314d-0fa8-0000-714b-e31d00000000.xml#m8034314d-0fa8-0000-714b-
```

```

        e31d00000000" />
    </RefObjects>
</ObjectPrivilege>

```

## 5.2.7 MDS XML Elements: Query Privilege

The query privilege element corresponds to the set of query privileges you can apply to users or application roles. In the Administration Tool, you can set query privileges in the Query Limits tab of the User/Application Role Permissions dialog.

The query privilege tag includes the following attributes:

**Table 5–20 Query Privilege Tag Attributes**

Attribute Name	Description
maxExecTime	The maximum number of minutes queries can run on a database.
maxExecTimePrivilege	Specifies the status of the maximum query run time limit. Valid values are: <ul style="list-style-type: none"> <li>■ <b>Enable:</b> Limits the time to the value specified in maxExecTime.</li> <li>■ <b>Disable:</b> Disables any limits set in maxExecTime.</li> <li>■ <b>Warn:</b> Does not enforce limits, but logs queries that exceed the set time limit in the Query log.</li> <li>■ <b>Ignore:</b> Inherits limits from the parent application role. If there is no time limit to inherit, no limit is enforced.</li> </ul>
maxRows	The maximum number of rows for users to retrieve from a database.
maxRowsPrivilege	Specifies the status of the maximum number of rows limit. Valid values are: <ul style="list-style-type: none"> <li>■ <b>Enable:</b> Limits the number of rows to the value specified. If the number of rows exceeds the maxRows value, the query is terminated.</li> <li>■ <b>Disable:</b> Disables any limits set in maxRows.</li> <li>■ <b>Warn:</b> Does not enforce limits, but logs queries that exceed the set limit in the Query log.</li> <li>■ <b>Ignore:</b> Inherits limits from the parent application role. If there is no row limit to inherit, no limit is enforced.</li> </ul>
populatePrivilege	Specifies whether the Populate privilege is granted or denied for a database. The Populate stored procedure writes the Cache/Saved Result Set value to the database when a criteria block is cached. Valid values are: <ul style="list-style-type: none"> <li>■ <b>Allow:</b> Explicitly grants the Populate privilege.</li> <li>■ <b>Disallow:</b> Explicitly denies the Populate privilege.</li> <li>■ <b>Ignore:</b> Inherits limits from the parent application role. If there is no limit to inherit, then the Populate privilege is allowed or disallowed based on the property <b>Allow populate queries by default</b> for the database object.</li> </ul>

**Table 5–20 (Cont.) Query Privilege Tag Attributes**

Attribute Name	Description
execPhysicalPrivilege	<p>Specifies whether direct database requests can be executed by default. Valid values are:</p> <ul style="list-style-type: none"> <li>▪ <b>Allow:</b> Explicitly grants the ability to execute direct database requests.</li> <li>▪ <b>Disallow:</b> Explicitly denies the ability to execute direct database requests.</li> <li>▪ <b>Ignore:</b> Inherits limits from the parent application role. If there is no limit to inherit, then direct database requests are allowed or disallowed based on the property <b>Allow direct database requests by default</b> for the database object.</li> </ul>

The query privilege tag includes the following child elements:

**Table 5–21 Query Privilege Child Elements**

Element Name	Description
ExecTimeTableItem	<p>If database access has been restricted to particular time periods, lists the time periods and whether access is allowed or disallowed.</p> <p>Contains three attributes: <code>allow</code> (true or false), <code>startTime</code>, and <code>endTime</code>.</p>

### Syntax

```
<QueryPrivilege ...
  maxExecTime=" "
  maxExecTimePrivilege=" "
  maxRows=" "
  maxRowsPrivilege=" "
  populatePrivilege=" "
  execPhysicalPrivilege=" ">
  <Description />
  <ExecTimeTableItem allow=" " startTime=" " endTime=" " />
</QueryPrivilege>
```

### Example

```
<QueryPrivilege mdsid="m803ac151-106c-0000-714b-e31d00000000"
  name="QueryPriv_4204:1926721120861104"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  maxExecTime="600"
  maxRows="100000"
  populatePrivilege="enable">
</QueryPrivilege>
```

## 5.2.8 MDS XML Elements: User

The user element corresponds to the user object in the repository. These objects represent the metadata repository copies or versions of externally managed user objects.

The user tag includes the following attributes:

**Table 5–22 User Tag Attributes**

Attribute Name	Description
fullName	The full name of this user.
loggingLevel	The logging level for this user.
logStatisticsStatus	This attribute is not used.
guid	Global unique identifier for a given user, which is independent of the user name.

The user tag includes the following child elements:

**Table 5–23 User Child Elements**

Element Name	Description
RefGroups	References the application roles to which this user belongs. Each application role is contained in a sub-element called RefGroup.
DBSignInListMapping	References database login user names and passwords, along with the corresponding database, if this user has database-specific logins defined.  Contains two attributes: dbSignInRef, which references the database credentials, and databaseRef, which references the database name. Note that database passwords are encrypted.

### Syntax

```
<User ...
  fullName=" "
  loggingLevel=" "
  guid=" " >
  <Description />
  <RefGroups>
    <RefGroup groupRef=" " .../>
    <RefGroup groupRef=" " .../>
  </RefGroups>
  <DBSignInListMapping dbSignInRef=" " databaseRef=" " />
</User>
```

### Example

```
<User mdsid="m0021f847-05dd-0000-714b-e31d00000000"
  name="Administrator"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository"
  guid="B0E8200AE53A11DE8F4643DF3B7A9E29"
  loggingLevel="6">
  <RefGroups>
    <RefGroup refId="m0021f847-05dd-0000-714b-e31d00000000-m0023e1a2-106e-0000-714b-e31d00000000"
      groupRef="/oracle/bi/server/base/Group/BIAAdministrators_0023e1a2-106e-0000-714b-e31d00000000.xml#m0023e1a2-106e-0000-714b-e31d00000000" />
    <RefGroup refId="m0021f847-05dd-0000-714b-e31d00000000-m0023e1a7-106e-0000-714b-e31d00000000"
      groupRef="/oracle/bi/server/base/Group/Service Analytics Administrator_0023e1a7-106e-0000-714b-e31d00000000.xml#m0023e1a7-106e-0000-714b-e31d00000000" />
    <RefGroup refId="m0021f847-05dd-0000-714b-e31d00000000-m0041592c-106e-0000-
```

```

714b-e31d00000000"
groupRef="/oracle/bi/server/base/Group/Purchasing Buyer_0041592c-106e-
0000-714b-e31d00000000.xml#m0041592c-106e-0000-714b-e31d00000000" />
</RefGroups>
</User>

```

## 5.2.9 MDS XML Elements: Group

The group element corresponds to the application role object in the repository metadata.

The group tag includes the following attributes:

**Table 5–24 Group Tag Attributes**

Attribute Name	Description
displayName	The custom Display Name for this application role.
logLevel	This attribute is not used.
logStatisticsStatus	This attribute is not used.
guid	Global unique identifier for a given application role, which is independent of the role name.

The group tag includes the following child elements:

**Table 5–25 Group Child Elements**

Element Name	Description
RefChildGroups	References the set of application roles that belong to this application role. Each child application role is contained in a sub-element called RefGroup.

### Syntax

```

<Group ...
  displayName=" "
  guid=" " >
  <Description .../>
  <RefChildGroups>
    <RefGroup groupRef=" " .../>
    <RefGroup groupRef=" " .../>
  </RefChildGroups>
</Group>

```

### Example

```

<Group mdsid="m0023e1d2-106e-0000-714b-e31d00000000"
  name="Insurance"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository">
  <RefChildGroups>
    <RefGroup refId="m0023e1d2-106e-0000-714b-e31d00000000-m0023e1dc-106e-0000-
      714b-e31d00000000"
      groupRef="/oracle/bi/server/base/Group/Financial Services Analytics User_
        0023e1dc-106e-0000-714b-e31d00000000.xml#m0023e1dc-106e-0000-714b-
        e31d00000000" />
    <RefGroup refId="m0023e1d2-106e-0000-714b-e31d00000000-m0023e1de-106e-0000-
      714b-e31d00000000"

```

```

        groupRef="/oracle/bi/server/base/Group/Insurance Analytics User_0023e1de-
        106e-0000-714b-e31d00000000.xml#m0023e1de-106e-0000-714b-e31d00000000" />
    </RefChildGroups>
</Group>

```

## 5.2.10 MDS XML Elements: DB Sign-On

The DB sign-on element corresponds to the information provided in the Logons tab of the user object. If the repository has been set up for database-specific login IDs and passwords, you can set up database-specific credentials to allow privileged users to connect to the underlying databases at the level of authority granted to those users in the databases.

The DB sign-on tag includes the following attributes:

**Table 5–26 DB Sign-on Tag Attributes**

Attribute Name	Description
user	The user name for the underlying database.
password	The corresponding password for the underlying database. Note that passwords are encrypted.

The DB sign-on tag does not include any child elements.

### Syntax

```

<DBSignOn ...
    user=" "
    password=" ">
    <Description />
</DBSignOn>

```

### Example

```

<DBSignOn mdsid="me406bac9-0bf1-1000-b290-0ae593200000"
    name="LOGON_4211:2559932074113"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns="http://www.oracle.com/obis/repository"
    user="my_db_user"
    password="BA0EAAB163">
</DBSignOn>

```

## 5.3 Other MDS XML Elements

The elements described in this section are miscellaneous elements that do not fit into any other category. These elements include:

- [Section 5.3.1, "MDS XML Elements: Project"](#)
- [Section 5.3.2, "MDS XML Elements: Query Object"](#)

### 5.3.1 MDS XML Elements: Project

The project element corresponds to the project object in the repository metadata. Projects support multiuser development by enabling developers to work on projects in their area of responsibility.

The project tag includes the following child elements:



**Table 5–27 Project Child Elements**

<b>Element Name</b>	<b>Description</b>
RefCatalogs	References the subject areas that belong to the project. Each subject area is contained in a sub-element called <code>RefPresentationCatalog</code> .
RefFactTables	References the logical fact tables that belong to the project. Each fact table is contained in a sub-element called <code>RefLogicalTable</code> .
RefGroups	References the application roles that belong to the project. Each application role is contained in a sub-element called <code>RefGroup</code> .
RefUsers	References the users that belong to the project. Each user is contained in a sub-element called <code>RefUser</code> .
RefVariables	References the variables that belong to the project. Each variable is contained in a sub-element called <code>RefVariable</code> .
RefInitBlocks	References the initialization blocks that belong to the project. Each initialization block is contained in a sub-element called <code>RefInitBlock</code> .
RefListCatalogs	References the list catalogs that belong to the project. Each list catalog is contained in a sub-element called <code>RefListCatalog</code> .
RefTables	References the presentation tables that belong to the project. Each presentation table is contained in a sub-element called <code>RefPresentationTable</code> .
RefColumns	References the presentation columns that belong to the project. Each presentation column is contained in a sub-element called <code>RefPresentationColumn</code> .
RefHierarchies	References the presentation hierarchies that belong to the project. Each presentation hierarchy is contained in a sub-element called <code>RefPresentationHierarchy</code> .
RefLevels	References the presentation levels that belong to the project. Each presentation level is contained in a sub-element called <code>RefPresentationLevel</code> .
RefExcludedCatalogs	References any subject areas that do not belong to the project, but that are mapped to logical objects that do belong to the project. Each subject area is contained in a sub-element called <code>RefPresentationCatalog</code> .
RefExcludedTables	References any presentation tables that do not belong to the project, but that are mapped to logical objects that do belong to the project. Each presentation table is contained in a sub-element called <code>RefPresentationTable</code> .

**Table 5–27 (Cont.) Project Child Elements**

Element Name	Description
RefExcludedColumns	References any presentation columns that do not belong to the project, but that are mapped to logical objects that do belong to the project.  Each presentation column is contained in a sub-element called RefPresentationColumn.
RefExcludedHierarchies	References any presentation hierarchies that do not belong to the project, but that are mapped to logical objects that do belong to the project.  Each presentation hierarchy is contained in a sub-element called RefPresentationHierarchy.
RefExcludedLevels	References any presentation levels that do not belong to the project, but that are mapped to logical objects that do belong to the project.  Each subject area is contained in a sub-element called RefPresentationLevel.

The project tag does not include any attributes.

### Syntax

```
<Project ...>
  <Description />
  <RefCatalogs>
    <RefPresentationCatalog catalogRef=" " .../>
  </RefCatalogs>
  <RefFactTables>
    <RefLogicalTable logicalTableRef=" " .../>
  </RefFactTables>
  <RefGroups>
    <RefGroup groupRef=" " .../>
  </RefGroups>
  <RefUsers>
    <RefUser userRef=" " .../>
  </RefUsers>
  <RefVariables>
    <RefVariable variableRef=" " .../>
  </RefVariables>
  <RefInitBlocks>
    <RefInitBlock initBlockRef=" " .../>
  </RefInitBlocks>
  <RefListCatalogs>
    <RefListCatalog listcatalogRef=" " .../>
  </RefListCatalogs>
  <RefTables>
    <RefPresentationTable tableRef=" " .../>
  </RefTables>
  <RefColumns>
    <RefPresentationColumn columnRef=" " .../>
  </RefColumns>
  <RefHierarchies>
    <RefPresentationHierarchy hierarchyRef=" " .../>
  </RefHierarchies>
  <RefLevels>
    <RefPresentationLevel levelRef=" " .../>
  </RefLevels>
</Project>
```

```

<RefExcludedCatalogs>
  <RefPresentationCatalog catalogRef="" .../>
</RefExcludedCatalogs>
<RefExcludedTables>
  <RefPresentationTable tableRef="" .../>
</RefExcludedTables>
<RefExcludedColumns>
  <RefPresentationColumn columnRef="" .../>
</RefExcludedColumns>
<RefExcludedHierarchies>
  <RefPresentationHierarchy hierarchyRef="" .../>
</RefExcludedHierarchies>
<RefExcludedLevels>
  <RefPresentationLevel levelRef="" .../>
</RefExcludedLevels>
</Project>

```

### Example

```

<Project mdsid="m80c9e2bf-1075-0000-714b-e31d00000000"
  name="FUSION_Sale Forecasting"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://www.oracle.com/obis/repository">
  <RefCatalogs>
    <RefPresentationCatalog refId="m80c9e2bf-1075-0000-714b-e31d00000000-
      m80ca9dbb-0fa4-0000-714b-e31d00000000"
      catalogRef="/oracle/bi/server/base/PresentationCatalog/Sales Manager
        Dashboard _u0150 Campaign 80ca9dbb-0fa4-0000-714b-e31d00000000.xml
        #m80ca9dbb-0fa4-0000-714b-e31d00000000" />
    <RefPresentationCatalog refId="m80c9e2bf-1075-0000-714b-e31d00000000-
      m80c9a197-0fa4-0000-714b-e31d00000000"
      catalogRef="/oracle/bi/server/base/PresentationCatalog/Territory Management
        _u0150 CRM Forecast_80c9a197-0fa4-0000-714b-e31d00000000.xml#m80c9a197-
        0fa4-0000-714b-e31d00000000" />
    ...
  </RefCatalogs>
  <RefFactTables>
    <RefLogicalTable refId="m80c9e2bf-1075-0000-714b-e31d00000000-m00224fba-07f3-
      0000-714b-e31d00000000"
      logicalTableRef="/oracle/bi/server/base/LogicalTable/Fact _u0150 CRM _u0150
        Revenue_00224fba-07f3-0000-714b-e31d00000000.xml#m00224fba-07f3-0000-714b-
        e31d00000000" />
    <RefLogicalTable refId="m80c9e2bf-1075-0000-714b-e31d00000000-m002250bc-07f3-
      0000-714b-e31d00000000"
      logicalTableRef="/oracle/bi/server/base/LogicalTable/Fact for Presentation
        Foldering_002250bc-07f3-0000-714b-e31d00000000.xml#m002250bc-07f3-0000-
        714b-e31d00000000" />
    ...
  </RefFactTables>
  <RefGroups>
    <RefGroup refId="m80c9e2bf-1075-0000-714b-e31d00000000-m0023e1a2-106e-0000-
      714b-e31d00000000"
      groupRef="/oracle/bi/server/base/Group/BIAAdministrators_0023e1a2-106e-0000-
        714b-e31d00000000.xml#m0023e1a2-106e-0000-714b-e31d00000000" />
  </RefGroups>
  <RefUsers>
    <RefUser refId="m80c9e2bf-1075-0000-714b-e31d00000000-m0021f847-05dd-0000-
      714b-e31d00000000"
      userRef="/oracle/bi/server/base/User/Administrator_0021f847-05dd-0000-714b-
        e31d00000000.xml#m0021f847-05dd-0000-714b-e31d00000000" />
  </RefUsers>

```

```

<RefVariables>
  <RefVariable refId="m80c9e2bf-1075-0000-714b-e31d00000000-m00238445-0bd7-
    0000-714b-e31d00000000"
    variableRef="/oracle/bi/server/base/Variable/USER_00238445-0bd7-0000-714b-
    e31d00000000.xml#m00238445-0bd7-0000-714b-e31d00000000" />
  <RefVariable refId="m80c9e2bf-1075-0000-714b-e31d00000000-m00238451-0bd7-
    0000-714b-e31d00000000"
    variableRef="/oracle/bi/server/base/Variable/LOCALE_00238451-0bd7-0000-
    714b-e31d00000000.xml#m00238451-0bd7-0000-714b-e31d00000000" />
  ...
</RefVariables>
<RefInitBlocks>
  <RefInitBlock refId="m80c9e2bf-1075-0000-714b-e31d00000000-m002384ea-0bd9-
    0000-714b-e31d00000000"
    initBlockRef="/oracle/bi/server/base/InitBlock/Warehouse Refresh Date_
    002384ea-0bd9-0000-714b-e31d00000000.xml#m002384ea-0bd9-0000-714b-
    e31d00000000" />
  <RefInitBlock refId="m80c9e2bf-1075-0000-714b-e31d00000000-m80c606df-0bd9-
    0000-714b-e31d00000000"
    initBlockRef="/oracle/bi/server/base/InitBlock/Dashboard Currency_80c606df-
    0bd9-0000-714b-e31d00000000.xml#m80c606df-0bd9-0000-714b-e31d00000000" />
  ...
</RefInitBlocks>
<RefExcludedColumns>
  <RefPresentationColumn refId="m80c9e2bf-1075-0000-714b-e31d00000000-
    m80ec06eb-0faa-0000-714b-e31d00000000"
    columnRef="/oracle/bi/server/base/PresentationTable/Date_80cf8966-0fa8-
    0000-714b-e31d00000000.xml#m80ec06eb-0faa-0000-714b-e31d00000000" />
  <RefPresentationColumn refId="m80c9e2bf-1075-0000-714b-e31d00000000-
    m80ec06ec-0faa-0000-714b-e31d00000000"
    columnRef="/oracle/bi/server/base/PresentationTable/Date_80cf8966-0fa8-
    0000-714b-e31d00000000.xml#m80ec06ec-0faa-0000-714b-e31d00000000" />
  ...
</RefExcludedColumns>
</Project>

```

### 5.3.2 MDS XML Elements: Query Object

The query object element corresponds to the saved query object in the repository metadata. You can save a query from the Query Repository dialog in the Administration Tool.

The query object tag includes the following child elements:

**Table 5–28 Query Object Child Elements**

Element Name	Description
QueryString	Contains the query string that qualifies and defines the query.

The query object tag does not include any attributes.

#### Syntax

```

<QueryObject ...>
  <Description />
  <QueryString .../>
</QueryObject>

```

**Example**

```
<QueryObject mdsid="mbd2048f1-0bf6-1000-806e-0a97078d0000"  
  name="Sample Query"  
  isDefaultReadable="false"  
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
  xmlns="http://www.oracle.com/obis/repository">  
  <QueryString>  
    <![CDATA[ (128 = "*" ) AND (6 = Database) AND (189 1 "1")]]>  
  </QueryString>  
</QueryObject>
```



# Part II

---

## XML Schema Elements

Part II provides usage and reference information for the Oracle BI Server XML API.

Part II contains the following chapters:

- [Chapter 6, "About the Oracle BI Server XML API"](#)
- [Chapter 7, "XML Logical Elements"](#)
- [Chapter 8, "XML Physical Elements"](#)
- [Chapter 9, "XML Presentation Elements"](#)
- [Chapter 10, "XML Marketing, Security, and Other Elements"](#)





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## About the Oracle BI Server XML API

Oracle Business Intelligence provides utilities to create a generic, XML-based representation of the Oracle BI repository metadata, using the Oracle BI Server XML API. This XML file version of the repository can be used to programmatically modify the metadata. The Oracle BI Server XML API can be used for metadata migration, programmatic metadata generation and manipulation, metadata patching, and other functions.

Note that Oracle BI Server XML API objects correspond to metadata repository objects in an RPD file. These objects are not the same as Oracle BI Presentation Catalog XML objects.

This chapter contains the following topics:

- [Section 6.1, "About the Oracle BI Server XML API"](#)
- [Section 6.2, "Generating and Executing XML"](#)
- [Section 6.3, "Using the Oracle BI Server XML API"](#)
- [Section 6.4, "Generic XML Elements and Attributes"](#)

### 6.1 About the Oracle BI Server XML API

The Oracle BI Server XML schema document (xudml1.xsd) contains the grammar for the structure of XML repository files. You can find this file at:

`ORACLE_HOME/bifoundation/server/bin`

Note that this is *not* the file that enables the generation of MDS XML output. For information about generating MDS XML output, see [Chapter 1, "About the Oracle BI Server MDS XML API."](#)

You can view this file to see relationships between XML metadata objects, but you must *not* modify this file. Doing so can lead to errors and crashes in the `biserverxmlexec` utility.

The structure of the repository is primarily a flat list of objects, in the format:

```
<?xml version="1.0" encoding="iso-8859-1"?>
<Repository xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <DECLARE>
    <ObjectType {attributes}>
      Contents...
    </ObjectType>
    <ObjectType {attributes}>
      Contents...
    </ObjectType>
    ...
  </DECLARE>
  ...
</Repository>
```

```
</DECLARE>  
</Repository>
```

Most of the modeling relationships, including the hierarchical ones, are formed using name references between objects, not by the hierarchical structure of the XML.

Note that the metadata objects in the XML file must appear in a particular order. You can view the set order in the XML schema document under the `objectList_t` element.

### 6.1.1 About Using the Oracle BI Server XML API to Merge and Append Objects

Do not use the Oracle BI Server XML API to attempt a full repository merge. The merge feature in the Administration Tool handles an extremely complex set of object comparisons and decisions, and it is not possible to account for and resolve these conflicts using the XML utilities. Because of this, using the XML API to perform a full merge is not supported. Attempting to do so might result in a corrupted repository.

However, you can use the XML API to append objects from one repository to another repository, using the `-B` option with `biserverxmlexec` to specify a base repository path name. This approach works when you have two completely separate repositories with no shared objects between the two, including no shared variables or application roles. For example, if you have separate repositories for the Credit and Manufacturing departments, you can take objects from the Credit XML metadata and append them to the Manufacturing XML metadata, and then convert to a single RPD that contains both working models. Using this method, you are essentially adding one repository to another.

Before attempting to perform an append operation, you should create a script to ensure that there are no common objects. Even when your repositories are separate, they might contain the same names for common objects, such as a `current_date` variable.

It is also a good idea to equalize the upgrade IDs to ensure that there are no accidental clashes. Equalizing objects causes objects in two repositories that have the same name but different upgrade ids to be treated as the same object. See "Equalizing Objects" in *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition* for more information.

## 6.2 Generating and Executing XML

Oracle Business Intelligence provides the following command-line tools to generate and execute XML:

- **biserverxmlgen** generates XML from an existing RPD
- **biserverxmlexec** lets you execute the XML in offline mode to create or modify a repository file
- **biserverxmlcli** executes the XML against the Oracle BI Server

Before running the XML utilities, you must first run `bi-init` to launch a command prompt or shell window that is initialized to your Oracle instance. This utility is called `bi-init.sh` on Linux and UNIX systems, `bi-init.bat` on client installations of the Administration Tool, and `bi-init.cmd` for all other Windows installation types.

For example, on Windows:

1. In Windows Explorer, go to the location appropriate for your install type:
  - Client installations:

`ORACLE_HOME/bifoundation/server/bin`

- All other installations:

`ORACLE_INSTANCE/bifoundation/OracleBIApplication/coreapplication/setup`

2. Double-click `bi-init.cmd` (or `bi-init.bat` for client installations) to display a command prompt that is initialized to your Oracle instance.
3. At the command prompt, type `biserverxmlgen`, `biserverxmlexec`, or `biserverxmlcli` with the desired options. You can also run the utilities with no arguments or parameters to see usage information.

Note that when you execute XML to update an existing repository with new content, objects are replaced in their entirety. For example, to change the name attribute of a `PresentationTable` object from `name="Facts Revenue"` to `name="Facts Financial"`, you must submit the entire `PresentationTable` object to `biserverxmlexec` or `biserverxmlcli`.

In addition, make sure that the qualified name, UID, and ID are correct when replacing existing objects. The Oracle BI Server assumes that a different ID is a different object.

This section contains the following topics:

- [Section 6.2.1, "Generating XML from an Existing RPD"](#)
- [Section 6.2.2, "Executing XML in Offline Mode"](#)
- [Section 6.2.3, "Executing XML Against the Oracle BI Server"](#)

## 6.2.1 Generating XML from an Existing RPD

Use `biserverxmlgen` to generate an XML file from an existing repository file (RPD). To use this utility, execute the following at the command prompt:

```
biserverxmlgen -R repository_pathname [-P password] -O output_file_pathname [-8]
[-N] [-Q|-S]
```

Where:

*repository\_pathname* is the name and location of the repository file from which you want to generate XML

*password* is the repository password.

The password argument is optional. If you do not provide a password argument, you are prompted to enter a password when you run the command. To minimize the risk of security breaches, Oracle recommends that you do not provide a password argument either on the command line or in scripts. Note that the password argument is supported for backward compatibility only, and will be removed in a future release.

*output\_file\_pathname* is the name and location of the XML output file you want to generate. It is recommended that you provide an output filename with an `.xml` extension.

Specify `-8` to use UTF-8 encoding in the generated XML file. If you do not specify `-8`, the generated XML file uses ANSI ISO-8859-1 encoding by default.

Specify `-N` to generate output without upgrade ids (uids). These are the internal identifiers of objects. Use this if you want to create a new repository without the old upgrade ids.

You can use one of the two options `-Q` and `-S` to control the generation of security objects:

- Use `-Q` to generate output without security objects
- Use `-S` to generate output for only security objects

If you use both `-Q` and `-S` on the same call of `biserverxmlgen`, the second option on the call command takes precedence, and the first is ignored.

## 6.2.2 Executing XML in Offline Mode

Use `biserverxmlexec` to execute XML in offline mode. This utility can generate an entire repository file (RPD) from an XML repository file, or it can modify an existing repository file by applying the changes specified in the XML file. The input XML is validated against the Oracle BI Server XML schema. Any objects that exist in both the RPD and the XML file are overwritten by the corresponding object definitions in the XML file. Note that the same object cannot be defined twice in the XML file.

A qualified name (`qualifiedName`) or upgrade id (`uid`) must be specified for each object. When the utility resolves and identifies objects, `uids` have the highest priority, followed by `qualifiedNames`. See [Section 6.4, "Generic XML Elements and Attributes"](#) for more information about identifier attributes.

To use this utility, execute the following at the command prompt:

```
biserverxmlexec -I input_file_pathname [-B base_repository_pathname] [-P password]  
-O output_repository_pathname
```

Where:

*input\_file\_pathname* is the name and location of the XML input file you want to execute

*base\_repository\_pathname* is the existing repository file you want to modify using the XML input file (optional). Do not specify this argument if you want to generate a new repository file from the XML input file.

*password* is the repository password. If you specified a base repository, enter the repository password for the base repository. If you did not specify a base repository, enter the password you want to use for the new repository.

The password argument is optional. If you do not provide a password argument, you are prompted to enter a password when you run the command. To minimize the risk of security breaches, Oracle recommends that you do not provide a password argument either on the command line or in scripts. Note that the password argument is supported for backward compatibility only, and will be removed in a future release.

*output\_repository\_pathname* is the name and location of the RPD output file you want to generate

### Examples

The following example creates a new repository called `rp1`:

```
biserverxmlexec -I testxudml.txt -O rp1.rpd  
Give password: my_rpd_password
```

The following example modifies `rp1` and writes to `rp2`:

```
biserverxmlexec -I testxudml.txt -B rp1.rpd -O rp2.rpd  
Give password: my_rpd_password
```

### 6.2.3 Executing XML Against the Oracle BI Server

Use `biserverxmlcli` to execute XML against the Oracle BI Server. This utility is very similar to `biserverxmlexec`, but is instead used to modify an online repository. An online repository is a running Oracle BI Server instance that has loaded an existing repository into its navigation space.

To use this utility, execute the following at the command prompt:

```
biserverxmlcli -U user_name [-P user_password] [-R repository_password]
-D data_source_name [-w ssl_pass_phrase [-y] -I XML_file_pathname
```

Where:

*user\_name* is a valid user name. This user must have the manage repository permission (`oracle.bi.server.manageRepositories`).

*user\_password* is the corresponding user password.

The user password argument is optional. If you do not provide a user password argument, you are prompted to enter a user password when you run the command. To minimize the risk of security breaches, Oracle recommends that you do not provide password arguments either on the command line or in scripts. Note that the user password argument is supported for backward compatibility only, and will be removed in a future release.

*repository\_password* is the repository password for the online repository.

The repository password argument is optional. If you do not provide a repository password argument, you are prompted to enter a repository password when you run the command. To minimize the risk of security breaches, Oracle recommends that you do not provide password arguments either on the command line or in scripts. Note that the repository password argument is supported for backward compatibility only, and will be removed in a future release.

*data\_source\_name* is the Oracle BI Server ODBC data source name (DSN) to which you want to connect

*ssl\_pass\_phrase* is the SSL passphrase for the Oracle BI Server, if the ODBC connection has been configured to use SSL

`-y` is the SSL passphrase to the private key file

*xml\_file\_pathname* is the name and location of the XML input file you want to execute

## 6.3 Using the Oracle BI Server XML API

This section provides information about different use cases for the Oracle BI Server XML API feature. This section contains the following topics:

- [Section 6.3.1, "Maintaining Versions of the Metadata"](#)
- [Section 6.3.2, "Migrating Metadata from Another System"](#)
- [Section 6.3.3, "Applying a Metadata Patch Against a Running Oracle BI Server"](#)
- [Section 6.3.4, "Manipulating Metadata Programmatically"](#)
- [Section 6.3.5, "Moving from Test to Production Environments"](#)

### 6.3.1 Maintaining Versions of the Metadata

The Oracle BI Server XML API provides an efficient way of keeping versions of an RPD. Rather than storing entire RPD files for each version, you can generate XML patch files using the Create Patch feature in the Compare dialog in the Administration Tool. The patch file contains only the delta of the changes between the current and original versions. Using patch files to store changes eliminates the need to store redundant data in entire repository files and saves disk space. Note that you always need to retain a copy of the original repository file to maintain versions using this method.

You can apply a patch to the original file using the patch merge feature in the Administration Tool, using the patchrpd utility, or by running biserverxmlxec with the -B option.

For example, if you have repository versions A0, A1, and A2, and you have an XML patch file called A2-0delta.xml that contains the changes between the latest and original versions, you can run the following command:

```
biserverxmlxec -I A2-0delta.xml -B A0.rpd -O A2reproduced.rpd
Give password: my_password
```

Alternatively, if you stored changes between A0 and A1, and then A1 and A2, you can run two commands to apply the latest changes on the original file:

```
biserverxmlxec -I A1-0delta.xml -B A0.rpd -O A1reproduced.rpd
Give password: my_password
```

```
biserverxmlxec -I A2-1delta.xml -B A1reproduced.rpd -O A2reproduced.rpd
Give password: my_password
```

Make sure to specify different names for the -B and -O arguments to avoid overwriting the original repository file.

See *Oracle Fusion Middleware Metadata Repository Builder's Guide for Oracle Business Intelligence Enterprise Edition* for more information about patch merges.

### 6.3.2 Migrating Metadata from Another System

If you have another business intelligence or reporting system and want to migrate the metadata to Oracle Business Intelligence, you can write an adapter to transform the third-party metadata to the Oracle Business Intelligence generic XML format. The XML schema file (xudml1.xsd) provides a way to understand the structure of the Oracle Business Intelligence metadata. After you have a compatible XML metadata file, you can use the biserverxmlxec utility to create a corresponding RPD file.

### 6.3.3 Applying a Metadata Patch Against a Running Oracle BI Server

If you use the Administration Tool to make changes to your repository in offline mode, you can use the XML patch feature to apply the changes to an online repository, without needing to restart the server or apply the changes manually.

To do this, open the new version of the repository in the Administration Tool, compare it with the running version, and create an XML patch file using the Create Patch feature. You can then apply the patch against the running Oracle BI Server to load the changes, using the biserverxmlcli utility. For example:

```
biserverxmlcli -U my_user -D my_server_dsn -I my_xml_file_pathname
Give user password: my_password
Give repository password: my_repos_password
```

## 6.3.4 Manipulating Metadata Programmatically

You can use the Oracle BI Server XML API to develop custom applications to modify Oracle BI repository metadata. To do this, you can generate XML from your RPD file using the `biserverxmlgen` utility, and then parse the XML using a generic XML parser. Because the Oracle BI XML utilities are command-line utilities, they can be invoked from batch files, scripts, or as processes from within the code. You can modify the XML programmatically, and then use the `biserverxmlexec` utility to generate a new RPD that includes the changes.

For example, the Cloning Application Framework (CAF) uses the Oracle BI Server XML API to replicate content developed for one application so that it can be used by another application. The goal of the CAF application is to reuse content across applications so that it does not need to be developed twice.

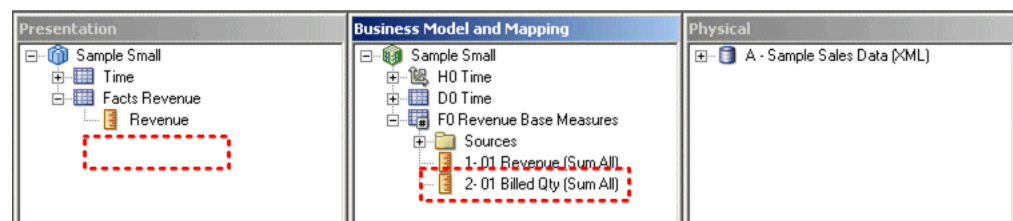
CAF users can map Presentation layer objects and logical dimension hierarchies from one RPD to the corresponding names in the other RPD. The CAF application generates XML for the first RPD using the `biserverxmlgen` utility, then scans the XML to determine the Presentation layer object dependencies in the Business Model and Mapping layer and Physical layer. It then creates the necessary Presentation and Business Model and Mapping layer objects (such as columns, subject areas, and expressions), identical to objects in the first RPD but with the appropriate mapped names. When the corresponding XML is ready, it generates the cloned RPD using the `biserverxmlexec` utility.

### 6.3.4.1 Example of Programmatically Creating a Repository Object Using XML

This example shows how to add a presentation column called "Billed Qty" to the "Facts Revenue" presentation table of the "Sample Small" subject area. The logical column in the business model on which it is based already exists, and has the name "Sample Small"."F0 Rev Base Measures"."2-01 Billed Qty (Sum All)".

Figure 6–1 illustrates the goal of the example.

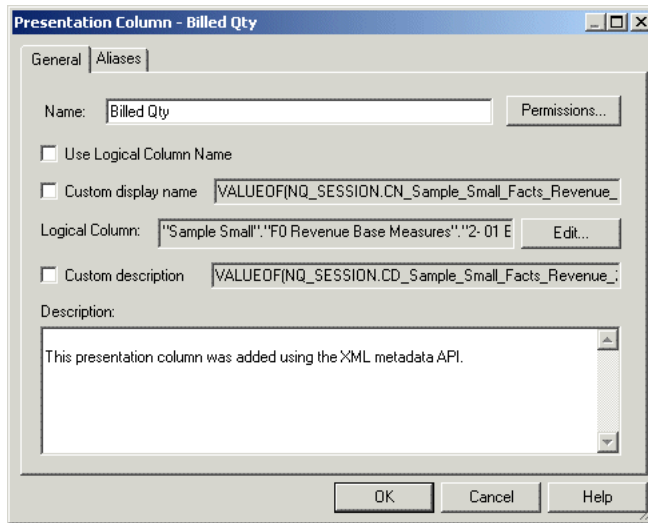
**Figure 6–1 Logical Column Exists in Repository with No Corresponding Presentation Column**



To add the presentation column programmatically, two metadata changes are needed:

1. A `<PresentationColumn>` object must be created for the new "Billed Qty" presentation column. It must reference the "2-01 Bill Qty (Sum All)" logical column to which it maps, and the Facts Revenue presentation table to which it belongs.
2. The `<PresentationTable name="Facts Revenue">` object must be updated to reference the new "Billed Qty" presentation column object.

Figure 6–2 shows a view of what the new presentation column looks like in the Administration Tool after it is created.

**Figure 6–2 Administration Tool Equivalent for New Presentation Column**

To update the metadata, first create an XML file called Change.rpd.xml. This file will contain the metadata changes needed, in XML format. Add the following code:

```
<?xml version="1.0" encoding="iso-8859-1"?>
<Repository xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <DECLARE>
    <PresentationColumn name="Billed Qty" parentName="&quot;Sample Small&quot;;..
&quot;Facts Revenue&quot;" parentId="4008:2143"
parentUid="80cab573-07d0-0000-714b-e31d00000000"
hasDispName="false"
overrideLogicalName="true">
      <Description>
        <![CDATA[This presentation column was added using the XML metadata API.]]>
      </Description>
      <RefLogicalColumn uid="946" id="2006:106" qualifiedName="&quot;Sample
Small&quot;.&quot;F0 Rev Base Measures&quot;.&quot;2-01 Billed Qty (Sum
All)&quot;"/>
    </PresentationColumn>
  </DECLARE>
</Repository>
```

This code adds a presentation column that references both the parent presentation table to which it belongs ("Facts Revenue"), and the logical column to which it maps ("2-01 Billed Qty (Sum All)"). Note that although the new presentation column has a qualified name, the id and uid are not specified, because they will be automatically created by the Oracle BI Server when it loads the modified RPD file.

In addition to adding the presentation column object, you must also add a reference to the new object from the existing presentation table object. To do this, generate an XML version of the current repository using biserverxmlgen and search the XML for the name of the presentation table (Facts Revenue). Copy the code for the presentation table object to the clipboard, as follows:

```
<PresentationTable name="Facts Revenue" parentName="&quot;Sample Small&quot;;..
&quot;Facts Revenue&quot;" parentId="4004:2137" parentUid="73609" id="4008:2143"
uid="73625"
hasDispName="false">
  <Description>
    <![CDATA[This folder contains several types of aggregation metrics
leveraging single revenue fact column. It also contains aggregations
```



```

    metrics based on Forecast physical table]]>
</Description>
<Aliases>
<Alias name="F1 Revenue"/>
</Aliases>
<Columns>
  <RefPresentationColumn uid="80cbbe7b-07d6-0000-714b-e31d00000000"
    id="4010:1707" qualifiedName="&quot;Sample Small&quot;
    ..&quot;Facts Revenue&quot;.&quot;Revenue&quot;"/>
</Columns>
</PresentationTable>

```

Paste the code for the Facts Revenue presentation table into the Change.rpd file, and add the appropriate presentation column reference to it. The final Change.rpd file appears as follows, with the key metadata changes shown in bold:

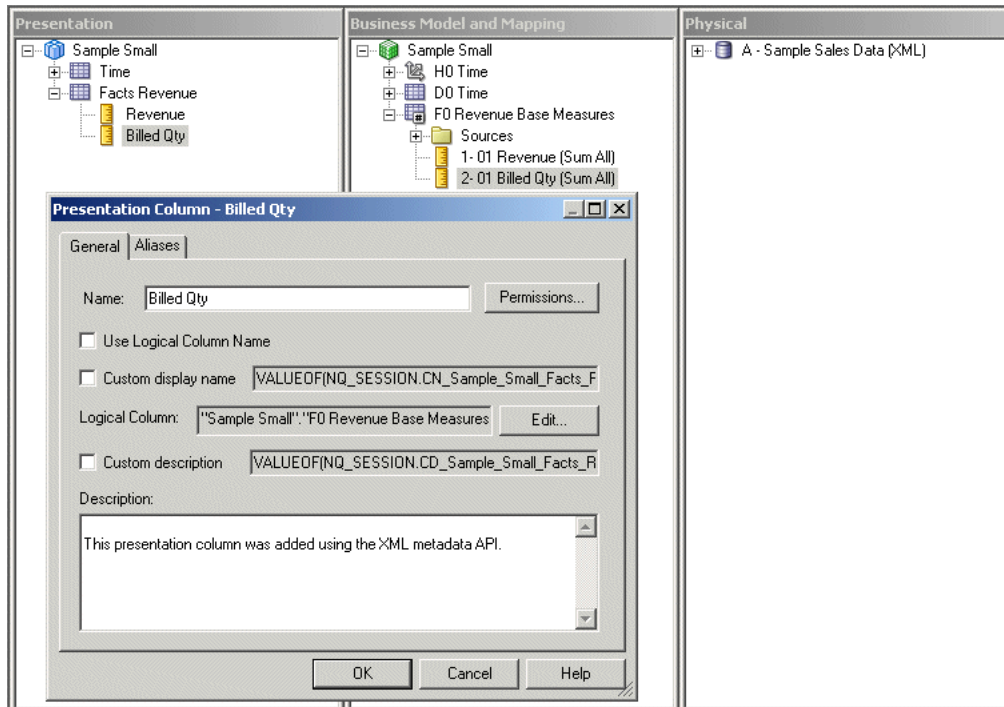
```

<?xml version="1.0" encoding="iso-8859-1"?>
<Repository xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <DECLARE>
    <PresentationTable name="Facts Revenue" parentName="&quot;Sample Small&quot;.&quot;
    &quot;&quot;
    parentId="4004:2137" parentUid="80cab573-07d0-0000-714b-e31d00000000"
    id="4008:12457" uid="80cab839-0fa8-0000-714b-e31d00000000"
    hasDispName="false">
      <Description>
        <![CDATA[This folder contains several types of aggregation metrics
        leveraging single revenue fact column. It also contains aggregations
        metrics based on Forecast physical table]]>
      </Description>
      <Aliases>
      <Alias name="F1 Revenue"/>
      </Aliases>
      <Columns>
        <RefPresentationColumn uid="80cb981e-0faa-0000-714b-e31d00000000"
          id="4010:1707" qualifiedName="&quot;Sample Small&quot;..&quot;
          Facts Revenue&quot;.&quot;Revenue&quot;"/>
        <RefPresentationColumn qualifiedName="&quot;Sample Small&quot;.&quot;
          .&quot;Facts Revenue&quot;.&quot;Billed Qty&quot;"/>
      </Columns>
    </PresentationTable>
    <PresentationColumn name="Billed Qty" parentName="&quot;Sample Small&quot;.&quot;
    .&quot;Facts Revenue&quot;" parentId="4008:2143"
    parentUid="80cab573-07d0-0000-714b-e31d00000000"
    hasDispName="false" overrideLogicalName="true">
      <Description>
        <![CDATA[This presentation column was added using the XML metadata API.]]>
      </Description>
      <RefLogicalColumn uid="80cbbe7b-07d6-0000-714b-e31d00000000"
        id="2006:106" qualifiedName="&quot;SampleSmall&quot;.&quot;
        F0 Rev Base Measures&quot;.&quot;2-01 Billed Qty (Sum All)&quot;"/>
    </PresentationColumn>
  </DECLARE>
</Repository>

```

Finally, run the biserverxmlexec utility to execute Change.rpd to update the original RPD file. [Figure 6-3](#) shows what the updated repository looks like in the Administration Tool.

**Figure 6–3 Updated Repository with New Presentation Column in the Administration Tool**



### 6.3.5 Moving from Test to Production Environments

When you move from test to production environments, you typically need to update connection pool settings for your data sources. You can use the Oracle BI Server XML API to programmatically update these settings in the repository.

To accomplish this task, you first need to open your test repository in the Administration Tool, manually update the connection pool settings for your data sources, and then save the repository under a different name. Next, you can compare the new repository with the original repository using the Administration Tool and then create an XML patch file that contains the changes. Finally, you can use `biserverxmlsec` or `biserverxmlcli` to execute the changes against a test repository.

[Example 6–1](#) provides step-by-step information about how to perform these tasks using an example scenario.

See "Moving Oracle Business Intelligence Components to a Production System" in *Oracle Fusion Middleware Administrator's Guide* for more information about moving from test to production environments in Oracle Business Intelligence.

#### **Example 6–1 Updating Connection Pool Test Values to Production Values**

This example shows how to programmatically update test values for two example connection pools to production values.

The following table shows example values for the two example data sources, in both test and production environments.

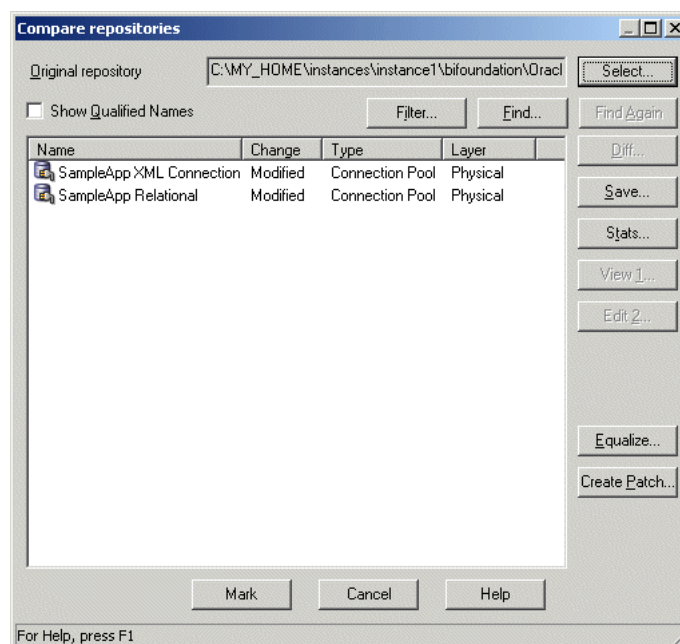
Environment	Data Source Type	Data Source Name	User Name	Password
Test	Relational	orcl_test	user_test	password_test
	XML	VALUEOF(ORACLE_HOME)/XML_data/Forecast	n/a	n/a
Production	Relational	orcl_prod	user_prod	password_prod
	XML	VALUEOF(ORACLE_HOME)/fcast_data/Forecast	n/a	n/a

**To programmatically update connection pool test values to production values:**

1. Open the test repository (for example, SampleApp\_test.rpd) in the Administration Tool.
2. In the Physical layer, open the connection pool for the relational source that needs to be changed.
3. Update the values for **Data Source Name**, **User Name**, and **Password** to the production values. Then, click **OK**.
4. Open the connection pool for the XML source that needs to be changed.
5. Update the value for **Data Source Name** to the production value. Then, click **OK**.
6. Select **File**, then select **Save As**. Then, save the repository under a new name (for example, SampleApp\_prod.rpd).
7. Select **File**, then select **Compare**.
8. Select the original repository file (SampleApp\_test.rpd) to compare to the currently open repository file (SampleApp\_prod.rpd).

Note that the Compare repositories dialog lists the two connection pools you modified, as shown in [Figure 6-4](#).

**Figure 6-4 Compare Repositories Dialog**



- Click **Create Patch**, enter the name of the patch file you want to create (for example, `SampleApp_diff.xml`), and click **Save**.

The resulting XML patch file might appear as follows:

```
<?xml version="1.0" encoding="UTF-8" ?>
<Repository xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
<DECLARE>
<ConnectionPool name="SampleApp_XML" parentName="&quot;1 - Sample App Xml
Data&quot;" parentId="3023:84"
parentUid="80ca62be-0bcf-0000-714b-e31d00000000" id="3029:1158"
uid="80ca62c4-0bcf-0000-714b-e31d00000000"
password="D7EDED84BC624A917F5B462A4DCA05CDCE256EEEEEDC97D5AC4D07C3A079829F"
timeout="300" maxConnDiff="10" maxConn="10"
dataSource="VALUEOF(BI_EE_HOME)/fcast_data/Forecast" type="Default"
reqQualifiedTableName="false" isSharedLogin="false"
isConcurrentQueriesInConnection="false" isCloseAfterEveryRequest="true"
xmlRefreshInterval="4294967295" outputType="xml" bulkInsertBufferSize="0"
transactionBoundary="0" xmlaUseSession="false" multiThreaded="false"
supportParams="false" isSiebelJDBSecured="false">
<Description></Description>
</ConnectionPool>
<ConnectionPool name="SampleApp_Relational" parentName="&quot;1 - Sample App
Data&quot;" parentId="3023:85"
parentUid="80cc60c9-0bcf-0000-714b-e31d00000000" id="3029:1159"
uid="80ca62bf-0bd5-0000-714b-e31d00000000" user="user_prod"
password="D7EDED84BC624A917F5B462A4DCA05CDCE256EEEEEDC97D5A1
50C61FBEB9092AF80FAEC9819DD51771A41425D03FB466B55BB9F03BCF6439"
timeout="4294967295" maxConnDiff="10" maxConn="10" dataSource="orcl_prod"
type="OCI10G" reqQualifiedTableName="false" isSharedLogin="true"
isConcurrentQueriesInConnection="false" isCloseAfterEveryRequest="false"
outputType="xml" bulkInsertBufferSize="131072" tempTablePrefix="TT"
transactionBoundary="1000" xmlaUseSession="false" isSiebelJDBSecured="false">
<Description></Description>
</ConnectionPool>
</DECLARE>
</Repository>
```

- After you create the patch, your test repository might continue to change, including name changes that could affect the `parentNames` or other attributes in your patch code. If this occurs, regenerate the patch using the steps in this section.
- You can use `biserverxmlexec` to execute the generated XML patch file against the test version of the repository to programmatically update the connection pool settings. For example:

```
biserverxmlexec -I SampleApp_diff.xml -B SampleApp_test.rpd
-O SampleApp_prod.rpd
Give password: my_rpd_password
```

To execute the XML patch file against a repository loaded into the Oracle BI Server, use `biserverxmlcli`.

### 6.3.6 Using XSL to Transform XML Files

You can use XSL to perform transformations on the XML files you generate. For example, you might want to use XSL to remove object IDs or UIDs to avoid conflicts.

[Example 6–2](#) shows a sample XSL script that you can use as a model for your own transformations. The example script disables all logical table sources in the repository.

**Example 6-2 Sample XSL Script**

```

<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="2.0"
xmlns:xalan="http://xml.apache.org/xslt"
xmlns:fn="http://www.w3.org/2003/11/xpath-functions">
<xsl:output method="xml" version="1.0" encoding="UTF-8" indent="yes"
cdata-section-elements="Description Expr Value" xalan:indent-amount="4"/>
<xsl:strip-space elements="*" />

<xsl:template match="/Repository/DECLARE">
  <xsl:element name="Repository">
    <xsl:element name="DECLARE">
      <xsl:for-each select="/*">
        <xsl:call-template name="objectmatch"/>
      </xsl:for-each>
    </xsl:element>
  </xsl:element>
</xsl:template>

<!-- The 'objectmatch' template is matched for every metadata object -->
<xsl:template name="objectmatch">
  <xsl:choose>
    <!-- We copy every object except for Logical Table Sources. We call the
'ltsmatch' template for LTSs -->
    <xsl:when test="name() = 'LogicalTableSource'">
      <xsl:call-template name="ltsmatch"/>
    </xsl:when>
    <xsl:otherwise>
      <xsl:copy-of select=".">
        <xsl:apply-templates/>
      </xsl:copy-of>
    </xsl:otherwise>
  </xsl:choose>
</xsl:template>

<!-- The 'ltsmatch' template gets matched for every logical table source. -->
<xsl:template name="ltsmatch">
  <xsl:element name="LogicalTableSource">
    <xsl:for-each select="/*">
      <!-- We call the 'ltspropmatch' template to process specific attributes on
the LTS -->
      <xsl:call-template name="ltspropmatch"/>
    </xsl:for-each>
    <xsl:for-each select="/*">
      <xsl:call-template name="objectmatch"/>
    </xsl:for-each>
  </xsl:element>
</xsl:template>

<xsl:template name="ltspropmatch">
  <xsl:choose>
    <!-- When we encounter the 'isActive' property, we set it to false. -->
    <xsl:when test="name() = 'isActive'">
      <xsl:attribute name="isActive">
        <xsl:text>>false</xsl:text>
      </xsl:attribute>
    </xsl:when>
    <xsl:otherwise>
      <xsl:copy-of select=".">
        <xsl:apply-templates/>
      </xsl:copy-of>
    </xsl:otherwise>
  </xsl:choose>

```

```

        </xsl:copy-of>
    </xsl:otherwise>
</xsl:choose>
</xsl:template>

</xsl:stylesheet>

```

## 6.4 Generic XML Elements and Attributes

This section describes generic elements and attributes that are common, like Description, name, and id. In the Oracle BI Server XML schema (.xsd file), these elements and attributes are defined under the `object_t` and `ref_t` elements.

The only common element is the Description element. This element can hold a text string describing a particular object. For example:

```

<Description>
  <![CDATA[ Generated by Time Series Wizard ]]>
</Description>

```

There are eleven common attributes defined under the `object_t` element. [Table 6-1](#) lists these attributes.

**Table 6-1 Common XML Attributes in `object_t`**

Attribute Name	Description
name	The name of the object.
parentName	The qualified name of the parent of the object, in the format <code>parent1.parent2.parent3</code> , and so on.
parentId	The global unique identifier of the parent of the object, in the format <code>type_id:parent_object_id</code> .
parentUid	The internal identifier of the parent of the object. Referring to objects using this attribute instead of qualified names can provide faster access.
id	The global unique identifier of the object, in the format <code>type_id:object_id</code> .
uid	The internal identifier of the object. Referring to objects using this attribute instead of qualified names can provide faster access.
iconIndex	The index number for the icon of the object in the Administration Tool.
isDefaultReadable	If set to <code>true</code> , indicates that this object is readable by default.
isDefaultReadWriteable	If set to <code>true</code> , indicates that this object is both readable and writable by default.
isDefaultDeletable	If set to <code>true</code> , indicates that this object is deletable by default.
isDefaultGrantable	If set to <code>true</code> , indicates that this object is grantable by default.
isDefaultAll	If set to <code>true</code> , indicates that this object is readable, writable, deletable, and grantable by default.

In addition to the common attributes defined in `object_t`, additional common attributes are defined in `ref_t`. These attributes are used when one object references another object or set of objects. For example, business model objects reference the logical tables contained in that business model, using the sub-element

RefLogicalTable. All referenced sub-elements have the same common attributes shown in [Table 6–2](#).

**Table 6–2 Common XML Attributes in ref\_t**

Attribute Name	Description
id	The global unique identifier of the object, in the format <code>type_id:object_id</code> .
uid	The internal identifier of the object. Referring to objects using this attribute instead of qualified names can provide faster access.
qualifiedName	The fully qualified name of the object. For example, the qualifiedName attribute for a logical column might appear as follows:  qualifiedName="&quot;Sample Sales&quot;.&quot;F3 Rolling Measures&quot;.&quot;1-22L Revenue (All Hist Sum)&quot;,"

### 6.4.1 About Object Identifiers

Oracle BI Server XML metadata objects can have three different types of object identifiers, any of which can be used to reference the object. Object identifiers include:

- Fully qualified name (qualifiedName).** This identifier is the only reference you need to include in your XML when creating a new object, because the other identifiers (uid and id) are automatically generated by the Oracle BI Server when it opens the RPD file. The fully qualified name must be unique within the file, but the name (the text after the last dot) only needs to be unique within the scope of its parent.

The fully qualified name is the best identifier to use when searching an XML repository file to find a particular object, because the name of each object is visible in the Administration Tool. For example:

```
qualifiedName="&quot;Sample Sales&quot;.&quot;H0 Time&quot;.&quot;Month&quot;,"
```

Note that qualified names for Presentation objects use .. between the subject area and the presentation table name. This syntax is used because there is no such thing as a presentation schema, which would normally go between a catalog and a table. For example:

```
qualifiedName="&quot;Sample Small&quot;..&quot;Facts Revenue&quot;.&quot;Billed Qty&quot;,"
```

A similar convention is used for Physical layer objects, when the database does not have a physical catalog or physical schema.

- uid.** This identifier, also called the UpgradeID, is a 32-bit number that is unique across the entire repository. The uid is created by the Oracle BI Server for the lifetime of the object. You can leave it blank when creating new objects in XML, because the server generates it automatically when it loads the RPD file. When you alter an object, make sure not to change the uid.

The uid is used for compare and merge algorithms. It can also be useful for tracing relationships when analyzing or reverse-engineering XML metadata.

For example: uid="80ca62be-0bcf-0000-714b-e31d00000000"

- **id.** This identifier, also called the VoidID, is created by the Oracle BI Server for the lifetime of the object. It is used in situations where the object type can be used to achieve better performance than the uid.

Like the uid, you can leave the id blank when creating new objects in XML, because the server generates it automatically when it loads the RPD file. When you alter an object, make sure not to change the id.

The id is a structure that contains two pieces of information: the type and a unique number within that type (for example, 2000:123456). Each object type, such as a logical column, has a particular number associated with it (for example, 2000). So, two objects of the same type both have the same number in the first part of the id.

The unique number in the second part of the id is a randomly assigned number within that type. It must be unique within the type, but does not need to be unique across different object types. For example, a repository might have the valid ids 2000:123456 and 2001:123456.

Although the id is typically created by the Oracle BI Server, you can create your own if needed, as long as you ensure that it is unique.

For example: id="4010:1720"

## 6.4.2 About Naming Requirements for Repository Objects

All repository object names must follow these requirements:

- Names cannot be longer than 128 characters
- Names cannot contain leading or trailing spaces
- Names cannot contain single quotes, question marks, or asterisks

Note that repository object names can include multibyte characters.



---



---

## XML Logical Elements

Logical elements are typically those elements that are exposed in the Business Model and Mapping layer, or in other words, the elements that appear in the center pane of the Administration Tool.

This chapter contains the following topics:

- [Section 7.1, "XML Elements: Logical Column"](#)
- [Section 7.2, "XML Elements: Business Model"](#)
- [Section 7.3, "XML Elements: Logical Complex Join"](#)
- [Section 7.4, "XML Elements: Logical Level"](#)
- [Section 7.5, "XML Elements: Dimension"](#)
- [Section 7.6, "XML Elements: Logical Table"](#)
- [Section 7.7, "XML Elements: Logical Foreign Key"](#)
- [Section 7.8, "XML Elements: Logical Key"](#)
- [Section 7.9, "XML Elements: Logical Table Source"](#)
- [Section 7.10, "XML Elements: Logical Source Folder"](#)
- [Section 7.11, "XML Elements: Measure Definition"](#)
- [Section 7.12, "XML Elements: Aggregation Rule"](#)
- [Section 7.13, "XML Elements: Override Aggregation Rule"](#)
- [Section 7.14, "XML Elements: Logical Display Folder"](#)

### 7.1 XML Elements: Logical Column

The logical column element corresponds to the logical column object in the Business Model and Mapping layer.

The logical column tag includes the following attributes:

**Table 7–1 Logical Column Tag Attributes**

Attribute Name	Description
isDerived	When set to true, indicates that the logical column is based on a user-defined expression (for example, another logical column, a constant value, or a variable).

**Table 7-1 (Cont.) Logical Column Tag Attributes**

Attribute Name	Description
IsWriteable	When set to true, indicates that write back has been enabled for this column. This feature is typically used with ADF Business Component data sources. This option is called <b>Writeable</b> in the Administration Tool.

The logical column tag includes the following child elements:

**Table 7-2 Logical Column Child Elements**

Element Name	Description
Expr	Contains the expression from which the logical column should be derived. This element is only used when the <code>isDerived</code> attribute is set to true.
CustomSortOrder	If the sort order for this logical column is based on a different logical column, this element references that logical column. The logical column upon which the sort order is based is contained in a sub-element called <code>RefLogicalColumn</code> .
DescriptorID	When multilingual columns are based on a lookup function, it is common to specify the non-translated lookup key column as the descriptor ID column of the translated column. This element references the descriptor ID column. The descriptor ID logical column is contained in a sub-element called <code>RefLogicalColumn</code> .
Levels	For dimension columns, shows the level to which this column has been assigned. For level-based measures, shows the level at which the column has been explicitly fixed. The level is contained in a sub-element called <code>RefLogicalLevel</code> .

### Syntax

```
<LogicalColumn ...
  isDerived=""
  isWriteable="">
  <Description />
  <Expr>...</Expr>
  <CustomSortOrder>
    <RefLogicalColumn .../>
  </CustomSortOrder>
  <DescriptorID>
    <RefLogicalColumn .../>
  </DescriptorID>
  <Levels>
    <RefLogicalLevel .../>
  </Levels>
</LogicalColumn>
```

### Example

```
<LogicalColumn name="Person ID"
  parentName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
  D01 Customers&quot;,"
  parentId="2035:61791" parentUid="80cbbddc-07f3-0000-714b-e31d00000000"
  id="2006:61814" uid="80cbbe7b-07d6-0000-714b-e31d00000000"
  isWriteable="false">
  <Levels>
```

```

    <RefLogicalLevel id="2025:63664"
      uid="80cbc70a-07e9-0000-714b-e31d00000000"
      qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;
        .&quot;H01 Customers&quot;.&quot;Customer ID&quot;"/>
  </Levels>
</LogicalColumn>

```

## 7.2 XML Elements: Business Model

The business model element corresponds to the business model object in the Business Model and Mapping layer.

The business model tag includes the following attributes:

**Table 7–3 Subject Area Tag Attributes**

Attribute Name	Description
isClassicStar	If set to true, indicates that the business model follows a star schema. Star schemas have one-to-many relationships between the logical dimension tables and the logical fact table.
isAvailable	If set to true, indicates that the corresponding subject area is available for queries.

The business model tag includes the following child elements:

**Table 7–4 Subject Area Child Elements**

Element Name	Description
Tables	References the logical tables that belong to this business model. Each logical table is contained in a sub-element called RefLogicalTable.
DisplayFolders	References the display folders that belong to this business model. Each display folder is contained in a sub-element called RefLogicalDisplayFolder.

### Syntax

```

<BusinessModel ...
  isClassicStar=""
  isAvailable="">
  <Description />
  <Tables>
    <RefLogicalTable .../>
    <RefLogicalTable .../>
  </Tables>
  <DisplayFolders>
    <RefLogicalDisplayFolder .../>
    <RefLogicalDisplayFolder .../>
  </DisplayFolders>
</BusinessModel>

```

### Example

```

<BusinessModel name="9 - Usage Tracking"
  id="2000:22314" uid="802b289f-07d0-0000-714b-e31d00000000"
  isClassicStar="false" isAvailable="true">
</BusinessModel>

```

## 7.3 XML Elements: Logical Complex Join

The logical complex join element corresponds to the logical join object in the Business Model and Mapping Layer.

The logical complex join tag includes the following attributes:

**Table 7–5 Logical Complex Join Tag Attributes**

Attribute Name	Description
type	The type of join. Valid values are Inner, LeftOuter, RightOuter, FullOuter, and FullOuterStitch.

The logical complex join tag includes the following child elements:

**Table 7–6 Logical Complex Join Child Elements**

Element Name	Description
Roles	<p>Roles define how a logical table or a logical level contributes to the join.</p> <p>Each role is contained in a sub-element called <code>Role</code>. The role sub-element has two attributes:</p> <ul style="list-style-type: none"> <li>▪ <code>multiplicity</code> indicates the multiplicity of the table or level in the join. Valid values are <code>([0-9])* TO ([0-9])*</code>, <code>ZERO TO ONE</code>, <code>ZERO TO MANY</code>, <code>ONE TO ONE</code>, <code>ONE TO MANY</code>, and <code>UNKNOWN</code>.</li> <li>▪ <code>isAggregate</code> indicates whether the table or level is an aggregate.</li> </ul> <p>Each <code>Role</code> sub-element can contain two additional sub-elements: <code>RefLogicalTable</code>, which references the logical tables in the join, and <code>RefLogicalLevel</code>, which references the logical levels in the join.</p> <p>See the syntax for the logical complex join element to see the complete hierarchy for the roles child element.</p>
DrivingTable	<p>If a driving table has been specified for the key, this element references that logical table.</p> <p>The driving table is contained in a sub-element called <code>RefLogicalTable</code>.</p>

### Syntax

```
<LogicalComplexJoin ...
  type="">
  <Description />
  <Roles>
    <Role multiplicity="" isAggregate="">
      <RefLogicalTable .../>
      <RefLogicalLevel .../>
    </Role>
  </Roles>
  <DrivingTable>
    <RefLogicalTable .../>
  </DrivingTable>
</LogicalComplexJoin>
```

### Example

```
<LogicalComplexJoin name="Relationship_2004:617171273059824"
  id="2004:61717" uid="80cbbf09-07d4-0000-714b-e31d00000000">
```

```

    type="Inner">
  <Roles>
    <Role multiplicity="n..n" isAggregate="false">
      <RefLogicalTable id="2035:61664"
        uid="80cbbdd9-07f3-0000-714b-e31d00000000"
        qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
          F1 Order Facts&quot;"/>
    </Role>
    <Role multiplicity="0..1" isAggregate="false">
      <RefLogicalTable id="2035:61573"
        uid="80cbbdd5-07f3-0000-714b-e31d00000000"
        qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
          D11 Discounts and Coupons&quot;"/>
    </Role>
  </Roles>
</LogicalComplexJoin>

```

## 7.4 XML Elements: Logical Level

The logical level element corresponds to the logical level object contained in the dimensions in the Business Model and Mapping layer.

The logical level tag includes the following attributes:

**Table 7-7 Logical Level Tag Attributes**

Attribute Name	Description
isUniqueSourceKey	If set to true, indicates that this level is associated with the logical column or columns that comprise the logical key of the dimension table (or in other words, that this level is the lowest level of the dimension).
isGTA	If set to true, indicates that this level is the Grand Total level, which is a special level representing the grand total for a dimension. Each dimension can have just one Grand Total level. A grand total level does not contain dimensional attributes and does not have a level key. <b>Note:</b> GTA stands for Grand Total Alias.
isFDUC	If set to true, indicates that the logical level rolls up to its parent. This option is called <b>Supports rollup to higher level of aggregation</b> in the Administration Tool. <b>Note:</b> FDUC stands for FullDrillUpCoverage.
levelConst	The star schema level constant.
memberCount	The number of elements that exist at this logical level.

The logical level tag includes the following child elements:

**Table 7-8 Logical Level Child Elements**

Element Name	Description
ChildLevels	References the child levels that have been defined for this logical level. Each child level is contained in a sub-element called RefLogicalLevel.

**Table 7–8 (Cont.) Logical Level Child Elements**

Element Name	Description
PreferredDrillDown	If a drill path has been defined that is outside the normal drill path defined by the dimension level hierarchy, this element references the level to which users should drill.  The preferred drill level is contained in a sub-element called RefLogicalLevel.
ParentKey	References the parent key for this level (for dimensions with parent-child hierarchies only).  The parent key is contained in a sub-element called RefLogicalKey.

**Syntax**

```

<LogicalLevel ...
  isUniqueSourceKey=""
  isGTA=""
  isFDUC=""
  levelConst=""
  memberCount="">
  <Description />
  <ChildLevels>
    <RefLogicalLevel .../>
    <RefLogicalLevel .../>
  </ChildLevels>
  <PreferredDrillDown>
    <RefLogicalLevel .../>
  </PreferredDrillDown>
  <ParentKey>
    <RefLogicalLevel .../>
  </ParentKey>
</LogicalLevel>

```

**Example**

```

<LogicalLevel name="City"
  parentName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
  H02 Cust Primary Addresses&quot;"
  parentId="2019:63679" parentUid="80cbc715-07e3-0000-714b-e31d00000000"
  id="2025:63890" uid="80cbc796-07e9-0000-714b-e31d00000000"
  isGTA="false" isFDUC="true" memberCount="1" levelConst="&apos;City&apos;">
  <ChildLevels>
    <RefLogicalLevel id="2025:63894"
      uid="80cbc798-07e9-0000-714b-e31d00000000"
      qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
      H02 Cust Primary Addresses&quot;.&quot;Cust Address&quot;" />
  </ChildLevels>
</LogicalLevel>

```

## 7.5 XML Elements: Dimension

The dimension element corresponds to the dimension object in the Business Model and Mapping layer.

The dimension tag includes the following attributes:

**Table 7–9 Dimension Tag Attributes**

Attribute Name	Description
isTimeDim	If set to true, indicates that this dimension is a time dimension.
isRagged	If set to true, indicates that this dimension hierarchy is unbalanced. An unbalanced hierarchy is one that contains levels that are not at the same depth.
isSkipped	If set to true, indicates that this dimension hierarchy is a skip-level hierarchy. A skip-level hierarchy is one in which there are members that do not have a value for a particular parent level.
isValueBased	If set to true, indicates that this object is a dimension with parent-child hierarchies. A parent-child hierarchy is a hierarchy of members that all have the same type. In a parent-child hierarchy, the inter-member relationships are parent-child relationships between dimension members.

The dimension tag includes the following child elements:

**Table 7–10 Dimension Child Elements**

Element Name	Description
RootLevels	References the root level or levels of this dimension. Root levels are levels in the hierarchy that do not have any levels above them. In the Administration Tool, root levels appear directly below the dimension icon.  Each level is contained in a sub-element called <code>RefLogicalLevel</code> .
DefaultRootLevel	References the default root level of this dimension. When there are many root levels in a dimension, the default root level is the one that is used for drilldown.  The default root level is contained in a sub-element called <code>RefLogicalLevel</code> .

### Syntax

```
<Dimension ...
  isTimeDim=" "
  isRagged=" "
  isSkipped=" "
  isValueBased=" " >
  <Description />
  <RootLevels>
    <RefLogicalLevel .../>
    <RefLogicalLevel .../>
  </RootLevels>
  <DefaultRootLevel>
    <RefLogicalLevel .../>
  </DefaultRootLevel>
</Dimension>
```

### Example

```
<Dimension name="H0 Time"
  parentName="&quot;3 - Sample Federated&quot;"
  parentId="2000:53458" parentUid="80cb9462-07d0-0000-714b-e31d00000000"
  id="2019:53459" uid="80cb9463-07e3-0000-714b-e31d00000000"
  isTimeDim="true" isValueBased="false" isRagged="false" isSkipped="false">
```

```

<RootLevels>
  <RefLogicalLevel id="2025:53882"
    uid="80cb960a-07e9-0000-714b-e31d00000000"
    qualifiedName="&quot;3 - Sample Federated&quot;.&quot;H0 Time&quot;.&quot;
      Total Time&quot;"/>
</RootLevels>
<DefaultRootLevel>
  <RefLogicalLevel id="2025:53882"
    uid="80cb960a-07e9-0000-714b-e31d00000000"
    qualifiedName="&quot;3 - Sample Federated&quot;.&quot;H0 Time&quot;.&quot;
      Total Time&quot;"/>
</DefaultRootLevel>
</Dimension>

```

## 7.6 XML Elements: Logical Table

The logical table element corresponds to the logical table object in the Business Model and Mapping layer.

The logical table tag includes the following attributes:

**Table 7–11 Logical Table Tag Attributes**

Attribute Name	Description
isBridgeTable	In previous releases, this attribute was used to indicate whether the logical table is a bridge table. This attribute exists only for backward compatibility with previous releases.
isLookupTable	If set to true, indicates that this logical table is a lookup table. Lookup tables are typically used to store fields that contain translations in several languages. Queries that require multilingual data join the base table and lookup table to obtain the translated values for each row in the base table.
x	The <i>x</i> coordinate of the table when it is shown in the business model diagrams.
y	The <i>y</i> coordinate of the table when it is shown in the business model diagrams.

The logical table tag includes the following child elements:

**Table 7–12 Logical Table Child Elements**

Element Name	Description
LevelColumn	References the column that is used in the level that corresponds to this logical table. Each level column is contained in a sub-element called RefLogicalColumn.
Columns	References the logical columns that belong to this logical table. Each logical column is contained in a sub-element called RefLogicalColumn.
TableSources	References the logical table sources for this logical table. Each logical table source is contained in a sub-element called RefLogicalTableSource.

### Syntax

```
<LogicalTable ...
```



```

        isBridgeTable=""
        isLookupTable=""
        x=""
        y="">
<Description />
<LevelColumn>
    <RefLogicalColumn .../>
</LevelColumn>
<Columns>
    <RefLogicalColumn .../>
    <RefLogicalColumn .../>
</Columns>
<TableSources>
    <RefLogicalTableSource .../>
    <RefLogicalTableSource .../>
</TableSources>
</LogicalTable>

```

### Example

```

<LogicalTable name="F2 Coupon Usages"
    parentName="&quot;8 - Fusion Order Demo (OLTP)&quot;"
    parentId="2000:61417" parentUid="80cbbdd2-07d0-0000-714b-e31d00000000"
    id="2035:61501" uid="80cbbde8-07f3-0000-714b-e31d00000000"
    x="133" y="378">
<Columns>
    <RefLogicalColumn id="2006:61504"
        uid="80cbbefc-07d6-0000-714b-e31d00000000"
        qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
            F2 Coupon Usages&quot;.&quot;Applied Date&quot;"/>
    <RefLogicalColumn id="2006:61507"
        uid="80cbbdff-07d6-0000-714b-e31d00000000"
        qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
            F2 Coupon Usages&quot;.&quot;# of Customers&quot;"/>
    <RefLogicalColumn id="2006:61508"
        uid="80cbbf00-07d6-0000-714b-e31d00000000"
        qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
            F2 Coupon Usages&quot;.&quot;# of Coupons and Discounts&quot;"/>
    <RefLogicalColumn id="2006:61512"
        uid="80cbbf04-07d6-0000-714b-e31d00000000"
        qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
            F2 Coupon Usages&quot;.&quot;Order ID&quot;"/>
</Columns>
<TableSources>
    <RefLogicalTableSource id="2037:61503"
        uid="80cbc055-07f5-0000-714b-e31d00000000"
        qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
            F2 Coupon Usages&quot;.&quot;COUPON_USAGES&quot;"/>
</TableSources>
</LogicalTable>

```

## 7.7 XML Elements: Logical Foreign Key

The logical foreign key element corresponds to the logical foreign key object in the Business Model and Mapping layer.

The logical foreign key tag includes the following attributes:

**Table 7–13 Logical Foreign Key Tag Attributes**

Attribute Name	Description
type	The type of join. Valid values are Inner, LeftOuter, RightOuter, FullOuter, and FullOuterStitch.

The logical foreign key tag includes the following child elements:

**Table 7–14 Logical Foreign Key Child Elements**

Element Name	Description
Columns	References the logical columns in the table that the foreign key references. Each logical column is contained in a sub-element called RefLogicalColumn.
CounterPartKey	References the foreign key columns for this foreign key. Each logical column is contained in a sub-element called RefLogicalKey.
DrivingTable	If a driving table has been specified for this logical foreign key, this element references that logical table. The driving table is contained in a sub-element called RefLogicalTable.

### Syntax

```
<LogicalForeignKey ...
  type="" >
  <Description />
  <Columns>
    <RefLogicalColumn .../>
    <RefLogicalColumn .../>
  </Columns>
  <CounterPartKey>
    <RefLogicalKey .../>
  </CounterPartKey>
  <DrivingTable>
    <RefLogicalTable .../>
  </DrivingTable>
</LogicalForeignKey>
```

### Example

```
<LogicalForeignKey name="Measures_FKey"
  parentName="&quot;9 - Usage Tracking&quot;.&quot;Measures&quot;"
  parentId="2035:22319" parentUid="802b28a4-07f3-0000-714b-e31d00000000"
  id="2033:22559" uid="802b29a5-07f1-0000-714b-e31d00000000"
  type="Inner">
  <Columns>
    <RefLogicalColumn id="2006:22349"
      uid="802b28b2-07d6-0000-714b-e31d00000000"
      qualifiedName="&quot;9 - Usage Tracking&quot;.&quot;Measures&quot;.&quot;
        QueryText&quot;"/>
  </Columns>
  <CounterPartKey>
    <RefLogicalKey id="2008:22412"
      uid="802b29a0-07d8-0000-714b-e31d00000000"
      qualifiedName="&quot;9 - Usage Tracking&quot;.&quot;Topic&quot;.&quot;
        Topic_Key&quot;"/>
  </CounterPartKey>
</LogicalForeignKey>
```

```

    </CounterPartKey>
  </LogicalForeignKey>

```

## 7.8 XML Elements: Logical Key

The logical key element corresponds to the logical key object in the Business Model and Mapping layer.

The logical key tag includes the following attributes:

**Table 7–15 Logical Key Tag Attributes**

Attribute Name	Description
isPrimary	If set to true, indicates that this key is the logical primary key for the table.
isForDrillDown	If set to true, indicates that this key is the key that is displayed when a user clicks to drill down.
isChronKey	If set to true, indicates that this key is a chronological key for a time dimension.

The logical key tag includes the following child elements:

**Table 7–16 Logical Key Child Elements**

Element Name	Description
Columns	References the logical column that defines the key of the logical table.  The logical column is contained in a sub-element called RefLogicalColumn.

### Syntax

```

<LogicalKey ...
  isPrimary=" "
  isForDrillDown=" "
  isChronKey=" ">
  <Description />
  <Columns>
    <RefLogicalColumn .../>
  </Columns>
</LogicalKey>

```

### Example

```

<LogicalKey name="CUSTOMER_ID"
  parentName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
  F2 Coupon Usages&quot;";
  parentId="2035:61501" parentUid="80cbbde8-07f3-0000-714b-e31d00000000"
  id="2008:61513" uid="80cbbf39-07d8-0000-714b-e31d00000000"
  isPrimary="true">
  <Columns>
    <RefLogicalColumn id="2006:61512"
      uid="80cbbf04-07d6-0000-714b-e31d00000000"
      qualifiedName="&quot;8 - Fusion Order Demo (OLTP)&quot;.&quot;
      F2 Coupon Usages&quot;.&quot;Order ID&quot;"/>
  </Columns>
</LogicalKey>

```

## 7.9 XML Elements: Logical Table Source

The logical table source element corresponds to the logical table source object in the Business Model and Mapping layer. See also the column mapping element, described in [Section 7.9.1, "Column Mapping."](#)

The logical table source tag includes the following attributes:

**Table 7–17 Logical Table Source Attributes**

Attribute Name	Description
isDistinct	This attribute is used if the values for the logical table source are unique. In the Administration Tool, this option is called <b>Select distinct values</b> in the Content tab of the Logical Table Source dialog.
isDimOnly	This attribute is not used.
isSysGen	If set to true, indicates that an internal utility such as the Aggregate Persistence Wizard has generated this logical table source.
canCombine	If set to true, indicates that this logical table source can be combined with other logical table sources to provide a full set of results. In the Administration Tool, this option is called <b>This source should be combined with other sources at this level</b> in the Content tab of the Logical Table Source dialog.
isActive	If set to true, indicates that this logical table source is active. In the Administration Tool, this attribute corresponds with the <b>Disabled</b> option in the General tab of the Logical Table Source dialog.
allowUnmappedTable	Determines if the logical table source can have physical tables which are not mapped to logical columns.  This can occur with a snowflake of physical tables A->B->C, where a logical table maps to columns in A and C, but B needs to be included in the logical table source because it is in the join path between A and C.
priorityGroup	Indicates the priority group number of this logical table source. Logical table source priority group numbers are assigned to indicate which logical table source should be used for queries for which there is more than one logical table source that can satisfy the requested set of columns.

The logical table source tag includes the following child elements:

**Table 7–18 Logical Table Source Child Elements**

Element Name	Description
Link	<p>References the set of physical tables to which the logical table source is mapped. These links are references to the physical joins that already exist. In the Administration Tool, this element corresponds with the <b>Map to these tables</b> section in the General tab of the Logical Table Source dialog.</p> <p>Each link child element contains two sub-elements, <code>StartNode</code> and <code>Joins</code>:</p> <ul style="list-style-type: none"> <li>■ The <code>StartNode</code> sub-element references the physical table identified by this link. It can contain the <code>RefCubeTable</code>, <code>RefPhysicalTable</code>, <code>RefAWDimension</code>, or <code>RefAWCube</code> sub-element, depending on your data source type.</li> <li>■ The <code>Joins</code> sub-element defines the joins for this link. It contains different sub-elements, depending on the type of join. For example: <ul style="list-style-type: none"> <li><code>RefCubeTable</code>, <code>RefPhysicalTable</code>, <code>RefAWCube</code>, or <code>RefAWDimension</code></li> <li><code>RefPhysicalForeignKey</code> or <code>RefComplexJoin</code></li> <li><code>DrivingTable</code>, which contains a sub-element <code>RefPhysicalTable</code></li> </ul> </li> </ul> <p>The <code>Joins</code> sub-element has two attributes: <code>type</code> (<code>Inner</code>, <code>LeftOuter</code>, <code>RightOuter</code>, <code>FullOuter</code>, or <code>FullOuterStitch</code>) and <code>cardinality</code> (<code>ONE TO ONE</code>, <code>ZERO OR ONE TO ONE</code>, <code>ONE TO ZERO OR ONE</code>, <code>ZERO OR ONE TO ZERO OR ONE</code>, <code>ONE TO MANY</code>, <code>ZERO OR ONE TO MANY</code>, <code>ZERO OR ONE TO MANY</code>, <code>MANY TO ONE</code>, <code>MANY TO ZERO OR ONE</code>, or <code>MANY TO MANY</code>).</p> <p>See the syntax for the logical table source element to see the complete hierarchy for the link child element.</p>
WhereClause	<p>If a <code>WHERE</code> clause filter has been defined, contains the <code>WHERE</code> clause expression that limits the number of rows the source uses in the resultant table. The expression is contained in a sub-element called <code>Expr</code>.</p> <p>In the Administration Tool, this option is called <b>Use this "WHERE clause" filter to limit rows returned (exclude the "WHERE")</b> in the Content tab of the Logical Table Source dialog.</p>
GroupBy	<p>Contains the expression that defines whether the aggregation is grouped by logical level or by column. The expression is contained in a sub-element called <code>Expr</code>.</p> <p>In the Administration Tool, this option is called <b>Aggregation content, group by</b> in the Content tab of the Logical Table Source dialog.</p>
FragmentContent	<p>Contains the expression that defines how the source is fragmented. The expression is contained in a sub-element called <code>Expr</code>.</p> <p>This child element is used in conjunction with the <code>canCombine</code> attribute. In the Administration Tool, this option is called <b>Fragmentation content</b> in the Content tab of the Logical Table Source dialog.</p>
ClosureTable	<p>References the parent-child table, if any.</p> <p>The parent-child table is contained in a sub-element called <code>RefPhysicalTable</code>.</p>

**Syntax**

```

<LogicalTableSource ...
  isDistinct=""
  isSysGen=""
  canCombine=""
  isActive=""
  priorityGroup="">
<Description />
<Link>
  <StartNode>
    <RefPhysicalTable .../>
  </StartNode>
  <Joins>
    <Join type="" cardinality="">
      <RefPhysicalTable .../>
      <RefPhysicalTable .../>
      <RefPhysicalForeignKey .../>
    </Join>
  </Joins>
</Link>
<WhereClause>
  <Expr>...</Expr>
</WhereClause>
<GroupBy>
  <Expr />
</GroupBy>
<FragmentContent>
  <Expr />
</FragmentContent>
<ClosureTable>
  <RefPhysicalTable .../>
</ClosureTable>
</LogicalTableSource>

```

**Example**

```

<LogicalTableSource name="LTS3 Channels (Bridged to Revenue)"
  parentName="&quot;1 - Sample App&quot;.&quot;D4 Offices and Channels
  (M:M Joins)&quot;"
  parentId="2035:11648" parentUid="80cab595-07f3-0000-714b-e31d00000000"
  id="2037:12357" uid="80cab7d5-07f5-0000-714b-e31d00000000"
  isActive="true">
<Link>
  <StartNode>
    <RefPhysicalTable id="3001:42412"
      uid="80cb6825-0bb9-0000-714b-e31d00000000"
      qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
      &quot;.&quot;BISAMPLE&quot;.&quot;D30 Offices&quot;"/>
    </StartNode>
  <Joins>
    <Join type="Inner" cardinality=" ONE TO MANY">
      <RefPhysicalTable id="3001:42412"
        uid="80cb6825-0bb9-0000-714b-e31d00000000"
        qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
        &quot;.&quot;BISAMPLE&quot;.&quot;D30 Offices&quot;"/>
      <RefPhysicalTable id="3001:42416"
        uid="80cb6829-0bb9-0000-714b-e31d00000000"
        qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
        &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;"/>
      <RefPhysicalForeignKey id="3006:43167"

```

```

        uid="80cb6b18-0bbe-0000-714b-e31d00000000"
        qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
            &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;
            .&quot;D43 Chnls Offcs Bridge (Revenue)_FKey&quot;"/>
    </Join>
</Joins>
</Link>
<Link>
    <StartNode>
        <RefPhysicalTable id="3001:42414"
            uid="80cb6827-0bb9-0000-714b-e31d00000000"
            qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                &quot;.&quot;BISAMPLE&quot;.&quot;D41 Channels (Revenue)&quot;"/>
    </StartNode>
    <Joins>
        <Join type="Inner" cardinality=" ONE TO MANY">
            <RefPhysicalTable id="3001:42414"
                uid="80cb6827-0bb9-0000-714b-e31d00000000"
                qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                    &quot;.&quot;BISAMPLE&quot;.&quot;D41 Channels (Revenue)&quot;"/>
            <RefPhysicalTable id="3001:42416"
                uid="80cb6829-0bb9-0000-714b-e31d00000000"
                qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                    &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;"/>
            <RefPhysicalForeignKey id="3006:43166"
                uid="80cb6b17-0bbe-0000-714b-e31d00000000"
                qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                    &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;
                    .&quot;D53 Teams Membership Bridge (Revenue Facts)_FKey#1&quot;"/>
        </Join>
    </Joins>
</Link>
<Link>
    <StartNode>
        <RefPhysicalTable id="3001:42416"
            uid="80cb6829-0bb9-0000-714b-e31d00000000"
            qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;"/>
    </StartNode>
    <Joins>
        <Join type="Inner" cardinality="MANY TO ONE">
            <RefPhysicalTable id="3001:42416"
                uid="80cb6829-0bb9-0000-714b-e31d00000000"
                qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                    &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;"/>
            <RefPhysicalTable id="3001:42414"
                uid="80cb6827-0bb9-0000-714b-e31d00000000"
                qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                    &quot;.&quot;BISAMPLE&quot;.&quot;D41 Channels (Revenue)&quot;"/>
            <RefPhysicalForeignKey id="3006:43166"
                uid="80cb6b17-0bbe-0000-714b-e31d00000000"
                qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                    &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;
                    .&quot;D53 Teams Membership Bridge (Revenue Facts)_FKey#1&quot;"/>
        </Join>
        <Join type="Inner" cardinality="MANY TO ONE">
            <RefPhysicalTable id="3001:42416"
                uid="80cb6829-0bb9-0000-714b-e31d00000000"
                qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
                    &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;"/>

```

```

    <RefPhysicalTable id="3001:42412"
      uid="80cb6825-0bb9-0000-714b-e31d00000000"
      qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
        &quot;.&quot;BISAMPLE&quot;.&quot;D30 Offices&quot;"/>
    <RefPhysicalForeignKey id="3006:43167"
      uid="80cb6b18-0bbe-0000-714b-e31d00000000"
      qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog
        &quot;.&quot;BISAMPLE&quot;.&quot;D43 Chnls Offs Bridge (Rev)&quot;
        .&quot;D43 Chnls Offcs Bridge (Revenue)_FKey&quot;"/>
  </Join>
</Joins>
</Link>
<WhereClause>
  <Expr></Expr>
</WhereClause>
<GroupBy>
  <Expr>
    <![CDATA[ GROUPBYLEVEL("1 - Sample App"."H4 Offices and Channels (M:M)"
      ."Channel Detail")]]>
  </Expr>
</GroupBy>
<FragmentContent>
  <Expr></Expr>
</FragmentContent>
</LogicalTableSource>

```

## 7.9.1 Column Mapping

The column mapping element does not correspond to any metadata repository object. It is only used in conjunction with the logical table source element. The column mapping element appears on its own in the XML schema (.xsd file), rather than as part of the logical table source element, so that the column mapping details are easier to read and update.

The column mapping tag includes the following child elements:

**Table 7–19 Column Mapping Child Elements**

Element Name	Description
RefLogicalTableSource	References the logical table source to which this column mapping belongs. Each column mapping must specify one and only one logical table source.
LogicalColumn	Contains the expression that identifies the logical column for this column mapping. The expression is contained in a sub-element called <i>Expr</i> .
Expr	Contains the expression that identifies the physical column for this column mapping. Note that this <i>Expr</i> child element is different from the <i>Expr</i> sub-element that appears inside the <i>LogicalColumn</i> child element.

The column mapping tag does not include any attributes.

### Syntax

```

<ColumnMapping>
  <RefLogicalTableSource .../>
  <LogicalColumn>
    <Expr>...</Expr>
  </LogicalColumn>

```



```

    <Expr>...</Expr>
  </ColumnMapping>

```

### Example

```

<ColumnMapping>
  <RefLogicalTableSource id="2037:43703"
    uid="80cb6db6-07f5-0000-714b-e31d00000000"
    qualifiedName="&quot;SampleApp &quot;.&quot;F0 Revenue Base Measures
      &quot;.&quot;LTS2 Revenue Facts Aggregate l&quot;"/>
  <LogicalColumn>
    <Expr>
      <![CDATA["SampleApp"."F0 Revenue Base Measures"."Revenue"]]>
    </Expr>
  </LogicalColumn>
  <Expr>
    <![CDATA["SampleApp".""."."F11 Revenue Facts Aggregate"."Revenue"]]>
  </Expr>
</ColumnMapping>

```

## 7.10 XML Elements: Logical Source Folder

The logical source folder element corresponds to the logical source folder object in the Business Model and Mapping layer. Logical source folders contain logical table sources.

The logical source folder element does not include any attributes or child elements, other than the default attributes and elements.

### Syntax

```

<LogicalSourceFolder ...>
  <Description />
</LogicalSourceFolder>

```

### Example

```

<LogicalSourceFolder name="Sources"
  parentName="&quot;Usage Tracking&quot;.&quot;Measures&quot;"
  parentId="2035:43831" parentUid="6c898eac-b03c-e91a-14ac-7868e974eafc"
  id="2046:43884" uid="6c898eac-b03c-e91a-14ac-7868e974eafc">
</LogicalSourceFolder>

```

## 7.11 XML Elements: Measure Definition

The measure definition element stores the measure definition for a measure column. A measure column is usually in a fact table, can change for each record, and can be added up or aggregated in some way.

The measure definition tag includes the following attributes:

**Table 7–20 Measure Definition Tag Attributes**

Attribute Name	Description
isCommutative	If set to true, indicates that the aggregation rule lets the server switch the order if it can increase the performance. For example, the following aggregation function is commutative: $A (B (x)) = B (A (x))$

The measure definition tag does not include any child elements.

### Syntax

```
<MeasureDefn ...
  isCommutative="">
  <Description />
</MeasureDefn>
```

### Example

```
<MeasureDefn name="Measure"
  parentName="&quot;Usage Tracking&quot;.&quot;Measures&quot;.&quot;
  Avg Row Count&quot;"
  parentId="2006:43837" parentUid="6c898eac-b03c-e91a-14ac-7868e974eafc"
  id="2048:43890" uid="6c898eac-b03c-e91a-14ac-7868e974eafc"
  isCommutative="false">
</MeasureDefn>
```

## 7.12 XML Elements: Aggregation Rule

The aggregation rule element corresponds to the aggregation rule object in the Business Model and Mapping layer.

The aggregation rule tag includes the following attributes:

**Table 7–21 Aggregation Rule Tag Attributes**

Attribute Name	Description
isDefault	If set to true, indicates that this is the default rule for aggregate calculations. This option only applies when there is more than one aggregation rule.

The aggregation rule tag includes the following child elements:

**Table 7–22 Aggregation Rule Child Elements**

Element Name	Description
Expr	Contains the expression on which this aggregation rule is based.
BasedOnDimension	If this aggregation rule is specific to a particular dimension, references the dimension for which this aggregation rule applies.  The dimension is contained in a sub-element called RefDimension.

### Syntax

```
<AggrRule ...
  isDefault="">
  <Description />
  <BasedOnDimension .../>
  <Expr>
    <![CDATA[...]]>
  </Expr>
</AggrRule>
```

### Example

```
<AggrRule name="AggrRule_2050:434611273647807"
  parentName="&quot;SampleApp Lite&quot;.&quot;F0 Revenue Base Measures&quot;
```

```

    .&quot;# of Products with Orders&quot;.&quot;Measure&quot; "
    parentId="2048:42600" parentUid="80cb68e1-0800-0000-714b-e31d00000000"
    id="2050:43461" uid="80cb6c4b-0802-0000-714b-e31d00000000"
    isDefault="true">
<Expr>
  <![CDATA[ COUNT(DISTINCT "SampleApp Lite"."F0 Revenue Base Measures".
    "# of Products with Orders")]]>
</Expr>
</AggrRule>

```

## 7.13 XML Elements: Override Aggregation Rule

The override aggregation rule element corresponds to the override aggregation expression for a logical table source in the Business Model and Mapping Layer.

When you select Count Distinct as the default aggregation rule, you can specify an override aggregation expression for specific logical table sources. This option is useful when you have more than one logical table source mapped to a logical column and you want to apply a different aggregation rule to each source.

The override aggregation rule tag includes the following child elements:

**Table 7–23** *Override Aggregation Rule Child Elements*

Element Name	Description
RefLogicalTableSource	References the logical table source to which this override aggregation rule applies.
Expr	Contains the expression on which this aggregation rule is based.

The override aggregation rule tag does not include any attributes.

### Syntax

```

<OverrideAggrRule ...>
  <Description />
  <RefLogicalTableSource .../>
  <Expr>...</Expr>
</OverrideAggrRule>

```

### Example

```

<OverrideAggrRule name="OvAggRule_2054:385501246426812"
  parentName="&quot;Core&quot;.&quot;Fact - CRM - Order Item
  &quot;.&quot;# of Accounts with Orders&quot;.&quot;Measure&quot; "
  parentId="2048:31122" parentUid="00225690-0800-0000-714b-e31d00000000"
  id="2054:38550" uid="802ba5d5-0806-0000-714b-e31d00000000">
  <RefLogicalTableSource id="2037:220577"
    uid="002253c3-07f5-0000-714b-e31d00000000"
    qualifiedName="&quot;Core&quot;.&quot;Fact - CRM - Order Item
    &quot;.&quot;Fact_W_ORDER_F&quot;"/>
  <Expr>
    <![CDATA[ COUNT(DISTINCT "Core"."Fact - CRM - Order Item".
      "# of Accounts with Orders")]]>
  </Expr>
</OverrideAggrRule>

```

## 7.14 XML Elements: Logical Display Folder

The logical display folder element corresponds to the logical display folder object in the Business Model and Mapping layer.

The logical display folder tag includes the following child elements:

**Table 7–24 Logical Display Folder Child Elements**

Element Name	Description
Dimensions	References the dimensions that belong to this logical display folder.  Each dimension is contained in a sub-element called RefDimension.
Tables	References the logical tables that belong to this logical display folder.  Each table is contained in a sub-element called RefLogicalTable.

The logical display folder element does not include any attributes.

### Syntax

```
<LogicalDisplayFolder ...>
  <Description />
  <Dimensions>
    <RefDimension .../>
    <RefDimension .../>
  </Dimensions>
  <Tables>
    <RefLogicalTable .../>
    <RefLogicalTable .../>
  </Tables>
</LogicalDisplayFolder>
```

### Example

```
<LogicalDisplayFolder name="Resources"
  parentName="&quot;SampleApp&quot;"
  parentId="2000:42377" parentUid="80cb6802-07d0-0000-714b-e31d00000000"
  id="2052:44085" uid="9bf9c250-0c00-1000-835d-0a9702490000">
  <Tables>
    <RefLogicalTable id="2035:42395"
      uid="80cb6814-07f3-0000-714b-e31d00000000"
      qualifiedName="&quot;SampleApp&quot;.&quot;D0 Time&quot;"/>
    <RefLogicalTable id="2035:42562"
      uid="80cb68bb-07f3-0000-714b-e31d00000000"
      qualifiedName="&quot;SampleApp&quot;.&quot;D2 Offices&quot;"/>
  </Tables>
</LogicalDisplayFolder>
```

---

---

# XML Physical Elements

Physical elements are typically those elements that are exposed in the Physical layer, or in other words, the elements that appear in the right-hand pane of the Administration Tool.

This chapter contains the following topics:

- [Section 8.1, "XML Elements: Database"](#)
- [Section 8.2, "XML Elements: Physical Catalog"](#)
- [Section 8.3, "XML Elements: Physical Schema"](#)
- [Section 8.4, "XML Elements: Physical Display Folder"](#)
- [Section 8.5, "XML Elements: Physical Table"](#)
- [Section 8.6, "XML Elements: Physical Column"](#)
- [Section 8.7, "XML Elements: Connection Pool"](#)
- [Section 8.8, "XML Elements: Physical Key"](#)
- [Section 8.9, "XML Elements: Physical Foreign Key"](#)
- [Section 8.10, "XML Elements: Complex Join"](#)
- [Section 8.11, "XML Elements: Cube Table"](#)
- [Section 8.12, "XML Elements: Physical Dimension"](#)
- [Section 8.13, "XML Elements: Physical Hierarchy"](#)
- [Section 8.14, "XML Elements: Physical Level"](#)
- [Section 8.15, "XML Elements: Cube Column"](#)
- [Section 8.16, "XML Elements: Analytic Workspace"](#)
- [Section 8.17, "XML Elements: AW Cube"](#)
- [Section 8.18, "XML Elements: AW Dimension"](#)
- [Section 8.19, "XML Elements: AW Hierarchy"](#)
- [Section 8.20, "XML Elements: AW Level"](#)
- [Section 8.21, "XML Elements: AW Column"](#)

## 8.1 XML Elements: Database

The database element corresponds to the database object in the Physical layer.

The database tag includes the following attributes:

**Table 8–1 Database Tag Attributes**

Attribute Name	Description
type	The type of data source, such as XMLDirect or ODBC20.
dbFlag	Stores the value of the following options: <ul style="list-style-type: none"> <li>■ <b>CRM metadata tables:</b> For legacy Siebel Systems sources only. When selected, the Administration Tool import utility looks for the table definition in Oracle's Siebel CRM-specific tables.</li> <li>■ <b>Virtual Private Database:</b> Identifies the physical database source as a virtual private database (VPD). When a VPD is used, returned data results are contingent on the user's authorization credentials. This option is used with the Security Sensitive option for session variables.</li> <li>■ <b>Allow populate queries by default:</b> When selected, allows all users to execute <code>POPULATE SQL</code>. If you want most, but not all, users to be able to execute <code>POPULATE SQL</code>, select this option and then limit queries for specific users or groups.</li> <li>■ <b>Allow direct database requests by default:</b> When selected, allows all users to execute physical queries. The Oracle BI Server will send unprocessed, user-entered, physical SQL directly to an underlying database. If you want most, but not all, users to be able to execute physical queries, select this option and then limit queries for specific users or groups.</li> </ul>

The database tag includes the following child elements:

**Table 8–2 Database Child Elements**

Element Name	Description
Features	Lists the SQL features for this database. Each feature is contained in a sub-element called <code>Feature</code> . This sub-element has two attributes: <ul style="list-style-type: none"> <li>■ <code>name</code> indicates the name of the feature, such as <code>LEFT_OUTER_JOIN_SUPPORTED</code>.</li> <li>■ <code>value</code> indicates whether this feature is supported by the database, or provides the actual value of the feature (such as "0" for <code>MAX_COLUMNS_IN_SELECT</code>).</li> </ul>
PersistConnPool	References the connection pool that is used as the persist connection pool, if one has been assigned. A persist connection pool is a database property that is used for specific types of queries (typically used to support Marketing queries). The persist connection pool is contained in a sub-element called <code>RefConnectionPool</code> .
DisplayFolders	References any physical display folders that contain objects in this database. Physical display folders can be used to organize tables in a database. For example, all alias tables can be stored in a display folder called <code>Alias</code> , in addition to being present in the database. Each display folder is contained in a sub-element called <code>RefPhysicalDisplayFolder</code> .
ConnectionPools	References the connection pools for this database object. Each connection pool is contained in a sub-element called <code>RefConnectionPool</code> .

**Table 8–2 (Cont.) Database Child Elements**

Element Name	Description
Properties	Custom database properties for Oracle ADF Business Component data sources that are passed to the Administration Tool from Oracle ADF BI VOs.

**Syntax**

```

<Database ...
  type=""
  dbFlag="">
  <Description />
  <Features>
    <Feature name="" value="" />
    <Feature name="" value="" />
    ...
  </Features>
  <PersistConnPool>
    <RefConnectionPool .../>
  </PersistConnPool>
  <DisplayFolders>
    <RefPhysicalDisplayFolder .../>
    <RefPhysicalDisplayFolder .../>
  </DisplayFolders>
  <ConnectionPools>
    <RefConnectionPool .../>
  </ConnectionPools>
  <Properties>
    <PropertyGroup>
      category=""
      <Property>
        <Name .../>
        <Value .../>
      </Property>
    </Property Group>
  </Properties>
</Database>

```

**Example**

```

<Database name="Paint" id="3023:205" uid="80ca62be-0bcf-0000-714b-e31d00000000"
  type="XMLDirect">
  <Features>
    <Feature name="LEFT_OUTER_JOIN_SUPPORTED" value="false" />
    <Feature name="RIGHT_OUTER_JOIN_SUPPORTED" value="false" />
    <Feature name="FULL_OUTER_JOIN_SUPPORTED" value="false" />
    <Feature name="NESTED_OUTER_JOIN_SUPPORTED" value="false" />
    <Feature name="UNION_SUPPORTED" value="false" />
    <Feature name="UNION_ALL_SUPPORTED" value="false" />
    <Feature name="COUNT_SUPPORTED" value="false" />
    <Feature name="COUNT_DISTINCT_SUPPORTED" value="false" />
    ...
    <Feature name="SORT_ORDER_LOCALE" value="english-usa" />
    <Feature name="COMMENT_START" />
    <Feature name="COMMENT_END" />
  </Features>
</Database>

```

## 8.2 XML Elements: Physical Catalog

The physical catalog element corresponds to the physical catalog object in the Physical layer.

The physical catalog tag includes the following child elements:

**Table 8–3 Physical Catalog Child Elements**

Element Name	Description
DynamicName	If a session variable is being used to specify the name of this physical catalog, this element references that session variable.  The session variable is contained in a sub-element called RefVariable.

The physical catalog element does not include any attributes.

### Syntax

```
<PhysicalCatalog ...>
  <Description />
  <DynamicName>
    <RefVariable .../>
  </DynamicName>
</PhysicalCatalog>
```

### Example

```
<PhysicalCatalog name="Catalog"
  parentName="&quot;01 - Sample App Data (ORCL)&quot;"
  parentId="3023:85" parentUid="80ca62c4-0bcf-0000-714b-e31d00000000"
  id="3025:42377" uid="80cb6802-0bd1-0000-714b-e31d00000000">
</PhysicalCatalog>
```

## 8.3 XML Elements: Physical Schema

The physical schema element corresponds to the physical schema object in the Physical layer.

The physical schema tag includes the following child elements:

**Table 8–4 Physical Schema Child Elements**

Element Name	Description
DynamicName	If a session variable is being used to specify the name of this physical schema, this element references that session variable.  The session variable is contained in a sub-element called RefVariable.
InputMessageTemplate	This child element is reserved for a future release.

The physical schema element does not include any attributes.

### Syntax

```
<Schema ...>
  <Description />
  <DynamicName>
    <RefVariable .../>
```



```

    </DynamicName>
</Schema>

```

### Example

```

<Schema name="BISAMPLE"
  parentName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog&quot;"
  parentId="3025:42377" parentUid="80cb6802-0bd1-0000-714b-e31d00000000"
  id="3027:42378" uid="80cb6803-0bd3-0000-714b-e31d00000000">
</Schema>

```

## 8.4 XML Elements: Physical Display Folder

The physical display folder element corresponds to the physical display folder object in the Physical layer.

The physical display folder tag includes the following child elements:

**Table 8–5 Physical Display Folder Child Elements**

Element Name	Description
Tables	References the physical tables that belong to this physical display folder. Each physical table is contained in a sub-element called RefPhysicalTable.

The physical display folder element does not include any attributes.

### Syntax

```

<PhysicalDispFolder ...>
  <Description />
  <Tables>
    <RefPhysicalTable .../>
  </Tables>
</Schema>

```

### Example

```

<PhysicalDisplayFolder name="Assets"
  parentName="&quot;Sample Data&quot;"
  parentId="3023:85" parentUid="80ca62c4-0bcf-0000-714b-e31d00000000"
  id="3037:44085" uid="96c2c481-0c00-1000-835d-0a9702490000">
  <Tables>
    <RefPhysicalTable id="3001:129"
      uid="80ca6538-0bb9-0000-714b-e31d00000000"
      qualifiedName="&quot;Sample Data&quot;...&quot;D20 Offices&quot;"/>
  </Tables>
</PhysicalDisplayFolder>

```

## 8.5 XML Elements: Physical Table

The physical table element corresponds to the physical table object in the Physical layer.

The physical table tag includes the following attributes:

**Table 8–6 Physical Table Tag Attributes**

Attribute Name	Description
type	The type of physical table. Options are as follows: <ul style="list-style-type: none"> <li>■ select indicates that this physical table object is a SELECT statement.</li> <li>■ sp indicates that this physical table is a stored procedure.</li> <li>■ alias indicates that this physical table is an alias table. An alias table (alias) is a physical table that references a different physical table as its source.</li> <li>■ none indicates that this physical table is a regular physical table.</li> </ul>
isCacheable	If set to true, indicates that this table is included in the Oracle BI Server query cache.
CacheExpiry	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.
isCacheEventTable	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
isOverrideCacheProp	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.
pollFreq	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.
x	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
y	The <i>y</i> coordinate of the table when it is shown in the physical diagram.
rowCount	The latest number of rows retrieved for this physical table.
lastUpdated	The time at which row counts were last updated for this physical table.
uri	For XML data sources only. The resource identifier for the XML data source.
xslPath	For XML data sources only. An XSLT file contains formatting rules written according to the XSLT standard. It defines how an XML file may be transformed.
maxConn	For XML data sources only. The maximum number of connections allowed to the same URL from different users.
xmlRefreshInterval	For XML data sources only. The time interval after which the XML data source is queried again directly, rather than using results in cache.
scriptPath	For XML data sources only. The extended gateway script path.
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this physical table.
isExtGatewayInProcess	For XML data sources only. Indicates that this physical table is the extended gateway part of the process.
extGatewayDelimiter	For XML data sources only. The row delimiter used in the metadata import process, typically the second level element in the XML document.

**Table 8–6 (Cont.) Physical Table Tag Attributes**

Attribute Name	Description
isSysGen	If set to true, indicates that an internal utility has generated this physical table.
isDDLAggr	Indicates whether this physical table is an aggregate table.
isDeployedView	For relational databases only. If set to true, indicates that this physical table is a deployed (opaque) view. An opaque view is a Physical layer table that consists of a SELECT statement.

The physical table tag includes the following child elements:

**Table 8–7 Physical Table Child Elements**

Element Name	Description
SourceTable	For alias tables only. References the physical table that is being used as the source for this alias table.  The physical table is contained in a sub-element called RefPhysicalTable.
DBMap	Stores the value of database-specific strings. The <DBMap> element contains an <Item> tag, which in turn contains a <Value> tag, as follows:  <pre>&lt;Item name=""&gt;   &lt;Value /&gt; &lt;/Item&gt;</pre>
AggrConnPool	If this physical table is an aggregate table, this element references the connection pool used for the aggregate.  The connection pool is contained in a sub-element called RefConnectionPool.
RefVariable	If a session variable is being used to specify the name of this physical table, this element references that session variable.
MemberKey	Applies to parent-child relationship tables that support parent-child hierarchies on relational sources. The name of the column that uniquely identifies members of the parent-child relationship table.  The member key is contained in a sub-element called RefPhysicalColumn.
ParentKey	The name of the column that contains the key of the parent or ancestor member. Applies to parent-child relationship tables that support parent-child hierarchies on relational sources.  The parent key is contained in a sub-element called RefPhysicalColumn.
DistanceColumn	The name of the column that records the number of levels between the member and the ancestor. Applies to parent-child relationship tables that support parent-child hierarchies on relational sources.  The distance column is contained in a sub-element called RefPhysicalColumn.

**Table 8–7 (Cont.) Physical Table Child Elements**

Element Name	Description
LeafColumn	The name of the column that indicates whether the member has no child members (1 if the member is a leaf and has no children, 0 if the member is not a leaf and has children). Applies to parent-child relationship tables that support parent-child hierarchies on relational sources.  The leaf column is contained in a sub-element called RefPhysicalColumn.
XSLT	This child element is reserved for a future release.
XSDSchema	This child element is reserved for a future release.

**Syntax**

```

<PhysicalTable ...
  type=" "
  isCacheable=" "
  cacheExpiry=" "
  isCacheEventTable=" "
  isOverrideCacheProp=" "
  pollFreq=" "
  x=" "
  y=" "
  rowCount=" "
  lastUpdated=" "
  uri=" "
  xslPath=" "
  maxConn=" "
  xmlRefreshInterval=" "
  scriptPath=" "
  hints=" "
  isExtGatewayInProcess=" "
  extGatewayDelimiter=" "
  isSysGen=" "
  isDDLAggr=" "
  isDeployedView=" ">
  <Description />
  <SourceTable>
    <RefPhysicalTable .../>
  </SourceTable>
  <DBMap>
    <Item name=" ">
      <Value .../>
    </Item>
  </DBMap>
  <AggrConnPool>
    <RefConnectionPool .../>
  </AggrConnPool>
  <RefVariable .../>
  <MemberKey>
    <RefPhysicalColumn .../>
  </MemberKey>
  <ParentKey>
    <RefPhysicalColumn .../>
  </ParentKey>

```

```

<DistanceColumn>
  <RefPhysicalColumn .../>
</DistanceColumn>
<LeafColumn>
  <RefPhysicalColumn .../>
</LeafColumn>
</PhysicalTable>

```

### Example

```

<PhysicalTable name="SAMP_LOOKUPS_D"
  parentName="&quot;01 - Sample App Data (ORCL)&quot;
    .&quot;Catalog&quot;.&quot;BISAMPLE&quot;"
  parentId="3027:42378" parentUid="80cb6803-0bd3-0000-714b-e31d00000000"
  id="3001:42390" uid="80cb680f-0bb9-0000-714b-e31d00000000"
  type="none"
  isCacheable="false"
  x="270" y="1551"
  rowCount="0.0"
  uri="VALUEOF(BI_EE_HOME)/sample/SampleAppFiles/Data/SAMP_LOOKUPS_D.xml"
  maxConn="0">
  <Description>
    <![CDATA[ Lookups dimension table : Stores lookup information for various
      dimension attributes in different languages]]>
  </Description>
  <XSLT />
  <XSDSchema />
</PhysicalTable>

```

## 8.6 XML Elements: Physical Column

The physical column element corresponds to the physical column object in the Physical layer.

The physical column tag includes the following attributes:

**Table 8–8 Physical Column Tag Attributes**

Attribute Name	Description
extName	The external name for the physical column. This attribute is required if the same name (such as STATE) is used in multiple hierarchies.  This attribute is optional for XML documents. For XML, the extName attribute stores the fully qualified name of a column.
dataType	The data type of the physical column, such as VARCHAR. This option is called <b>Type</b> in the Physical Column dialog in the Administration Tool.
nullable	If set to true, indicates that null values are allowed for the column. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the column.
scale	The scale of the data type of the column.
rowCount	The latest number of rows retrieved for this physical column.
lastUpdated	The time at which row counts were last updated for this physical column.

**Table 8–8 (Cont.) Physical Column Tag Attributes**

Attribute Name	Description
valueType	Applies to Siebel OM data sources only. Indicates the cardinality of the value of the column. Valid values include: <ul style="list-style-type: none"> <li>■ One to One (Default/Unknown/Single-valued)</li> <li>■ Many to One (Picklist)</li> <li>■ One to Many (Multi-valued)</li> <li>■ Many to Many (Multi-valued)</li> </ul>
mappedColumn	Applies to Siebel OM data sources only. The name of the mapped column. Corresponds to the field of the same name for the multi-valued group (MVG) business component.
MVLinkName	Applies to Siebel OM data sources only. The name of the link used in the Siebel business component.
specialType	Valid values are LUD or None. LUD stands for "Last Update Date."  This attribute is currently used only for ADF data sources. It is used to indicate that the column should be checked when performing ETL operations.

The physical column tag includes the following child elements:

**Table 8–9 Physical Column Child Elements**

Element Name	Description
DynamicName	If a session variable is being used to specify the name of this physical column, this element references that session variable.  The session variable is contained in a sub-element called RefVariable.
SourceColumn	For physical columns in an alias table only. References the physical column that is being used as the source for this column.  The physical column is contained in a sub-element called RefPhysicalColumn.
PicklistColumns	A list of physical columns to which the picklist is mapped.  Each physical column is contained in a sub-element called RefPhysicalColumn.

### Syntax

```
<PhysicalColumn ...
  extName=" "
  dataType=" "
  length=" "
  nullable=" "
  precision=" "
  scale=" "
  rowCount=" "
  lastUpdated=" "
  valueType=" "
  mappedColumn=" "
  MVLinkName=" "
  specialType=" ">
  <Description />
  <DynamicName>
```

```

    <RefVariable .../>
  </DynamicName>
  <SourceColumn>
    <RefPhysicalColumn .../>
  </SourceColumn>
  <PicklistColumns>
    <RefPhysicalColumn .../>
  </PicklistColumns>
</PhysicalColumn>

```

### Example

```

<PhysicalColumn name="Prod_Dsc"
  parentName="&quot;01 - Sample App Data (ORCL)&quot;;.&quot;Catalog&quot;;
  .&quot;BISAMPLE&quot;;.&quot;SAMP_PRODUCTS_D&quot;;"
  parentId="3001:42392" parentUid="80cb6811-0bb9-0000-714b-e31d00000000"
  id="3003:42538" uid="80cb68a3-0bbb-0000-714b-e31d00000000"
  dataType="VARCHAR"
  precision="25"
  rowCount="0.0"
  specialType="none">
  <Description>
    <![CDATA[Product Description: Stores the product description information
      as text]]>
  </Description>
</PhysicalColumn>

```

## 8.7 XML Elements: Connection Pool

The connection pool element corresponds to the connection pool object in the Physical layer.

The connection pool tag includes the following attributes:

**Table 8–10 Connection Pool Tag Attributes**

Attribute Name	Description
bulkInsertBufferSize	Used for limiting the number of bytes each time data is inserted in a database table. The value is given in kilobytes (KB).
transactionBoundary	Controls the batch size for an insert in a database table.
unicodeDB	This attribute is typically set to true when working with columns of an explicit Unicode data type, such as NCHAR, in an Unicode database.
tempTablePrefix	The first two characters in a temporary table name. The default value is TT.
tempTableOwner	Table owner name used to qualify a temporary table name in a SQL statement, for example to create the table owner.tablename.
tempTableDatabase	Database where the temporary table will be created. This property applies only to IBM OS/390, because IBM OS/390 requires the database name qualifier to be part of the CREATE TABLE statement.
tempTableSpace	Tablespace where the temporary table will be created. This property applies only to IBM OS/390, because IBM OS/390 requires the tablespace name qualifier to be part of the CREATE TABLE statement.
user	The user name for the data source.

**Table 8–10 (Cont.) Connection Pool Tag Attributes**

Attribute Name	Description
password	The password for the data source. Note that passwords are encrypted.
timeout	The amount of time that a connection to the data source will remain open after a request completes. During this time, new requests use this connection rather than open a new one (up to the number specified for the maximum connections). The time is reset after each completed connection request.  If you set the timeout to 0 (the default), connection pooling is disabled. In other words, each connection to the data source terminates immediately when the request completes. Any new connections either use another connection pool or open a new connection.
maxConnDiff	The maximum number of total connections allowed to this connection pool across all users.
dataSource	The data source name that is configured to access the database to which you want to connect. The data source name must contain valid login information for the data source.
reqQualifiedTableName	If set to true, indicates that this database requires fully qualified table names. The fully qualified names are based on the physical object names in the repository.
isSharedLogin	If set to true, all users whose queries use the connection pool will access the underlying database using the same user name and password.
isConcurrentQueriesInConnection	An option that enables a single database connection to remain open for the specified time for use by future query requests. If you do not select this option, each query sent to the database opens a new connection.  In the Administration Tool, this option corresponds to a value of "selected" for <b>Enable connection pooling</b> in the General tab of the Connection Pool dialog.
isCloseAfterEveryRequest	If set to true, indicates that the connection pool gets closed after every query.  In the Administration Tool, this option corresponds to a value of "not selected" for <b>Enable connection pooling</b> in the General tab of the Connection Pool dialog.
isAsyncExecution	An option that indicates that the data source supports asynchronous queries.
executeOnCmd	A command that is to be executed by the Oracle BI Server each time a connection is made to the database. The command may be any command accepted by the database.
xslPath	For XML data sources only. An XSLT file contains formatting rules written according to the XSLT standard. It defines how an XML file may be transformed. Specifying the XSLT file in the connection pool applies it to all the XML physical tables in the connection pool. Used when <code>outputType</code> is set to XML.
maxConn	The maximum number of total connections allowed to this connection pool for a given user.
xmlRefreshInterval	For XML data sources only. The time interval after which the XML data source is queried again directly, rather than using results in cache.
scriptPath	The connection method Search script. This option is used for XML Server data sources.



**Table 8–10 (Cont.) Connection Pool Tag Attributes**

Attribute Name	Description
outputType	For XML data sources only. The query output format (delimited, xml, or fixed).  In the Administration Tool, this option is called <b>Query output format</b> in the XML tab of the Connection Pool dialog.  If this option is not set, the query output format is assumed to be a custom format, and the value for convertScriptPath is used.
gwDelim	The delimiting characters for the query output format. Used when outputType is set to delimited.
xpath	An XPath expression is a simple XSLT transformation rule that fits into one line. Used when outputType is set to xml.
convertScriptPath	Used when outputType is not set. The path to the .exe file to be used to convert the query output to a custom output format (such as HTML).
ignoreFirstLine	If set to true, indicates that the first line of the output file is ignored.
xmlHeaderPath	The path to the header file, if any, used as a query input supplement. Used for XML Server data sources.
trailerPath	The path to the trailer file, if any, used as a query input supplement. Used for XML Server data sources.
supportParams	Indicates whether the data source supports parameters. If set to false, and the database features table supports parameters, special code executes that enables the Oracle BI Server to push filters (or calculations) with parameters to the database.
isolationLevel	For ODBC and DB2 gateways. Sets the transaction isolation level on each connection to the back-end database. The isolation level setting controls the default transaction locking behavior for all statements issued by a connection. Options are as follows: <ul style="list-style-type: none"> <li>▪ default uses the default transaction locking behavior of the data source.</li> <li>▪ readCommitted specifies that shared locks are held while the data is read to avoid dirty reads.</li> <li>▪ readUncommitted implements dirty read (isolation level 0 locking). When this option is set, it is possible to read uncommitted or dirty data, change values in the data, and have rows appear or disappear in the data set before the end of the transaction.</li> <li>▪ repeatableRead places locks on all data that is used in a query, preventing other users from updating the data.</li> <li>▪ serializable places a range lock on the data set, preventing other users from updating or inserting rows into the data set until the transaction is complete.</li> </ul>
xmlaInfo	The vendor-specific information used to connect to the multidimensional data source.
xmlaCatalog	The list of catalogs available. The cube tables correspond to the catalog you use in the connection pool.
xmlaUseSession	If set to true, causes queries go through a common session.

**Table 8–10 (Cont.) Connection Pool Tag Attributes**

Attribute Name	Description
multiThreaded	If set to true, indicates that the connection pool supports multi-threading, or in other words, that one connection pool can support multiple queries. If this option is set to false, each query is tied to a single database connection.
type	The call interface type.
appName	The name of the ADF application server.
appServerPort	The port number of the ADF application server.
appID	The ADF application ID.
appEJBBean	The name of the ADF application Enterprise Java Bean.
javaHostServiceName	The name of the JavaHost service. The JavaHost is used as a connector between the Oracle BI Server and data sources that use Java, such as ADF.
isSiebelJDBSecuredisaw	For Siebel OM data sources only. Indicates whether the connection between the Oracle BI Server and the Siebel data source is encrypted.
csfKey	This attribute is not currently used.
isAW	This attribute is not currently used.
useCert	This attribute stands for "Use Certificate." It is used for ADF data sources and indicates whether to use a certificate when securing the connection.
wsServer	This attribute is reserved for a future release.
wsWSDL	This attribute is reserved for a future release.

The connection pool tag includes the following child elements:

**Table 8–11 Connection Pool Child Elements**

Element Name	Description
AfterQueryString	Contains a connection script that is executed after the query is run.
BeforeQueryString	Contains a connection script that is executed before the query is run.
PostConnectString	Contains SQL queries executed after the connection is closed.
PreDisconnectString	Contains SQL queries executed before the connection is established.
RelationalConnPool	This child element is not used.
RelationalDataFolder	This child element is not used.
SQLBypassDB	For Oracle ADF data sources only. References the SQL Bypass database, if one has been specified.  The SQL Bypass feature directly queries the database so that aggregations and other transformations are pushed down where possible, reducing the amount of data streamed and worked on in Oracle Business Intelligence.  The database object is contained in a sub-element called RefDatabase.

**Syntax**

```

<ConnectionPool ...
    bulkInsertBufferSize=" "
    transactionBoundary=" "
    unicodeDB=" "
    tempTablePrefix=" "
    tempTableOwner=" "
    tempTableDatabase=" "
    tempTableSpace=" "
    user=" "
    password=" "
    timeout=" "
    maxConnDiff=" "
    dataSource=" "
    reqQualifiedTableName=" "
    isSharedLogin=" "
    isConcurrentQueriesInConnection=" "
    isCloseAfterEveryRequest=" "
    isAsyncExecution=" "
    executeOnCmd=" "
    xslPath=" "
    maxConn=" "
    xmlRefreshInterval=" "
    scriptPath=" "
    outputType=" "
    gwDelim=" "
    xpath=" "
    convertScriptPath=" "
    ignoreFirstLine=" "
    xmlHeaderPath=" "
    trailerPath=" "
    supportParams=" "
    isolationLevel=" "
    xmlaInfo=" "
    xmlaCatalog=" "
    xmlaUseSession=" "
    multiThreaded=" "
    type=" "
    appServerName=" "
    appServerPort=" "
    appID=" "
    appEJBBean=" "
    javaHostServiceName=" "
    isSiebelJDBSecured=" "
    useCert=" ">
<Description />
<AfterQueryString flag=" ">
    <Value .../>
</AfterQueryString>
<BeforeQueryString flag=" ">
    <Value .../>
</BeforeQueryString>
<PostConnectString flag=" ">
    <Value .../>
</PostConnectString>
<PreDisconnectString flag=" ">
    <Value .../>
</PreDisconnectString>
<SQLBypassDB>
    <RefDatabase .../>

```

```

    </SQLBypassDB>
  </ConnectionPool>

```

### Example

```

<ConnectionPool name="SampleApp XML Connection"
  parentName="&quot;02 - Sample App Xml Data&quot;"
  parentId="3023:760" parentUid="80ca62c4-0bcf-0000-714b-e31d00000000"
  id="3029:762" uid="80ca62c5-0bd5-0000-714b-e31d00000000"
  password="D7EDED84BC624A917F5B462A4DCA05CDCE256EEEEEDC97D5AC4D07C3A079829F"
  timeout="300"
  maxConnDiff="10"
  maxConn="10"
  dataSource="VALUEOF(BI_EE_HOME)/sample/sample_app/xml_data"
  type="Default"
  reqQualifiedTableName="false"
  isSharedLogin="false"
  isConcurrentQueriesInConnection="false"
  isCloseAfterEveryRequest="true"
  xmlRefreshInterval="4294967295"
  outputType="xml"
  bulkInsertBufferSize="0"
  transactionBoundary="0"
  xmlaUseSession="false"
  multiThreaded="false"
  supportParams="false"
  isSiebelJDBSecured="false">
</ConnectionPool>

```

## 8.8 XML Elements: Physical Key

The physical key element corresponds to the physical key object in the Physical layer.

The physical key tag includes the following child elements:

**Table 8–12 Physical Key Child Elements**

Element Name	Description
Columns	References the column that defines this physical key. The column is contained in a sub-element, either <code>RefPhysicalColumn</code> or <code>RefCubeColumn</code> .

The physical key element does not include any attributes.

### Syntax

```

<PhysicalKey ...>
  <Description />
  <Columns>
    <RefPhysicalColumn .../>
    <RefCubeColumn .../>
  </Columns>
</PhysicalKey>

```

### Example

```

<PhysicalKey name="09 Segment_Key"
  parentName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog&quot;
  .&quot;BISAMPLE&quot;.&quot;D61 Customer Segments&quot;"
  parentId="3001:42429" parentUid="80cb6836-0bb9-0000-714b-e31d00000000"

```

```

    id="3008:43143" uid="80cb6b00-0bc0-0000-714b-e31d00000000">
  <Columns>
    <RefPhysicalColumn id="3003:42857"
      uid="80cb69e2-0bbb-0000-714b-e31d00000000"
      qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog&quot;
        .&quot;BISAMPLE&quot;.&quot;D61 Customer Segments&quot;
        .&quot;Segment_Key&quot;" />
  </Columns>
</PhysicalKey>

```

## 8.9 XML Elements: Physical Foreign Key

The physical foreign key element corresponds to the physical foreign key object in the Physical layer.

The physical foreign key tag includes the following attributes:

**Table 8–13 Physical Foreign Key Tag Attributes**

Attribute Name	Description
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this physical foreign key.

The physical foreign key tag includes the following child elements:

**Table 8–14 Physical Foreign Key Child Elements**

Element Name	Description
Columns	References the physical columns in the table that the foreign key references. Each physical column is contained in a sub-element called either <code>RefPhysicalColumn</code> or <code>RefCubeColumn</code> .
CounterPartKey	References the corresponding primary key. Each primary key is contained in a sub-element called <code>RefPhysicalKey</code> .

### Syntax

```

<PhysicalForeignKey ...
  hints="">
  <Description />
  <Columns>
    <RefPhysicalColumn .../>
    <RefCubeColumn .../>
  </Columns>
  <CounterPartKey>
    <RefPhysicalKey .../>
  </CounterPartKey>
</PhysicalForeignKey>

```

### Example

```

<PhysicalForeignKey name="ORDER_ID"
  parentName="&quot;08 - Fusion Order Demo (OLTP)&quot;.&quot;FOD&quot;
  .&quot;ORDER_ITEMS&quot;"
  parentId="3001:60530" parentUid="80cbb70c-0bb9-0000-714b-e31d00000000"
  id="3006:60849" uid="80cbb908-0bbe-0000-714b-e31d00000000">
  <Columns>

```

```

    <RefPhysicalColumn id="3003:60537"
      uid="80cbb80c-0bbb-0000-714b-e31d00000000"
      qualifiedName="&quot;08 - Fusion Order Demo (OLTP)&quot;;..&quot;FOD&quot;
        .&quot;ORDER_ITEMS&quot;;.&quot;ORDER_ID&quot;"/>
  </Columns>
  <CounterPartKey>
    <RefPhysicalKey id="3008:62858"
      uid="80cbc41c-0bc0-0000-714b-e31d00000000"
      qualifiedName="&quot;08 - Fusion Order Demo (OLTP)&quot;;..&quot;FOD&quot;
        .&quot;ORDERS (Attributes)&quot;;.&quot;ORDERS (Attributes)_Key&quot;"/>
  </CounterPartKey>
</PhysicalForeignKey>

```

## 8.10 XML Elements: Complex Join

The complex join element corresponds to the complex join object in the Physical layer.

The complex join tag includes the following attributes:

**Table 8–15 Complex Join Tag Attributes**

Attribute Name	Description
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this complex join.
cardinality	Indicates the cardinality of the join. Valid values are: ONE TO ONE, ZERO OR ONE TO ONE, ONE TO ZERO OR ONE, ZERO OR ONE TO ZERO OR ONE, ONE TO MANY, ZERO OR ONE TO MANY, ZERO OR ONE TO MANY, MANY TO ONE, MANY TO ZERO OR ONE, or MANY TO MANY.
extName	The external name for the join.

The complex join tag includes the following child elements:

**Table 8–16 Complex Join Child Elements**

Element Name	Description
Tables	References the physical tables in the join. Each physical table is contained in a sub-element called RefPhysicalTable, RefCubeTable, RefAWCube, or RefAWDimension.
Expr	Contains the expression that defines the relationship between the two tables.
ExternalExpr	Contains the external expression used for ADF Business Component data sources.

### Syntax

```

<ComplexJoin ...
  hints=" "
  cardinality=" "
  extName=" " >
  <Description />
  <Tables>
    <RefPhysicalTable .../>
    <RefPhysicalTable .../>
  </Tables>
  <Expr> ... </Expr>
  <ExternalExpr> ... </ExternalExpr>

```

```
</ComplexJoin>
```

### Example

```
<ComplexJoin name="D04 Time Rolling Mth_F90 Facts Rolling Time Mth"
  id="3012:43263" uid="80cb6b78-0bc4-0000-714b-e31d00000000">
  <Tables>
    <RefPhysicalTable id="3001:42446"
      uid="80cb6847-0bb9-0000-714b-e31d00000000"
      qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog&quot;
        .&quot;BISAMPLE&quot;.&quot;F90 Facts Rolling Time Mth&quot;"/>
    <RefPhysicalTable id="3001:42407"
      uid="80cb6820-0bb9-0000-714b-e31d00000000"
      qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;Catalog&quot;
        .&quot;BISAMPLE&quot;.&quot;D04 Time Rolling Mth&quot;"/>
  </Tables>
  <Expr>
    <![CDATA["01 - Sample App Data (ORCL)". "Catalog". "BISAMPLE". "D04 Time Rolling
      Mth". "Mth_Key" >= "01 - Sample App Data (ORCL)". "Catalog". "BISAMPLE".
      "F90 Facts Rolling Time Mth". "Mth_Key"]]>
  </Expr>
</ComplexJoin>
```

## 8.11 XML Elements: Cube Table

The cube table element corresponds to the physical cube table object in the Physical layer.

The cube table tag includes the following attributes:

**Table 8–17** *Cube Table Tag Attributes*

Attribute Name	Description
extName	The external name for the data source.
type	The type of physical cube table. Options are as follows: <ul style="list-style-type: none"> <li>■ select indicates that this physical table object is a SELECT statement.</li> <li>■ sp indicates that this physical cube table is a stored procedure.</li> <li>■ alias indicates that this physical cube table is an alias table to a logical table source.</li> <li>■ none indicates that this physical cube table is a regular physical cube table.</li> </ul>
isCacheable	If set to true, indicates that this table is included in the Oracle BI Server query cache.
CacheExpiry	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.
isCacheEventTable	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
pollFreq	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.
x	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
y	The <i>y</i> coordinate of the table when it is shown in the physical diagram.

**Table 8–17 (Cont.) Cube Table Tag Attributes**

Attribute Name	Description
rowCount	The latest number of rows retrieved for this physical cube table.
lastUpdated	The time at which row counts were last updated for this physical cube table.
scriptPath	For XML data sources only. The extended gateway script path.
isSysGen	If set to true, indicates that an internal utility has generated this physical cube table.
isOverrideCacheProp	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.
hints	This attribute is not used.
isDDLAggr	Indicates whether this cube table is an aggregate table.
memberReference	For Essbase data sources only. Indicates the cube property (for example, Member Name).  An Essbase cube can have multiple aliases, and the value of memberReference is one of the alias names. The query engine will generate a query against the alias set for memberReference.
dateFormat	For Essbase only. Defines the format of date member, for example, 'yyyy-MM-dd.' The value is automatically set during import.
isMemberAliasUnique	This is used for query performance. If you know that all the member names in your backend are unique, you can set it to true by checking the checkbox "Use unqualified member name for better performance".

The cube table tag includes the following child elements:

**Table 8–18 Cube Table Child Elements**

Element Name	Description
Aliases	For Essbase data sources only. For any alias tables for this Essbase cube, lists the alias to use (such as default, LongNames, French, and so on).
AliasTableVar	For Essbase data sources only. Each AliasTableVar represents an Essbase alias table. The AliasTableVar child element contains a sub-element called RefVariable.
DBMap	This child element is not used.



**Table 8–18 (Cont.) Cube Table Child Elements**

Element Name	Description
CubeVars	<p>For SAP/BW data sources only. Cube variables are used as a means of parameterizing queries.</p> <p>Each cube variable is contained in a sub-element called CubeVar. This sub-element has the following attributes:</p> <ul style="list-style-type: none"> <li>■ name: Name of the cube variable.</li> <li>■ caption: A description (label or caption) associated with the cube variable, mainly used for display purposes.</li> <li>■ type: The type of cube variable (SAP_VAR_TYPE_MEMBER, SAP_VAR_TYPE_HIERARCHY, or SAP_VAR_TYPE_NUMERIC).</li> <li>■ selectionType: The selection type of the cube variable, for cube variables of type SAP_VAR_TYPE_MEMBER (SAP_VAR_SEL_TYPE_VALUE, SAP_SEL_TYPE_INTERVAL, or SAP_VAR_SEL_TYPE_COMPLEX).</li> <li>■ entryType: Indicates whether replacing variables is optional or mandatory. Values include SAP_VAR_INPUT_TYPE_OPTIONAL, SAP_VAR_INPUT_TYPE_MANDATORY, or SAP_VAR_INPUT_TYPE_MANDATORY_NOT_INITIAL.</li> <li>■ refDimension: The reference dimension. This column contains a DIMENSION_UNIQUE_NAME for the parameter type SAP_VAR_TYPE_HIERARCHY.</li> <li>■ refHierarchy: The reference hierarchy. This column contains a HIERARCHY_UNIQUE_NAME for the variable type SAP_VAR_TYPE_MEMBER.</li> <li>■ defaultLow: Contains a default value for the variable, or is zero.</li> <li>■ defaultHigh: Contains a default value for the variable, or is zero. This property is only important for variables with the selection type SAP_VAR_SEL_TYPE_INTERVAL and SAP_VAR_SEL_TYPE_SELECTION.</li> <li>■ overrideLow: The default value for the cube variable (used if defaultLow is zero).</li> <li>■ overrideHigh: The default value for the cube variable (used if defaultHigh is zero).</li> </ul>
CalcScripts	This child element is not used.
AnonymousCalcBlock	This child element is not used.

**Syntax**

```

<CubeTable ...
  extName=" "
  type=" "
  isCacheable=" "
  cacheExpiry=" "
  isCacheEventTable=" "
  pollFreq=" "
  x=" "
  y=" "
  rowCount=" "
  lastUpdated=" "
  scriptPath=" "
  isSysGen=" "
  isOverrideCacheProp=" "
  isDDLAggr=" "
  memberReference=" "

```

```

        dateFormat=""
        isMemberAliasUnique="">
<Description />
<Aliases>
</Aliases>
<AliasTableVar>
  <RefVariable .../>
  <RefVariable .../>
</AliasTableVar>
<CubeVars>
  <CubeVar .../>
  <CubeVar .../>
</CubeVars>
</CubeTable>

```

**Example**

```

<CubeTable name="Budget" parentName="&quot;FoodMart&quot;..&quot;&quot;;"
  parentId="3025:55574" parentUId="80cb9c54-0bd1-0000-714b-e31d00000000"
  id="3039:55589" uid="80cb9c63-0bdf-0000-714b-e31d00000000"
  type="none" extName="Budget"
  isCacheable="false" x="170" y="50"
  memberReference="Default"
  dateFormat="MM-DD-YYYY" isMemberAliasUnique="true">
</CubeTable>

```

## 8.12 XML Elements: Physical Dimension

The physical dimension element corresponds to the physical dimension object in the Physical layer.

The physical dimension tag includes the following attributes:

**Table 8–19 Physical Dimension Tag Attributes**

Attribute Name	Description
defaultMember	The default member for this physical dimension.

The physical dimension tag includes the following child elements:

**Table 8–20 Physical Dimension Child Elements**

Element Name	Description
Hierarchies	References the hierarchies that belong to this physical dimension. Each hierarchy is contained in a sub-element called RefPhysicalHierarchy.
UserAttributes	References the dimension properties for this physical dimension. Each dimension property is contained in a sub-element called RefCubeColumn.
AlternateHierarchyNames	For Essbase physical dimension objects, lists the names of any alternate hierarchies that belong to this dimension. Each hierarchy name is listed in a sub-element called Name.

**Syntax**

```
<PhysicalDimension ...
```

```

        defaultMember="">
<Description />
<Hierarchies>
  <RefPhysicalHierarchy .../>
</Hierarchies>
<UserAttributes>
  <RefCubeColumn .../>
</UserAttributes>
<AlternateHierarchyNames>
  <Name .../>
</AlternateHierarchyNames>
</PhysicalDimension>

```

### Example

```

<PhysicalDimension name="Months"
  parentName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE
    &quot;..&quot;Sample&quot;"
  parentId="3039:55589" parentUid="80cb9c63-0bdf-0000-714b-e31d00000000"
  id="3064:55587" uid="80cb9c61-0bf8-0000-714b-e31d00000000">
<Hierarchies>
  <RefPhysicalHierarchy id="3041:55581"
    uid="80cb9c5b-0be1-0000-714b-e31d00000000"
    qualifiedName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE
      &quot;..&quot;Sample&quot;.&quot;Months&quot;"/>
</Hierarchies>
<UserAttributes>
  <RefCubeColumn id="3043:55696"
    uid="80cb9cce-0be3-0000-714b-e31d00000000"
    qualifiedName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE
      &quot;..&quot;Sample&quot;.&quot;Months Leaf Indicator&quot;"/>
  <RefCubeColumn id="3043:55697"
    uid="80cb9ccf-0be3-0000-714b-e31d00000000"
    qualifiedName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE
      &quot;..&quot;Sample&quot;.&quot;Months Root Indicator&quot;"/>
</UserAttributes>
<AlternateHierarchyNames>
  <Name>
    <![CDATA[Calendar]]>
  </Name>
  <Name>
    <![CDATA[Fiscal]]>
  </Name>
</AlternateHierarchyNames>
</PhysicalDimension>

```

## 8.13 XML Elements: Physical Hierarchy

The physical hierarchy element corresponds to the physical hierarchy object in the Physical layer.

The physical hierarchy tag includes the following attributes:

**Table 8–21 Physical Hierarchy Tag Attributes**

Attribute Name	Description
memberType	Values are Unknown, Regular, All, Formula, Measure. Default value is Unknown.
extName	The external name for the physical hierarchy.

**Table 8–21 (Cont.) Physical Hierarchy Tag Attributes**

Attribute Name	Description
type	The type of physical hierarchy. Options include FULLY BALANCED, UNBALANCED, RAGGED BALANCED, and NETWORK.  This option corresponds to the <b>Hierarchy Type</b> option in the Physical Hierarchy dialog in the Administration Tool.
dimType	The dimension type (for example, Measure Dimension) for the dimension to which this hierarchy belongs.
rowCount	The latest number of rows retrieved for this physical hierarchy.
isTimeDim	If set to true, indicates that this physical dimension is a time dimension.
dimUniqueName	The name of the dimension to which this hierarchy belongs.
isMemberAliasUnique	Indicates whether member names (including aliases) are unique in a given hierarchy so that the Oracle BI Server can take advantage of specific MDX syntax to optimize performance.  This option corresponds to the <b>Use unqualified member name for better performance</b> option in the Physical Hierarchy dialog in the Administration Tool.

The physical hierarchy tag includes the following child elements:

**Table 8–22 Physical Hierarchy Child Elements**

Element Name	Description
Columns	For parent-child (value) hierarchies. References the set of cube columns that belong to this physical hierarchy.  Each cube column is contained in a sub-element called RefCubeColumn.
MemberKey	For parent-child (value) hierarchies. References the cube column that is the member key for this hierarchy.  The member key column is contained in a sub-element called RefCubeColumn.
ParentKey	For parent-child (value) hierarchies. References the cube column that is the parent key for this hierarchy.  The parent key column is contained in a sub-element called RefCubeColumn.
Levels	For level-based hierarchies. References the set of physical levels that belong to this physical hierarchy.  Each level is contained in a sub-element called RefPhysicalLevel.

### Syntax

```
<PhysicalHierarchy ...
  memberType=" "
  extName=" "
  type=" "
  dimType=" "
  rowCount=" "
  isTimeDim=" "
  dimUniqueName=" "
  isMemberAliasUnique=" ">
  <Description />
```

```

<Columns>
  <RefCubeColumn .../>
</Columns>
<MemberKey>
  <RefCubeColumn .../>
</MemberKey>
<ParentKey>
  <RefCubeColumn .../>
</ParentKey>
<Levels>
  <RefPhysicalLevel .../>
</Levels>
</PhysicalHierarchy>

```

### Example

```

<PhysicalHierarchy name="Employees"
  parentName="&quot;04 - Essbase Sample E2 (Default Import)&quot;
    .&quot;BISAMPLE&quot;..&quot;Sample&quot;."
  parentId="3039:73265" parentUid="80cbf73c-0bdf-0000-714b-e31d00000000"
  id="3041:73255" uid="80cbf732-0be1-0000-714b-e31d00000000"
  memberType="all"
  extName="Employees"
  type="VALUE" dimType="Other" dimUniqueName="Employees"
  isMemberAliasUnique="true">
  <Columns>
    <RefCubeColumn id="3043:73365"
      uid="80cbf7a0-0be3-0000-714b-e31d00000000"
      qualifiedName="&quot;04 - Essbase Sample E2 (Default Import)&quot;.&quot;
        BISAMPLE&quot;..&quot;Sample&quot;.&quot;Employee Name&quot;"/>
    <RefCubeColumn id="3043:73367"
      uid="80cbf7a2-0be3-0000-714b-e31d00000000"
      qualifiedName="&quot;04 - Essbase Sample E2 (Default Import)&quot;.&quot;
        BISAMPLE&quot;..&quot;Sample&quot;.&quot;Employee Name - Memnor&quot;"/>
    ...
  </Columns>
  <MemberKey>
    <RefCubeColumn id="3043:73365"
      uid="80cbf7a0-0be3-0000-714b-e31d00000000"
      qualifiedName="&quot;04 - Essbase Sample E2 (Default Import)&quot;.&quot;
        BISAMPLE&quot;..&quot;Sample&quot;.&quot;Employee Name&quot;"/>
  </MemberKey>
  <ParentKey>
    <RefCubeColumn id="3043:74681"
      uid="80cbfaa4-0be3-0000-714b-e31d00000000"
      qualifiedName="&quot;04 - Essbase Sample E2 (Default Import)&quot;.&quot;
        BISAMPLE&quot;..&quot;Sample&quot;.&quot;Employees Parent Key&quot;"/>
  </ParentKey>
  <Levels>
    <RefPhysicalLevel id="3045:73449"
      uid="80cbf7f4-0be5-0000-714b-e31d00000000"
      qualifiedName="&quot;04 - Essbase Sample E2 (Default Import)&quot;.&quot;
        BISAMPLE&quot;..&quot;Sample&quot;.&quot;Employees&quot;.&quot;
        All Employees&quot;"/>
    <RefPhysicalLevel id="3045:73450"
      uid="80cbf7f5-0be5-0000-714b-e31d00000000"
      qualifiedName="&quot;04 - Essbase Sample E2 (Default Import)&quot;.&quot;
        BISAMPLE&quot;..&quot;Sample&quot;.&quot;Employees&quot;.&quot;
        Employee L1&quot;"/>
    ...
  </Levels>

```

```
</PhysicalHierarchy>
```

## 8.14 XML Elements: Physical Level

The physical level element corresponds to the hierarchical levels for a physical cube table object in the Physical layer.

The physical level tag includes the following attributes:

**Table 8–23 Physical Level Tag Attributes**

Attribute Name	Description
levelNum	Identifies the order of this physical level in the hierarchy.
extName	Fully qualified name for the level.
rowCount	The latest number of rows retrieved for this physical level.

The physical level tag includes the following child elements:

**Table 8–24 Physical Level Child Elements**

Element Name	Description
LevelKey	References the key column for this physical level. The key column is contained in a sub-element called RefCubeColumn.

### Syntax

```
<PhysicalLevel ...
  levelNumber=" "
  extName=" "
  rowCount=" ">
  <Description />
  <LevelKey>
    <RefCubeColumn .../>
  </LevelKey>
</PhysicalLevel>
```

### Example

```
<PhysicalLevel name="Brands"
  parentName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE
  &quot;..&quot;Sample&quot;.&quot;Products&quot;"
  parentId="3041:55576" parentUid="80cb9c56-0be1-0000-714b-e31d00000000"
  id="3045:55742" uid="80cb9cfc-0be5-0000-714b-e31d00000000"
  levelNum="1" extName="Brands">
  <LevelKey>
    <RefCubeColumn id="3043:55604"
      uid="80cb9c72-0be3-0000-714b-e31d00000000"
      qualifiedName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE
      &quot;..&quot;Sample&quot;.&quot;Brands&quot;"/>
  </LevelKey>
</PhysicalLevel>
```

## 8.15 XML Elements: Cube Column

The cube column element corresponds to the cube column of a physical cube object in the Physical layer.

The cube column tag includes the following attributes:

**Table 8–25 Cube Column Tag Attributes**

Attribute Name	Description
extName	The external name for the cube column. This attribute is required if the same name (such as STATE) is used in multiple hierarchies.
aggrType	The type of aggregation on the column, if any.
dataType	The data type of the cube column, such as VARCHAR.
nullable	If set to true, indicates that null values are allowed for the column. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the cube column.
scale	The scale of the data type of the column.
rowCount	The latest number of rows retrieved for this cube column.
lastUpdated	The time at which row counts were last updated for this cube column.
dimPropType	For Essbase dimensional columns only. Indicates the property type of the cube column. Valid values are: <ul style="list-style-type: none"> <li>▪ uda: User Defined Attribute (UDA) type.</li> <li>▪ memnor: Memnor type, used for outline sorts in the logical layer. Imported at the lowest level of each dimension. Called <b>Outline Sort</b> in the Administration Tool.</li> <li>▪ attribute: Attribute type, for attribute dimensions.</li> <li>▪ other: The type is different than those listed, or unknown.</li> <li>▪ none: The column does not have a property type. Note that this type is mapped to <b>Member Alias</b> in the Administration Tool.</li> <li>▪ ancestorRef: References the ancestor of a dimension.</li> <li>▪ memberKey: The column is a member key.</li> <li>▪ levelNumber: The column is the lowest member of the hierarchy. Called <b>Leaf</b> in the Administration Tool.</li> <li>▪ genNumber: The column is the root member of the hierarchy. Called <b>Root</b> in the Administration Tool.</li> <li>▪ parentRef: References the parent of a dimension.</li> </ul>

The cube column tag includes the following child elements:

**Table 8–26 Cube Column Child Elements**

Element Name	Description
AttributeHierarchy	References the physical hierarchy to which this cube column belongs. The hierarchy is contained in a sub-element called RefPhysicalHierarchy.
PhysicalLevel	References the physical level to which this cube column belongs. The level is contained in a sub-element called RefPhysicalLevel.

**Syntax**

```

<CubeColumn ...
  extName=" "
  aggrType=" "
  dataType=" "
  nullable=" "
  precision=" "
  scale=" "
  rowCount=" "
  lastUpdated=" "
  dimPropType=" ">
  <Description />
  <AttributeHierarchy>
    <RefPhysicalHierarchy .../>
  </AttributeHierarchy>
  <PhysicalLevel>
    <RefPhysicalLevel .../>
  </PhysicalLevel>
</CubeColumn>

```

**Example**

```

<CubeColumn name="Month Names"
  parentName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE&quot;
  ..&quot;Sample&quot;"
  parentId="3039:55589" parentUid="80cb9c63-0bdf-0000-714b-e31d00000000"
  id="3043:55660" uid="80cb9caa-0be3-0000-714b-e31d00000000"
  extName="Month Names" dataType="VARCHAR" precision="128"
  nullable="true" dimPropType="none">
  <PhysicalLevel>
    <RefPhysicalLevel id="3045:55757"
      uid="80cb9d0b-0be5-0000-714b-e31d00000000"
      qualifiedName="&quot;03 - Essbase Sample E1&quot;.&quot;BISAMPLE&quot;
      ..&quot;Sample&quot;.&quot;Month of Year&quot;.&quot;Month Names&quot;" />
  </PhysicalLevel>
</CubeColumn>

```

## 8.16 XML Elements: Analytic Workspace

The Analytic Workspace element corresponds to the Oracle OLAP Analytic Workspace (AW) object in the Physical layer.

The Analytic Workspace tag includes the following attributes:

**Table 8–27 Analytic Workspace Tag Attributes**

Attribute Name	Description
version	The version of the Analytic Workspace.

The Analytic Workspace tag includes the following child elements:

**Table 8–28 Analytic Workspace Child Elements**

Element Name	Description
DynamicName	<p>If a session variable is being used to specify the name of this Analytic Workspace, this element references that session variable.</p> <p>The session variable is contained in a sub-element called RefVariable.</p>



**Syntax**

```
<AnalyticWorkspace ...
  version="">
  <Description />
  <DynamicName>
    <RefVariable .../>
  </DynamicName>
</AnalyticWorkspace>
```

**Example**

```
<AnalyticWorkspace name="GLOBAL"
  parentName="&quot;Demo AW&quot;. &quot;GLOBAL&quot;"
  parentId="3025:8" parentUid="000000ad-0bd1-0000-714b-e31d00000000"
  id="3049:9" uid="000000ae-0be9-0000-714b-e31d00000000"
  version="10">
</AnalyticWorkspace>
```

## 8.17 XML Elements: AW Cube

The AW cube element corresponds to the Oracle OLAP cube object in the Physical layer.

The AW cube tag includes the following attributes:

**Table 8–29 AW Cube Tag Attributes**

Attribute Name	Description
extName	The physical name that is used when referencing the cube in physical SQL queries.
isCacheable	If set to true, indicates that this table is included in the Oracle BI Server query cache.
CacheExpiry	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.
isCacheEventTable	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
pollFreq	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.
x	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
y	The <i>y</i> coordinate of the table when it is shown in the physical diagram.
rowCount	The latest number of rows retrieved for this Oracle OLAP cube.
lastUpdated	The time at which row counts were last updated for this Oracle OLAP cube.
hints	For Oracle Databases only. Lists any database hints, such as index hints or leading hints, that were specified for this physical table.
isExtGatewayInProcess	For XML data sources only. Indicates that this physical table is the extended gateway part of the process.
isOverrideCacheProperties	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.

**Table 8–29 (Cont.) AW Cube Tag Attributes**

Attribute Name	Description
isDDLAggr	Indicates whether this Oracle OLAP cube is an aggregate table.
isPartitioned	If set to true, indicates that the cube is partitioned by one or more dimensions.
isSysGen	If set to true, indicates that an internal utility has generated this Oracle OLAP cube.
densityStatus	For Oracle OLAP 10g cubes only. Indicates whether the cube is dense or sparse. If neither dense nor sparse is specified, the Oracle BI Server assumes the data is sparse. Valid values are <code>dense</code> , <code>sparse</code> , and <code>unknown</code> .
materializationStatus	For Oracle OLAP 10g cubes only. Indicates whether the cube is fully materialized. Valid values are <code>fully</code> , <code>not fully</code> , and <code>unknown</code> .

The AW cube tag includes the following child elements:

**Table 8–30 AW Cube Child Elements**

Element Name	Description
Columns	References the Oracle OLAP columns that belong to this Oracle OLAP cube. Each Oracle OLAP column is contained in a sub-element called <code>RefAWColumn</code> .
AggrConnPool	If this Oracle OLAP cube is an aggregate table, this element references the connection pool used for the aggregate. The connection pool is contained in a sub-element called <code>RefConnectionPool</code> .
CompositeInfo	References dimensions for the cube. Contains the sub-element called <code>Composite</code> , which has one attribute called <code>name</code> and a sub-element called <code>Dimension</code> . Each dimension is contained in the <code>Dimension</code> sub-element.

### Syntax

```
<AWCube ...
  extName=" "
  isCacheable=" "
  cacheExpiry=" "
  isCacheEventTable=" "
  pollFreq=" "
  x=" "
  y=" "
  rowCount=" "
  lastUpdated=" "
  hints=" "
  isExtGatewayInProgress=" "
  isOverrideCacheProp=" "
  isDDLAggr=" "
  isSysGen=" "
  isPartitioned=" "
  densityStatus" "
  materializationStatus=" ">
<Description />
```

```

<Columns>
  <RefAWColumn .../>
</Columns>
<AggrConnPool>
  <RefConnectionPool .../>
</AggrConnPool>
<CompositeInfo>
  <Composite name=" ">
    <Dimension .../>
  </Composite>
</CompositeInfo>
</AWCube>

```

### Example

```

<AWCube name="Units Cube"
  parentName="&quot;Demo AW&quot; .&quot;&quot;GLOBAL&quot; .&quot;&quot;GLOBAL&quot;"
  parentId="3049:9" parentUid="000000ae-0be9-0000-714b-e31d00000000"
  id="3054:10" uid="000000af-0bee-0000-714b-e31d00000000"
  extName="Units Cube">
  <Columns>
    <RefAWColumn id="3060:11"
      uid="000000b5-0bf4-0000-714b-e31d00000000"
      qualifiedName="&quot;Demo AW&quot; .&quot;&quot;GLOBAL&quot;
        .&quot;&quot;GLOBAL&quot; .&quot;&quot;Units Cube&quot; .&quot;&quot;Units&quot;" />
    <RefAWColumn id="3060:12"
      uid="000000b6-0bf4-0000-714b-e31d00000000"
      qualifiedName="&quot;Demo AW&quot; .&quot;&quot;GLOBAL&quot;
        .&quot;&quot;GLOBAL&quot; .&quot;&quot;Units Cube&quot; .&quot;&quot;Sales&quot;" />
    ...
  </Columns>
  <CompositeInfo>
    <Composite name="UNITS_CUBE_COMPOSITE">
      <Dimension><![CDATA[CUSTOMER]]></Dimension>
      <Dimension><![CDATA[PRODUCT]]></Dimension>
      <Dimension><![CDATA[CHANNEL]]></Dimension>
    </Composite>
  </CompositeInfo>
</AWCube>

```

## 8.18 XML Elements: AW Dimension

The AW dimension element corresponds to the Oracle OLAP dimension object in the Physical layer.

The AW dimension tag includes the following attributes:

**Table 8–31** AW Dimension Tag Attributes

Attribute Name	Description
type	The dimension type.
isCacheable	If set to true, indicates that this dimension is included in the Oracle BI Server query cache.
CacheExpiry	If set to true, indicates that this dimension is included in the Oracle BI Server query cache.
isCacheEventTable	How long table entries should persist in the query cache. A value of 0 indicates that cache entries do not expire.

**Table 8–31 (Cont.) AW Dimension Tag Attributes**

Attribute Name	Description
isOverrideCacheProp	For alias tables only. If set to true, indicates that the alias table has its own cache properties that override the cache properties of the source table.
pollFreq	If set to true, indicates that this table has been registered as an Oracle BI Server event polling table.
x	The polling frequency, in seconds. Only applies if this table is an Oracle BI Server event polling table. The default value is 3600 seconds.
y	The <i>x</i> coordinate of the table when it is shown in the physical diagram.
rowCount	The <i>y</i> coordinate of the table when it is shown in the physical diagram.
lastUpdated	The time at which row counts were last updated for this Oracle OLAP dimension.
hints	This attribute is not used.
isSysGen	If set to true, indicates that an internal utility has generated this Oracle OLAP dimension.
isDDLAggr	Indicates whether this Oracle OLAP dimension is an aggregate table.
isTimeDim	If set to true, indicates that this Oracle OLAP dimension is a time dimension.
extName	The physical name that is used when referencing the dimension in physical SQL queries.

The AW dimension tag includes the following child elements:

**Table 8–32 AW Dimension Child Elements**

Element Name	Description
AggrConnPool	If this AW dimension is an aggregate table, this element references the connection pool used for the aggregate. The connection pool is contained in a sub-element called RefConnectionPool.
AWObjects	References the Oracle OLAP objects, such a list of hierarchies, associated with this dimension. Each object is contained in a sub-element called AWObject. This sub-element includes the following attributes: <ul style="list-style-type: none"> <li>■ name</li> <li>■ type</li> <li>■ dataType</li> <li>■ nullable</li> <li>■ precision</li> <li>■ scale</li> </ul>

**Syntax**

```
<AWDimension ...
  type=" "
```

```

isCacheable=""
cacheExpiry=""
isCacheEventTable=""
isOverrideCacheProp=""
pollFreq=""
x=""
y=""
rowCount=""
lastUpdated=""
isSysGen=""
isDDLAggr=""
isTimeDim=""
extName="">
<Description />
<AggrConnPool>
  <RefConnectionPool .../>
</AggrConnPool>
<AWObjects>
  <AWObject name="" type="" dataType="" .../>
  <AWObject name="" type="" dataType="" .../>
</AWObjects>
</AWDimension>

```

### Example

```

<AWDimension name="Customer"
  parentName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;"
  parentId="3049:9" parentUid="000000ae-0be9-0000-714b-e31d00000000"
  id="3052:91" uid="000000b3-0bec-0000-714b-e31d00000000"
  type="none" extName="CUSTOMER">
  <AWObjects>
    <AWObject type="HIER_LIST" name="CUSTOMER_HIERLIST" dataType="VARCHAR"
      precision="100"/>
    <AWObject type="LEVEL_LIST" name="CUSTOMER_LEVELLIST" dataType="VARCHAR"
      precision="100"/>
    <AWObject type="IN_HIER" name="CUSTOMER_INHIER" dataType="VARCHAR"
      precision="100"/>
    <AWObject type="PARENT_REL" name="CUSTOMER_PARENTREL" dataType="VARCHAR"
      precision="100"/>
    <AWObject type="LEVEL_REL" name="CUSTOMER_LEVELREL" dataType="VARCHAR"
      precision="100"/>
    <AWObject type="FAMILY_REL" name="CUSTOMER_FAMILYREL" dataType="VARCHAR"
      precision="100"/>
  </AWObjects>
</AWDimension>

```

## 8.19 XML Elements: AW Hierarchy

The AW hierarchy element corresponds to the Oracle OLAP hierarchy object in the Physical layer.

The AW hierarchy tag includes the following attributes:

**Table 8–33 AW Hierarchy Tag Attributes**

Attribute Name	Description
type	The type of Oracle OLAP hierarchy (value or level).
isDefault	If set to true, indicates that this is the default hierarchy for the Oracle OLAP dimension.

**Table 8–33 (Cont.) AW Hierarchy Tag Attributes**

Attribute Name	Description
extName	The physical name that is used when referencing the hierarchy in physical SQL queries.
dataType	The data type of the Oracle OLAP hierarchy, such as VARCHAR.
nullable	If set to true, indicates that null values are allowed for the Oracle OLAP hierarchy. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the Oracle OLAP hierarchy.
scale	The scale of the data type of the Oracle OLAP hierarchy.

The AW hierarchy tag includes the following child elements:

**Table 8–34 AW Hierarchy Child Elements**

Attribute Name	Description
Levels	For level-based hierarchies only. References the level or levels for this Oracle OLAP hierarchy. Each level is contained in a sub-element called RefAWLevel.
Columns	For value-based hierarchies only. References the column or columns for this Oracle OLAP hierarchy. Each column is contained in a sub-element called RefAWColumn.
MemberKey	References the member key (for parent-child hierarchies). The member key is contained in a sub-element called RefAWColumn.

### Syntax

```
<AWHierarchy ...
  type=" "
  isDefault=" "
  extName=" "
  dataType=" "
  nullable=" "
  precision=" "
  scale=" ">
  <Description />
  <Levels>
    <RefAWLevel ../>
  </Levels>
  <Columns>
    <RefAWColumn ../>
  </Columns>
  <MemberKey>
    <RefAWColumn ../>
  </MemberKey>
</AWHierarchy>
```

### Example

```
<AWHierarchy name="Primary"
  parentName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;.&quot;
  Channel&quot;"
  parentId="3052:84" parentUid="000000b2-0bec-0000-714b-e31d00000000">
```

```

id="3056:138" uid="0000012f-0bf0-0000-714b-e31d00000000"
isDefault="true" extName="PRIMARY" dataType="UNKNOWN">
<Levels>
<RefAWLevel id="3058:150"
uid="0000013b-0bf2-0000-714b-e31d00000000"
qualifiedName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;
.&quot;Channel&quot;.&quot;Primary&quot;.&quot;Total Channel&quot;"/>
<RefAWLevel id="3058:151"
uid="0000013c-0bf2-0000-714b-e31d00000000"
qualifiedName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;
.&quot;Channel&quot;.&quot;Primary&quot;.&quot;Channel&quot;"/>
</Levels>
</AWHierarchy>

```

## 8.20 XML Elements: AW Level

The AW level element corresponds to the Oracle OLAP level object in the Physical layer.

The AW level tag includes the following attributes:

**Table 8–35 AW Level Tag Attributes**

Attribute Name	Description
extName	The physical name that is used when referencing the level in physical SQL queries.
dataType	The data type of the Oracle OLAP level, such as VARCHAR.
nullable	If set to true, indicates that null values are allowed for the Oracle OLAP level. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the Oracle OLAP level.
scale	The scale of the data type of the Oracle OLAP level.

The AW level tag includes the following child elements:

**Table 8–36 AW Level Child Elements**

Element Name	Description
Columns	References the column or columns for this Oracle OLAP level. Each column is contained in a sub-element called RefAWColumn.
LevelKey	References the key column for this Oracle OLAP level. The key column is contained in a sub-element called RefAWColumn.

### Syntax

```

<AWLevel ...
  extName=" "
  dataType=" "
  nullable=" "
  precision=" "
  scale=" ">
  <Description />
  <Columns>
    <RefAWColumn .../>

```

```

</Columns>
<LevelKey>
  <RefAWColumn .../>
</LevelKey>
</AWLevel>

```

### Example

```

<AWLevel name="All Years"
  parentName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;
    .&quot;Time&quot;.&quot;Calendar Year&quot;"
  parentId="3056:136" parentUId="0000012d-0bf0-0000-714b-e31d00000000"
  id="3058:142" uid="00000133-0bf2-0000-714b-e31d00000000"
  extName="ALL_YEARS" dataType="UNKNOWN">
  <Columns>
    <RefAWColumn id="3060:49"
      uid="000000d9-0bf4-0000-714b-e31d00000000"
      qualifiedName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;
        .&quot;Time&quot;.&quot;CALENDAR_YEAR - All Years - Long Description
          &quot;"/>
    <RefAWColumn id="3060:50"
      uid="000000da-0bf4-0000-714b-e31d00000000"
      qualifiedName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;
        .&quot;Time&quot;.&quot;Calendar Year - All Years&quot;"/>
  </Columns>
  <LevelKey>
    <RefAWColumn id="3060:50"
      uid="000000da-0bf4-0000-714b-e31d00000000"
      qualifiedName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;
        .&quot;Time&quot;.&quot;Calendar Year - All Years&quot;"/>
  </LevelKey>
</AWLevel>

```

## 8.21 XML Elements: AW Column

The AW column element corresponds to the AW column object in the Physical layer.

The AW column tag includes the following attributes:

**Table 8–37 AW Column Tag Attributes**

Attribute Name	Description
extName	The physical name that is used when referencing the column in physical SQL queries.
isParentKey	Indicates whether this Oracle OLAP column is a parent key for a level.
dataType	The data type of the Oracle OLAP column, such as VARCHAR.
scale	The scale of the data type of the Oracle OLAP column.
nullable	If set to true, indicates that null values are allowed for the Oracle OLAP column. This allows null values to be returned to the user, which is expected with certain functions and with outer joins.
precision	The precision of the data type of the Oracle OLAP column.

The AW column tag does not include any child elements.



**Syntax**

```
<AWColumn ...
  extName=" "
  isParentKey=" "
  dataType=" "
  nullable=" "
  precision=" "
  scale=" ">
  <Description />
</AWColumn>
```

**Example**

```
<AWColumn name="Sales"
  parentName="&quot;Demo AW&quot;.&quot;GLOBAL&quot;.&quot;GLOBAL&quot;
  .&quot;Units Cube&quot;";
  parentId="3054:10" parentUid="000000af-0bee-0000-714b-e31d00000000"
  id="3060:12" uid="000000b6-0bf4-0000-714b-e31d00000000"
  extName="UNITS_CUBE_SALES" dataType="DOUBLE" nullable="true">
</AWColumn>
```



---



---

## XML Presentation Elements

Presentation elements are typically those elements that are exposed in the Presentation layer, or in other words, the elements that appear in the left-hand pane of the Administration Tool.

This chapter contains the following topics:

- [Section 9.1, "XML Elements: Presentation Catalog"](#)
- [Section 9.2, "XML Elements: Presentation Schema"](#)
- [Section 9.3, "XML Elements: Presentation Table"](#)
- [Section 9.4, "XML Elements: Presentation Column"](#)
- [Section 9.5, "XML Elements: Presentation Hierarchy"](#)
- [Section 9.6, "XML Elements: Presentation Level"](#)

### 9.1 XML Elements: Presentation Catalog

The presentation catalog element corresponds to the subject area object in the Presentation layer.

The presentation catalog tag includes the following attributes:

**Table 9–1 Presentation Catalog Tag Attributes**

Attribute Name	Description
isExportKeys	If set to true, indicates that logical keys for this subject area are exposed to other applications.
hasDispName	Indicates whether this subject area has a custom display name.
dispName	The value of the custom display name, if one exists for this subject area.
hasDispDescription	Indicates whether this subject area has a custom description.
dispDescription	The value of the custom description, if one exists for this subject area.

The presentation catalog tag includes the following child elements:

**Table 9–2 Presentation Catalog Child Elements**

Element Name	Description
RefBusinessModel	References the business model for this subject area.

**Table 9–2 (Cont.) Presentation Catalog Child Elements**

Element Name	Description
DefaultFactCol	References the implicit fact column for this subject area, if one has been set. This column is used to specify a default join path between dimension tables when there are several possible alternatives or contexts.  The implicit fact column is contained in a sub-element called RefLogicalColumn.
Aliases	Lists any aliases that have been defined for this subject area. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries.  Each alias is contained in a sub-element called Alias, with one attribute called name.
Tables	References the presentation tables that belong to this subject area.  Each presentation table is contained in a sub-element called RefPresentationTable.

**Syntax**

```

<PresentationCatalog ...
  isExportKeys=" "
  isAutoAggr=" "
  hasDispName=" "
  dispName=" "
  hasDispDescription=" "
  dispDescription=" "
<Description />
<RefBusinessModel .../>
<DefaultFactCol>
  <RefLogicalColumn .../>
</DefaultFactCol>
<Aliases .../>
<Tables>
  <RefPresentationTable .../>
</Tables>
</PresentationCatalog>

```

**Example**

```

<PresentationCatalog name="C - Sample Headcount"
  id="4004:20154" uid="80cad5f1-0fa4-0000-714b-e31d00000000"
  hasDispName="false" hasDispDescription="false">
  <Description>
    <![CDATA[Sample Subject Area for Headcount analysis. ]]>
  </Description>
  <RefBusinessModel id="2000:11614"
    uid="80cab573-07d0-0000-714b-e31d00000000"
    qualifiedName="&quot;1 - Sample App&quot;"/>
  <DefaultFactCol>
    <RefLogicalColumn id="2006:11713"
      uid="80cab5d6-07d6-0000-714b-e31d00000000"
      qualifiedName="&quot;1 - Sample App&quot;.&quot;
        F0 Revenue Base Measures&quot;.&quot;1- Revenue&quot;"/>
  </DefaultFactCol>
  <Tables>
    <RefPresentationTable id="4008:22157"

```

```

uid="80caddc2-0fa8-0000-714b-e31d00000000"
qualifiedName="&quot;C - Sample Headcount&quot;..&quot;Time&quot;"/>
<RefPresentationTable id="4008:32117"
uid="80cb3805-0fa8-0000-714b-e31d00000000"
qualifiedName="&quot;C - Sample Headcount&quot;..&quot;Offices&quot;"/>
<RefPresentationTable id="4008:20169"
uid="80cad600-0fa8-0000-714b-e31d00000000"
qualifiedName="&quot;C - Sample Headcount&quot;..&quot;Base Facts&quot;"/>
<RefPresentationTable id="4008:20170"
uid="80cad601-0fa8-0000-714b-e31d00000000"
qualifiedName="&quot;C - Sample Headcount&quot;..&quot;
  Calculated Facts&quot;"/>
<RefPresentationTable id="4008:20171"
uid="80cad602-0fa8-0000-714b-e31d00000000"
qualifiedName="&quot;C - Sample Headcount&quot;..&quot;
  Simple Calculations&quot;"/>
<RefPresentationTable id="4008:22145"
uid="80caddb6-0fa8-0000-714b-e31d00000000"
qualifiedName="&quot;C - Sample Headcount&quot;..&quot;
  Time Span Variations&quot;"/>
</Tables>
</PresentationCatalog>

```

## 9.2 XML Elements: Presentation Schema

The presentation schema element is not used.

## 9.3 XML Elements: Presentation Table

The presentation table element corresponds to the presentation table object in the Presentation layer.

The presentation table tag includes the following attributes:

**Table 9–3 Presentation Table Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this presentation table has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation table.
hasDispDescription	Indicates whether this presentation table has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation table.

The presentation table tag includes the following child elements:

**Table 9–4 Presentation Table Child Elements**

Element Name	Description
Aliases	Lists any aliases that have been defined for this presentation table. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries.  Each alias is contained in a sub-element called <code>Alias</code> , with one attribute called <code>name</code> .
Columns	References the presentation columns that belong to this presentation table.  Each presentation column is contained in a sub-element called <code>RefPresentationColumn</code> .

**Syntax**

```

<PresentationTable ...
  hasDispName=" "
  dispName=" "
  hasDispDescription=" "
  dispDescription=" ">
  <Description />
  <Aliases>
    <Alias name=" " />
    <Alias name=" " />
  </Aliases>
  <Columns>
    <RefPresentationColumn .../>
  </Columns>
</PresentationTable>

```

**Example**

```

<PresentationTable name="Offices"
  parentName="&quot;A - Sample Sales&quot;.&quot;&quot;"
  parentId="4004:12383" parentUid="80cab7ef-0fa4-0000-714b-e31d00000000"
  id="4008:12457" uid="80cab839-0fa8-0000-714b-e31d00000000"
  dispName="VALUEOF(NQ_SESSION.CN_A_-_Sample_Sales_Offices)"
  hasDispName="true" hasDispDescription="false">
  <Description>
    <![CDATA[Offices dimension attribute objects]]>
  </Description>
  <Columns>
    <RefPresentationColumn id="4010:31845"
      uid="80cb368a-0faa-0000-714b-e31d00000000"
      qualifiedName="&quot;A - Sample Sales&quot;.&quot;.&quot;Offices&quot;
        .&quot;D1 Office&quot;"/>
    <RefPresentationColumn id="4010:31847"
      uid="80cb368b-0faa-0000-714b-e31d00000000"
      qualifiedName="&quot;A - Sample Sales&quot;.&quot;.&quot;Offices&quot;
        .&quot;D2 Department&quot;"/>
    <RefPresentationColumn id="4010:31849"
      uid="80cb368c-0faa-0000-714b-e31d00000000"
      qualifiedName="&quot;A - Sample Sales&quot;.&quot;.&quot;Offices&quot;
        .&quot;D3 Organization&quot;"/>
    <RefPresentationColumn id="4010:31851"
      uid="80cb368d-0faa-0000-714b-e31d00000000"
      qualifiedName="&quot;A - Sample Sales&quot;.&quot;.&quot;Offices&quot;
        .&quot;D4 Company&quot;"/>
  </Columns>

```

```
</PresentationTable>
```

## 9.4 XML Elements: Presentation Column

The presentation column element corresponds to the presentation column object in the Presentation layer.

The presentation column tag includes the following attributes:

**Table 9–5 Presentation Column Tag Attributes**

Attribute Name	Description
overrideLogicalName	Indicates whether the presentation column has been configured to always use the logical column name.  This option corresponds to <b>Use Logical Column Name</b> in the <b>Administration Tool</b> . A <code>false</code> value for this attribute indicates that this option has been selected.
hasDispName	Indicates whether this presentation column has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation column.
hasDispDescription	Indicates whether this presentation column has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation column.

The presentation column tag includes the following child elements:

**Table 9–6 Presentation Column Child Elements**

Attribute Name	Description
RefLogicalColumn	References the logical column upon which this presentation column is based.
Aliases	Lists any aliases that have been defined for this presentation column. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries.  Each alias is contained in a sub-element called <code>Alias</code> , with one attribute called <code>name</code> .

### Syntax

```
<PresentationColumn ...
  overrideLogicalName=" "
  hasDispName=" "
  dispName=" "
  hasDispDescription=" "
  dispDescription=" ">
  <Description />
  <RefLogicalColumn .../>
  <Aliases>
    <Alias name=" " />
    <Alias name=" " />
  </Aliases>
</PresentationColumn>
```

**Example**

```

<PresentationColumn name="T01 Per Name Week (Rel Only)"
  parentName="&quot;F - Sample Essb Federated&quot;..&quot;Time&quot;"
  parentId="4008:54644" parentUid="80cb981c-0fa8-0000-714b-e31d00000000"
  id="4010:54646" uid="80cb981e-0faa-0000-714b-e31d00000000"
  hasDispName="false" hasDispDescription="false" overrideLogicalName="false">
  <Description>
    <![CDATA[Help : Period Name Week. Stores the week information
      in the format YYYY Week Number. Eg :- 2006 Week 40]]>
  </Description>
  <RefLogicalColumn id="2006:53537"
    uid="80cb94b1-07d6-0000-714b-e31d00000000"
    qualifiedName="&quot;3 - Sample Federated&quot;.&quot;D0 Time&quot;
    .&quot;T01 Per Name Week (Rel Only)&quot;"/>
  <Aliases>
    <Alias name="T01 Per Name Week"/>
  </Aliases>
</PresentationColumn>

```

## 9.5 XML Elements: Presentation Hierarchy

The presentation hierarchy element corresponds to the presentation hierarchy object in the Presentation layer.

The presentation hierarchy tag includes the following attributes:

**Table 9–7 Presentation Hierarchy Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this presentation hierarchy has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation hierarchy.
hasDispDescription	Indicates whether this presentation hierarchy has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation hierarchy.

The presentation hierarchy tag includes the following child elements:

**Table 9–8 Presentation Hierarchy Child Elements**

Element Name	Description
Levels	References the presentation levels for this presentation hierarchy. Each presentation level is contained in a sub-element called RefPresentationLevel.
Aliases	Lists any aliases that have been defined for this presentation hierarchy. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries. Each alias is contained in a sub-element called Alias, with one attribute called name.



**Table 9–8 (Cont.) Presentation Hierarchy Child Elements**

Element Name	Description
DisplayColumns	For parent-child hierarchies only. This element references the columns designated to be used for display for this parent-child hierarchy. Each display column is contained in a sub-element called RefPresentationColumn.
Dimension	References the logical dimension upon which this presentation hierarchy is based. The dimension is contained in a sub-element called RefDimension.

**Syntax**

```

<PresentationHierarchy ...
  hasDisplayName=" "
  displayName=" "
  hasDispDescription=" "
  dispDescription=" ">
  <Description />
  <Levels>
    <RefPresentationLevel .../>
  </Levels>
  <Aliases>
    <Alias name=" " />
    <Alias name=" " />
  </Aliases>
  <DisplayColumns>
    <RefPresentationColumn .../>
  </DisplayColumns>
  <Dimension>
    <RefDimension .../>
  </Dimension>
</PresentationHierarchy>

```

**Example**

```

<PresentationHierarchy name="Discounts and Coupons"
  parentName="&quot;Fusion Order Demo&quot;..&quot;Discounts and Coupons&quot;;"
  parentId="4008:69443" parentUid="80cbdded-0fa8-0000-714b-e31d00000000"
  id="4028:69466" uid="80cbde04-0fbc-0000-714b-e31d00000000"
  hasDispName="false" hasDispDescription="false">
  <Levels>
    <RefPresentationLevel id="4030:69479"
      uid="80cbde11-0fbe-0000-714b-e31d00000000"
      qualifiedName="&quot;Fusion Order Demo&quot;..&quot;Discounts and Coupons
        &quot;.&quot;Discounts and Coupons&quot;.&quot;Total&quot;"/>
    <RefPresentationLevel id="4030:69480"
      uid="80cbde12-0fbe-0000-714b-e31d00000000"
      qualifiedName="&quot;Fusion Order Demo&quot;..&quot;Discounts and Coupons
        &quot;.&quot;Discounts and Coupons&quot;.&quot;Discounts Detail&quot;"/>
  </Levels>
  <Aliases>
    <Alias name="H11 Discounts and Coupons"/>
  </Aliases>
  <Dimension>
    <RefDimension id="2019:63982"
      uid="80cbc7c7-07e3-0000-714b-e31d00000000"
      qualifiedName="&quot;Fusion Order Demo (OLTP)&quot;.&quot;
        H11 Discounts and Coupons&quot;"/>
  </Dimension>
</PresentationHierarchy>

```

## 9.6 XML Elements: Presentation Level

The presentation level element corresponds to the presentation level object in the Presentation layer.

The presentation level tag includes the following attributes:

**Table 9–9 Presentation Level Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this presentation level has a custom display name.
dispName	The value of the custom display name, if one exists for this presentation level.
hasDispDescription	Indicates whether this presentation level has a custom description.
dispDescription	The value of the custom description, if one exists for this presentation level.

The presentation level tag includes the following child elements:

**Table 9–10 Presentation Level Child Elements**

Element Name	Description
RefLogicalLevel	References the logical level upon which this presentation level is based.
DrillTo	References the levels for cross-dimension drill-down operations, as in the case of a Region dimension with a City level that can have a "drill to" level Year in the Time dimension.
DisplayColumns	References the columns that have been designated to be used for display for this presentation level (on drill-down). Each column is contained in a sub-element called RefPresentationColumn.
Aliases	Lists any aliases that have been defined for this presentation level. Aliases are created when presentation objects are renamed to ensure that any references to the old names still work in logical SQL queries. Each alias is contained in a sub-element called Alias, with one attribute called name.

### Syntax

```
<PresentationLevel ...
  hasDisplayName=" "
  displayName=" "
  hasDispDescription=" "
  dispDescription=" ">
  <Description />
  <RefLogicalLevel .../>
  <DrillTo>
    <RefPresentationLevel .../>
    <RefPresentationLevel .../>
  </DrillTo>
  <DisplayColumns>
    <RefPresentationColumn .../>
    <RefPresentationColumn .../>
  </DisplayColumns>
```

```

<Aliases>
  <Alias name="" />
  <Alias name="" />
</Aliases>
</PresentationLevel>

```

### Example

```

<PresentationLevel name="Ship to Region"
  parentName="&quot;A - Sample Sales&quot;;.&quot;Orders&quot;;
  .&quot;Ship To Region Hier&quot;";
  parentId="4028:32353" parentUid="80cb38ef-0fbc-0000-714b-e31d00000000"
  id="4030:32356" uid="80cb38f3-0fbe-0000-714b-e31d00000000"
  dispName="VALUEOF (NQ_SESSION.CN_Orders_Ship_To_Region_Hier_Ship_to_Region) "
  hasDispName="true" hasDispDescription="false">
  <RefLogicalLevel id="2025:32260"
    uid="80cb38a5-07e9-0000-714b-e31d00000000"
    qualifiedName="&quot;1 - Sample App&quot;;.&quot;H9 Orders&quot;;
    .&quot;Ship To Region&quot;"/>
  <DisplayColumns>
    <RefPresentationColumn id="4010:32350"
      uid="80cb38ec-0faa-0000-714b-e31d00000000"
      qualifiedName="&quot;A - Sample Sales&quot;;.&quot;Ship To Regions&quot;;
      .&quot;R50 Region&quot;"/>
  </DisplayColumns>
  <Aliases>
    <Alias name="Bill to Region"/>
  </Aliases>
</PresentationLevel>

```



---

---

## XML Marketing, Security, and Other Elements

This chapter describes the XML API elements for Oracle Marketing Segmentation objects, security objects, and miscellaneous objects that do not fall in other categories.

This chapter contains the following topics:

- [Section 10.1, "XML Marketing Elements"](#)
- [Section 10.2, "XML Security Elements"](#)
- [Section 10.3, "Other XML Elements"](#)

### 10.1 XML Marketing Elements

Marketing elements are typically those elements that are related to features for the Oracle Marketing Segmentation product. For information about features and options related to Oracle Marketing Segmentation, see the administrator documentation for the Oracle Marketing Segmentation application.

Marketing elements include:

- [Section 10.1.1, "XML Elements: Catalog Link"](#)
- [Section 10.1.2, "XML Elements: Target Level"](#)
- [Section 10.1.3, "XML Elements: List Catalog"](#)
- [Section 10.1.4, "XML Elements: Qualified List Item"](#)
- [Section 10.1.5, "XML Elements: Qualifying Key"](#)
- [Section 10.1.6, "XML Elements: Sampling Table"](#)
- [Section 10.1.7, "XML Elements: Seg Catalog"](#)

#### 10.1.1 XML Elements: Catalog Link

The catalog link element corresponds to the conforming dimension link object in the Marketing metadata. A conforming dimension links a fact that contains target-level IDs to a fact that does not contain target-level IDs by navigating along a dimension that is shared by both fact tables.

The catalog link tag includes the following child elements:

**Table 10–1 Catalog Link Child Elements**

Element Name	Description
From	References the presentation column that represents the primary key of the subject area from which the dimension link originates.  The primary key column is contained in a sub-element called RefPresentationColumn.
To	References the presentation column that represents the primary key of the subject area to which the dimension link points.  The primary key column is contained in a sub-element called RefPresentationColumn.

The catalog link tag does not include any attributes.

### Syntax

```
<CatalogLink ...>
  <Description />
  <From>
    <RefPresentationColumn .../>
  </From>
  <To>
    <RefPresentationColumn .../>
  </To>
</CatalogLink>
```

### Example

```
<CatalogLink name="Customer Profile-&gt;Campaign Contacts"
  id="4012:280960" uid="8032f5a3-0fac-0000-714b-e31d00000000">
  <Description>
    <![CDATA[Used by both Contact and Account Target Levels to filter with
      " Offered Product_segmentation" catalog.]]>
  </Description>
  <To>
    <RefPresentationColumn id="4010:223709"
      uid="80312fc3-0faa-0000-714b-e31d00000000"
      qualifiedName="&quot;Campaign Contacts_segmentation&quot;..&quot;
        - Contact Profile&quot;..&quot;ROW_ID&quot;"/>
  </To>
</CatalogLink>
```

## 10.1.2 XML Elements: Target Level

The target level element corresponds to the target level object in the Marketing metadata. A target level is the entity that a marketer wants to count, typically customer types like individuals, businesses, or households.

The target level tag includes the following attributes:

**Table 10–2 Target Level Tag Attributes**

Attribute Name	Description
hasDispName	Indicates whether this target level has a custom display name.
dispName	The value of the custom display name, if one exists for this target level.
hasDispDescription	Indicates whether this target level has a custom description.

**Table 10–2 (Cont.) Target Level Tag Attributes**

Attribute Name	Description
dispDescription	The value of the custom description, if one exists for this target level.

The target level tag includes the following child elements:

**Table 10–3 Target Level Child Elements**

Element Name	Description
PrimaryQLI	References the primary qualified list item for this target level. The qualified list item is contained in a sub-element called RefQualifiedListItem.
PrimaryPresCatalog	References the primary segmentation catalog for this target level. The segmentation catalog is contained in a sub-element called RefPresentationCatalog.
SamplingTables	References the physical tables used as sampling tables for this target level. Each physical table is contained in a sub-element called RefSamplingTable.
Catalogs	References the set of segmentation catalogs for this target level. Each segmentation catalog is contained in a sub-element called RefSegCatalog.
PresentationCatalog	References the subject area for saved result sets (the saved results catalog). The saved results catalog is contained in a sub-element called RefPresentationCatalog.
TargetColumn	References the Target Id presentation column. The Target Id column is contained in a sub-element called RefPresentationColumn.
NodeColumn	References the GUID presentation column. The GUID column is contained in a sub-element called RefPresentationColumn.
PhysicalTable	References the physical table that stores the result sets for this target level. The physical table is contained in a sub-element called RefPhysicalTable.
ConnectionPool	References the connection pool in which this target level is mapped. The connection pool is contained in a sub-element called RefConnectionPool.
HeaderSQL	Contains the physical SQL to insert the Saved Result Header. Used when users save a result set.
DelHeaderSQL	Contains the physical SQL to delete the saved result set header. Used when users purge saved result sets.
DelDataSQL	Contains the physical SQL to delete the saved result data set. Used when users purge saved result sets.

**Syntax**

```

<TargetLevel ...
  hasDispName=" "
  dispName=" "
  hasDispDescription=" "
  dispDescription=" " >
<Description />
<PrimaryQLI>
  <RefQualifiedListItem .../>
</PrimaryQLI>
<PrimaryPresCatalog>
  <RefPresentationCatalog .../>
</PrimaryPresCatalog>
<SamplingTables>
  <RefSamplingTable .../>
</SamplingTables>
<Catalogs>
  <RefSegCatalog .../>
  <RefSegCatalog .../>
</Catalogs>
<PresentationCatalog>
  <RefPresentationCatalog .../>
</PresentationCatalog>
<TargetColumn>
  <RefPresentationColumn .../>
</TargetColumn>
<NodeColumn>
  <RefPresentationColumn .../>
</NodeColumn>
<PhysicalTable>
  <RefPhysicalTable .../>
</PhysicalTable>
<ConnectionPool>
  <RefConnectionPool .../>
</ConnectionPool>
<HeaderSQL .../>
<DelHeaderSQL .../>
<DelDataSQL .../>
</TargetLevel>

```

**Example**

```

<TargetLevel name="Claims"
  id="4014:280967" uid="803421c3-0fae-0000-714b-e31d00000000"
  hasDispName="false" hasDispDescription="false">
<PrimaryQLI>
  <RefQualifiedListItem id="4018:280971"
    uid="80341f19-0fb2-0000-714b-e31d00000000"
    qualifiedName="&quot;Claims&quot;"/>
</PrimaryQLI>
<PrimaryPresCatalog>
  <RefPresentationCatalog id="4004:275727"
    uid="803405cb-0fa4-0000-714b-e31d00000000"
    qualifiedName="&quot;Insurance Claims_Segmentation&quot;"/>
</PrimaryPresCatalog>
<SamplingTables>
  <RefSamplingTable id="4024:281052"
    uid="80342e79-0fb8-0000-714b-e31d00000000"
    qualifiedName="&quot;Claims&quot;.&quot;M_10C_INSCLM_D&quot;"/>
</SamplingTables>

```



```

<Catalogs>
  <RefSegCatalog id="4026:281080"
    uid="803421ca-0fba-0000-714b-e31d00000000"
    qualifiedName="&quot;Claims&quot;.&quot;Claims_Insurance Claims_Segmentation
      &quot;"/>
  <RefSegCatalog id="4026:281081"
    uid="803421cb-0fba-0000-714b-e31d00000000"
    qualifiedName="&quot;Claims&quot;.&quot;Claims_Fin Accounts and
      Ins Policies_segmentation&quot;"/>
  <RefSegCatalog id="4026:281082"
    uid="803421c8-0fba-0000-714b-e31d00000000"
    qualifiedName="&quot;Claims&quot;.&quot;Claims_Activities_segmentation
      &quot;"/>
  <RefSegCatalog id="4026:281083"
    uid="803421c9-0fba-0000-714b-e31d00000000"
    qualifiedName="&quot;Claims&quot;.&quot;Claims_Service Requests_segmentation
      &quot;"/>
</Catalogs>
<TargetColumn>
  <RefPresentationColumn id="4010:226622"
    uid="80342e43-0faa-0000-714b-e31d00000000"
    qualifiedName="&quot;Marketing Segmentation Cache and Saved Results
      &quot;..&quot;- Claim Result Data&quot;.&quot;Claim ID&quot;"/>
</TargetColumn>
<NodeColumn>
  <RefPresentationColumn id="4010:226621"
    uid="80342e45-0faa-0000-714b-e31d00000000"
    qualifiedName="&quot;Marketing Segmentation Cache and Saved Results
      &quot;..&quot;- Claim Result Data&quot;.&quot;GUID&quot;"/>
</NodeColumn>
<PhysicalTable>
  <RefPhysicalTable id="3001:100690"
    uid="80342d47-0bb9-0000-714b-e31d00000000"
    qualifiedName="&quot;Oracle Data Warehouse&quot;.&quot;Catalog
      &quot;.&quot;dbo&quot;.&quot;M_SR_CLAIM&quot;"/>
</PhysicalTable>
<HeaderSQL>
  <![CDATA[INSERT INTO M_SR_HEADER (GUID, SEGMENT_PATH, SR_CUSTOM_LABEL,
    PRIORITY, NODE_PATH, NODE_LABEL, TARGET_LEVEL, CREATED_BY, "COUNT", DATE_
    TIME, SR_PATH, CONNECTION_POOL) VALUES ('@{guid}', '@{segmentPath}',
    '@{srCustomLabel}', @{priority}, '@{nodePath}', '@{nodeLabel}',
    '@{targetLevel}', '@{createdBy}', @{count}, '@{createdTime}', '@{srPath}',
    '@{connectionPool}')]>
</HeaderSQL>
<DelHeaderSQL>
  <![CDATA[DELETE FROM M_SR_HEADER WHERE GUID IN (@{guids})]]>
</DelHeaderSQL>
<DelDataSQL>
  <![CDATA[DELETE FROM M_SR_CLAIM WHERE GUID IN (@{guids})]]>
</DelDataSQL>
</TargetLevel>

```

### 10.1.3 XML Elements: List Catalog

The list catalog element corresponds to the list catalog object in the Marketing metadata. A list catalog is an object that is used to generate a list of data at the target level.

The list catalog tag includes the following child elements:

**Table 10–4 List Catalog Child Elements**

Element Name	Description
RefPresentationCatalog	References the subject area for this list catalog. The name of the subject area is used as the name of the list catalog.
QualifyingKeys	References the set of qualifying keys for this list catalog. Each qualifying key is contained in a sub-element called RefQualifyingKey.

The list catalog tag does not include any attributes.

### Syntax

```
<ListCatalog ...>
  <Description />
  <RefPresentationCatalog .../>
  <QualifyingKeys>
    <RefQualifyingKey .../>
    <RefQualifyingKey .../>
  </QualifyingKeys>
</ListCatalog>
```

### Example

```
<ListCatalog name="Campaign Load - Contacts"
  id="4016:281116" uid="8032fe2c-0fb0-0000-714b-e31d00000000">
  <RefPresentationCatalog id="4004:275725"
    uid="8032fb8c-0fa4-0000-714b-e31d00000000"
    qualifiedName="&quot;Campaign Load - Contacts&quot;" />
  <QualifyingKeys>
    <RefQualifyingKey id="4020:281006"
      uid="8032fe3d-0fb4-0000-714b-e31d00000000"
      qualifiedName="&quot;Contacts&quot; .&quot;Qualifying Key#29&quot;" />
    <RefQualifyingKey id="4020:281037"
      uid="8032fe3e-0fb4-0000-714b-e31d00000000"
      qualifiedName="&quot;Accounts&quot; .&quot;Qualifying Key#30&quot;" />
  </QualifyingKeys>
</ListCatalog>
```

## 10.1.4 XML Elements: Qualified List Item

The qualified list item element corresponds to the qualified list item object in the Marketing metadata. A qualified list item is an entity that is evaluated against segment criteria so that the information related to that entity can be exported in a list file.

The qualified list item tag includes the following attributes:

**Table 10–5 Qualified List Item Tag Attributes**

Attribute Name	Description
cacheTable	Indicates whether this qualified list item is cached.

The qualified list item tag includes the following child elements:

**Table 10–6 Qualified List Item Child Elements**

Element Name	Description
CacheCatalog	References the subject area for the cache for this qualified list item. The subject area is contained in a sub-element called RefPresentationCatalog.
CacheConnPool	References the connection pool for the cached table. The connection pool is contained in a sub-element called RefConnectionPool.
TargetColumn	References the Target Id presentation column. The Target Id column is contained in a sub-element called RefPresentationColumn.
NodeColumn	References the GUID presentation column. The GUID column is contained in a sub-element called RefPresentationColumn.
PhysicalTable	References the physical table that stores the cached qualified list item. The physical table is contained in a sub-element called RefPhysicalTable.
DeleteSQL	Contains the physical SQL used to delete the cached results.

**Syntax**

```

<QualifiedListItem ...
  cacheTable="">
  <Description />
  <CacheCatalog>
    <RefPresentationCatalog .../>
  </CacheCatalog>
  <CacheConnPool>
    <RefConnectionPool .../>
  </CacheConnPool>
  <TargetColumn>
    <RefPresentationColumn .../>
  </TargetColumn>
  <NodeColumn>
    <RefPresentationColumn .../>
  </NodeColumn>
  <PhysicalTable>
    <RefPhysicalTable .../>
  </PhysicalTable>
  <DeleteSQL>
    <![CDATA[[...]]>
  </DeleteSQL>
</QualifiedListItem>

```

**Example**

```

<QualifiedListItem name="Service Requests"
  id="4018:6474" uid="80caa1d3-0fb2-0000-714b-e31d00000000">
  <DeleteSQL>
    <![CDATA[DELETE FROM M_C_GENERIC WHERE GUID = '{@guid}']]>
  </DeleteSQL>
</QualifiedListItem>

```

## 10.1.5 XML Elements: Qualifying Key

The qualifying key element corresponds to the qualifying keys that are used in list catalog or segmentation catalog objects in the Marketing metadata. Qualifying keys map qualified list items to presentation columns.

The qualifying key tag includes the following child elements:

**Table 10–7 Qualifying Key Child Elements**

Element Name	Description
RefSegCatalog	References the segmentation catalog to which this qualifying key belongs.
RefListCatalog	References the list catalog to which this qualifying key belongs.
RefPresentationColumn	References the presentation column for this qualifying key.

The qualifying key tag does not include any attributes.

### Syntax

```
<QualifyingKey ...>
  <Description />
  <RefSegCatalog ../>
  <RefListCatalog ../>
  <RefPresentatonColumn ../>
</QualifyingKey>
```

### Example

```
<QualifyingKey name="MKTG_QK_4020:125971262767661"
  parentName="&quot;Customers&quot;"
  parentId="4018:6474" parentUid="80caa1d3-0fb2-0000-714b-e31d00000000"
  id="4020:12597" uid="80cab8c6-0fb4-0000-714b-e31d00000000">
  <RefSegCatalog id="4026:12596"
    uid="80cab8c7-0fba-0000-714b-e31d00000000"
    qualifiedName="&quot;Customers&quot;.&quot;Customers_A - Sample Sales&quot;"/>
  <RefPresentationColumn id="4010:12527"
    uid="80cab87f-0faa-0000-714b-e31d00000000"
    qualifiedName="&quot;A - Sample Sales&quot;.&quot;More Customer Objects&quot;
    .&quot;X20 Cust Key (Segmentation)&quot;"/>
</QualifyingKey>
```

## 10.1.6 XML Elements: Sampling Table

The sampling table element corresponds to the sampling table object in the Marketing metadata. Sampling tables are created and managed as part of target level objects.

The sampling table tag includes the following attributes:

**Table 10–8 Sampling Table Tag Attributes**

Attribute Name	Description
factor	The sampling factor (for example, 10%).

The sampling table tag includes the following child elements:

**Table 10–9 Sampling Table Child Elements**

Element Name	Description
RefPhysicalTable	References the physical table being used as the sampling table.

**Syntax**

```
<SamplingTable ...
  factor=" ">
  <Description />
  <RefPhysicalTable .../>
</SamplingTable>
```

**Example**

```
<SamplingTable name="M_10C_PERSON_D"
  parentName="&quot;Contacts&quot;"
  parentId="4014:280966" parentUid="802ba17b-0fae-0000-714b-e31d00000000"
  id="4024:281051" uid="80331464-0fb8-0000-714b-e31d00000000"
  factor="0.1">
  <RefPhysicalTable id="3001:86873"
  uid="002261ab-0bb9-0000-714b-e31d00000000"
  qualifiedName="&quot;Oracle Data Warehouse&quot;.&quot;Catalog&quot;"
  .&quot;dbo&quot;.&quot;Dim_W_PARTY_PER_D_Contact&quot;" />
</SamplingTable>
```

## 10.1.7 XML Elements: Seg Catalog

The seg catalog element corresponds to the segmentation catalog object in the Marketing metadata. Segmentation catalogs are Oracle BI subject areas that are enabled for segmentation. Segmentation catalogs provides a set of dimensions and fact measures that can be used to create segment criteria.

The seg catalog tag includes the following child elements:

**Table 10–10 Seg Catalog Child Elements**

Element Name	Description
RefPresentationCatalog	References the subject area for this segmentation catalog.
QualifyingKeys	References the set of qualifying keys for this list catalog. Each qualifying key is contained in a sub-element called RefQualifyingKey.

The seg catalog tag does not include any attributes.

**Syntax**

```
<SegCatalog ...>
  <Description />
  <RefPresentationCatalog .../>
  <QualifyingKeys>
    <RefQualifyingKey .../>
  </QualifyingKeys>
</SegCatalog>
```

**Example**

```
<SegCatalog name="Customers_A - Sample Sales"
  parentName="&quot;Customers&quot;"
```

```
    parentId="4014:6473" parentUid="80caa1d2-0fae-0000-714b-e31d00000000"
    id="4026:12596" uid="80cab8c7-0fba-0000-714b-e31d00000000">
<RefPresentationCatalog id="4004:12383"
  uid="80cab7ef-0fa4-0000-714b-e31d00000000"
  qualifiedName="&quot;A - Sample Sales&quot;"/>
<QualifyingKeys>
  <RefQualifyingKey id="4020:12597"
    uid="80cab8c6-0fb4-0000-714b-e31d00000000"
    qualifiedName="&quot;Customers&quot;.&quot;
      MKTG_QK_4020:125971262767661&quot;"/>
</QualifyingKeys>
</SegCatalog>
```

## 10.2 XML Security Elements

Security elements are typically those elements that are related to Oracle Business Intelligence security features, such as those related to variables, authentication, privileges, users, and application roles. Security elements include:

- [Section 10.2.1, "XML Elements: Variable"](#)
- [Section 10.2.2, "XML Elements: LDAP Server"](#)
- [Section 10.2.3, "XML Elements: Init Block"](#)
- [Section 10.2.4, "XML Elements: Custom Authenticator"](#)
- [Section 10.2.5, "XML Elements: Privilege Package"](#)
- [Section 10.2.6, "XML Elements: Object Privilege"](#)
- [Section 10.2.7, "XML Elements: Query Privilege"](#)
- [Section 10.2.8, "XML Elements: User"](#)
- [Section 10.2.9, "XML Elements: Group"](#)
- [Section 10.2.10, "XML Elements: DB Sign-On"](#)
- [Section 10.2.11, "XML Elements: FMW Security"](#)

### 10.2.1 XML Elements: Variable

The variable element corresponds to the variable object in the Physical layer of the repository.

The variable tag includes the following attributes:

**Table 10–11 Variable Tag Attributes**

Attribute Name	Description
securityMask	<p>For session variables only. This attribute stores the value of the following options:</p> <ul style="list-style-type: none"> <li> <b>Enable any user to set the value.</b> When selected, lets session variables be set after the initialization block has populated the value (at user login) by calling the ODBC store procedure <code>NQSSetSessionValue()</code>. For example, this option lets non-administrators set this variable for sampling. </li> <li> <b>Security Sensitive.</b> When selected, identifies the variable as sensitive to security for virtual private databases (VPDs). When filtering cache table matches, the Oracle BI Server looks at the parent database of each column or table that is referenced in the logical request projection list. If the physical database source is a VPD, the Oracle BI Server matches a list of security-sensitive variables to each prospective cache hit. Cache hits would only occur on cache entries that included and matched all security-sensitive variables. </li> </ul>
isSessionVar	<p>If set to true, indicates that this variable is a session variable. Session variables are created and assigned a value when each user logs on, unlike repository variables, which have static values.</p>

The variable tag includes the following child elements:

**Table 10–12 Variable Child Elements**

Element Name	Description
Expr	Contains the expression that forms the definition of this variable.

### Syntax

```
<Variable ...
  securityMask=" "
  isSessionVar=" ">
  <Description />
  <Expr>...</Expr>
</Variable>
```

### Example

```
<Variable name="DYNAMIC_PRODUCT_TABLE"
  parentName="&quot;DUAL Prod Table&quot;"
  parentId="3033:81463" parentUid="80cc200a-0bd9-0000-714b-e31d00000000"
  id="3031:7079" uid="80caa443-0bd7-0000-714b-e31d00000000"
  securityMask="2" isSessionVar="true">
  <Expr>
    <![CDATA[' SAMP_PRODUCTS_D']]>
  </Expr>
</Variable>
```

## 10.2.2 XML Elements: LDAP Server

The LDAP server element corresponds to the LDAP server object in the Identity Manager dialog in the Administration Tool.

The LDAP server tag includes the following attributes:

**Table 10–13 LDAP Server Tag Attributes**

Attribute Name	Description
hostName	The host name of the LDAP server.
port	The port number of the LDAP server (for example, 389).
baseDN	The base distinguished name (DN) that identifies the starting point of the authentication search.
bindDN	The optional DN that is required to bind to the LDAP server. This option is required if <code>isADSI</code> is set to true.
userNameAttrType	A value that uniquely identifies a user, such as the user ID, the RDN (relative distinguished name), or (for ADSI) <code>sAMAccountName</code> .
domainID	A domain identifier that uniquely identifies the domain for which the LDAP object is responsible. This is especially useful when there are multiple LDAP objects.
password	The user password associated with the Bind DN. This option is required if <code>isADSI</code> is set to true. Note that passwords are encrypted.
timeout	The time period after which Administration Tool import attempts or Oracle BI Server user authentication attempts against this LDAP server will time out.
cacheExpiry	The interval at which the authentication cache entry in the LDAP cache for a logged on user is refreshed.  This option corresponds to <b>Cache refresh interval</b> in the Repository tab of the Options dialog in the Administration Tool.
isADSI	If set to true, indicates that this is an Active Directory LDAP server.
useSSL	If set to true, indicates that the connection to the LDAP server uses Secure Sockets Layer (SSL).
keyFile	The name of the key file that holds the client certificate and Certificate Authority (CA) certificate. Required if <code>useSSL</code> is set to true.  This option corresponds to <b>Key file name</b> in the Repository tab of the Options dialog in the Administration Tool.
keyPassword	For a secure LDAP, there is a keydb file which stores the required certificates. <code>keyPassword</code> is the password to access the keydb file.
version	The LDAP version number of the LDAP server, either 2 or 3. The default is 3.
cacheEntries	The maximum number of entries in the authentication cache, preallocated when the Oracle BI Server starts. If the number of users exceeds this limit, cache entries are replaced using the LRU algorithm. If this value is 0, then the authentication cache is disabled.  This option corresponds to <b>Number of Cache Entries</b> in the Repository tab of the Options dialog in the Administration Tool.

The LDAP server tag does not include any child elements.



**Syntax**

```
<LDAPServer ...
  hostName=" "
  port=" "
  baseDN=" "
  bindDN=" "
  userNameAttrType=" "
  domainID=" "
  password=" "
  timeout=" "
  cacheExpiry=" "
  entities=" "
  isADSI=" "
  useSSL=" "
  keyFile=" "
  keyPassword=" "
  version=" "
  cacheEntries=" ">
  <Description />
</LDAPServer>
```

**Example**

```
<LDAPServer name="L1"
  id="3035:44085" uid="c39e1310-0c00-1000-806e-0a9702490000"
  hostName="sdacns05" port="389" version="3" baseDN="name1" bindDN="name2"
  userNameAttrType="sAMAccountName"
  password="6C6F0BE01FC4111F3AC2236A364D912E6CC6E805A7729CECC34915F82D6CA5D1B19
  AF813BD5ADC908750471E8F5D151A A886F77E060E2E17F45AD8D18CAB2E4D3EFA15B75E30D8
  B4BFA8C7B2D70552BD"
  timeout="60" cacheExpiry="86400" cacheEntries="1000"
  isADSI="true" useSSL="true"
  keyPassword="E3130008E1C4CAD47041E4AE68B048E6 7C2E35213306F12832914CBE7A9DD95
  561D771DED06484112B1FC6F27B6D0D58">
</LDAPServer>
```

**10.2.3 XML Elements: Init Block**

The init block element corresponds to the initialization block object in the Physical layer. Initialization blocks are used to initialize dynamic repository variables, system session variables, and nonsystem session variables.

The init block tag includes the following attributes:

**Table 10–14** *Init Block Tag Attributes*

Attribute Name	Description
isSessionVar	If set to true, indicates that this initialization block is a session initialization block. Session initialization blocks are used with session variables. The default value is false.
refreshPeriod	The refresh interval for this initialization block, in seconds. For repository initialization blocks only. The default value is 0.
baseTime	The start date and time for this initialization block. For repository initialization blocks only. The default value is 2001-01-01 00:00:00.

**Table 10–14 (Cont.) Init Block Tag Attributes**

Attribute Name	Description
isRowWiseInit	If set to true, indicates that row-wise initialization has been enabled. Row-wise initialization lets you create session variables dynamically and set their values when a session begins. For session initialization blocks only.  The default value is false.
isRowWiseCacheEnabled	If set to true, indicates that the <b>Use caching</b> option has been enabled. This option directs the Oracle BI Server to store the results of the query in a main memory cache. This option is only available if row-wise initialization has been enabled.  The default value is true.
isSuccRequired	Indicates that the <b>Required for Authentication</b> option has been selected for this initialization block in the Administration Tool.  If this option is selected, this initialization block must succeed for users to log in. In other words, users will be denied access to Oracle BI EE if the initialization block fails to execute. Failure to execute can occur if the wrong credentials have been defined in the initialization block, or if there is an error in the default initialization string.  The default value is false.
isEnabled	If set to true, indicates that this initialization block is enabled. For session initialization blocks only.  The default value is true.
isDeferredExecution	If set to true, indicates that deferred execution of this initialization block is enabled.  Deferred execution is used to speed up the server startup time, by preventing the execution of the SQL for the initialization block when the server starts. The SQL is issued and the variables are initialized only when one of the variables is used.
isDBIndependentSQL	If set to true, indicates that database independent SQL is enabled.  The SQL is logical SQL, and it is translated by Oracle BI server to database specific SQL.

The init block tag includes the following child elements:

**Table 10–15 Init Block Child Elements**

Element Name	Description
RefConnectionPool	References the connection pool for this initialization block.  This element is only used if the data source type for this initialization block is Database or XML.
RefCustomAuthenticator	References the custom authenticator for this initialization block.
DBMap	Stores the value of database-specific strings. The <DBMap> element contains an <Item> tag, which in turn contains a <Value> tag, as follows:  <pre>&lt;Item name=" "&gt;   &lt;Value /&gt; &lt;/Item&gt;</pre>

**Table 10–15 (Cont.) Init Block Child Elements**

Element Name	Description
Predecessors	References the initialization blocks, if any, that are initialized before this initialization block Each initialization block is contained in a sub-element called RefInitBlock.
Variables	References the variables that are associated with this initialization block. Each variable is contained in a sub-element called RefVariable.
InitString	The SQL initialization string needed to populate the variables. This element is only used if the data source type for this initialization block is Database or XML.
LDAPServers	References the LDAP servers that are associated with this initialization block. Each LDAP server is contained in a sub-element called RefLDAPServer. This element is only used if the data source type for this initialization block is LDAP.

**Syntax**

```

<InitBlock ...
  isSessionVar=" "
  refreshPeriod=" "
  baseTime=" "
  isRowWiseInit=" "
  isRowWiseCacheEnabled=" "
  isSuccRequired=" "
  isEnabled=" "
  isDeferredExecution=" "
  isDBIndependentSQL=" ">
  <Description />
  <RefConnectionPool .../>
  <RefCustomAuthenticator .../>
  <DBMap>
    <Item name=" ">
      <Value .../>
    </Item>
  </DBMap>
  <Predecessors>
    <RefInitBlock .../>
  </Predecessors>
  <Variables>
    <RefVariable .../>
    <RefVariable .../>
  </Variables>
  <InitString .../>
  <LDAPServers>
    <RefLDAPServer .../>
    <RefLDAPServer .../>
  </LDAPServers>
</InitBlock>

```

**Example**

```

<InitBlock name="DUAL Prod Table"
  id="3033:81463" uid="80cc200a-0bd9-0000-714b-e31d00000000"

```

```

    isSessionVar="true">
  <RefConnectionPool id="3029:1159"
    uid="80ca62c5-0bd5-0000-714b-e31d00000000"
    qualifiedName="&quot;01 - Sample App Data (ORCL)&quot;.&quot;
    Sample Relational Connection&quot;"/>
  <DBMap>
    <Item name="DefaultMulDB">
      <Value>
        <![CDATA[Select 'SAMP_PRODUCTS_D' From Dual]]>
      </Value>
    </Item>
  </DBMap>
  <Variables>
    <RefVariable id="3031:7079"
      uid="80caa443-0bd7-0000-714b-e31d00000000"
      qualifiedName="&quot;DUAL Prod Table&quot;.&quot;
      DYNAMIC_PRODUCT_TABLE&quot;"/>
  </Variables>
  <InitString>
    <![CDATA[Select 'SAMP_PRODUCTS_D' From Dual]]>
  </InitString>
</InitBlock>

```

## 10.2.4 XML Elements: Custom Authenticator

The Custom Authenticator element corresponds to the Custom Authenticator object in the Identity Manager dialog in the Administration Tool.

The Custom Authenticator tag includes the following attributes:

**Table 10–16 Custom Authenticator Tag Attributes**

Attribute Name	Description
cacheExpiry	The interval at which the authentication cache entry for a logged on user is refreshed for this custom authenticator.
path	The path and name of the authenticator plug-in dll.
configParam	Lists any parameters for this custom authenticator that have been explicitly exposed for configuration.
hiddenParam	Lists any parameters for this custom authenticator that have been encrypted, such as passwords.
cacheEntries	The maximum number of entries in the authentication cache for this custom authenticator, preallocated when the Oracle BI Server starts. If the number of users exceeds this limit, cache entries are replaced using the LRU algorithm. If this value is 0, then the authentication cache is disabled.
csfKey	This attribute is not used.

The Custom Authenticator element does not include any child elements.

### Syntax

```

<CustomAuthenticator ...
  cacheExpiry=" "
  path=" "
  configParam=" "
  hiddenParam=" "
  cacheEntries=" ">

```

```
<Description />
</CustomAuthenticator>
```

### Example

```
<CustomAuthenticator name="NEWCA"
  id="3047:44086" uid="c467a4a0-0c00-1000-806e-0a9702490000"
  cacheExpiry="86400" cacheEntries="1000"
  path="authenticate.dll"
  configParam="ABC"
  hiddenParam="D7EDED84BC624A917F5B462A4DCA05CDCE256EEEEEDC97D5B383E1888393F558
  5DA9CAC25EA1FA59">
</CustomAuthenticator>
```

## 10.2.5 XML Elements: Privilege Package

The privilege package element is a container for other privileges. It corresponds to a set of permissions that applies to a particular user or application role object in the repository metadata. The privilege package element contains the information available on the Object Permissions, Data Filters, and Query Limits tabs of the User/Application Role Permissions dialog in the Administration Tool.

Because privilege packages can be associated with more than one user or application role, the total number of privilege packages may not equal the total number of users and application roles.

The privilege package tag includes the following child elements:

**Table 10–17 Privilege Package Child Elements**

Element Name	Description
QueryPrivileges	<p>References any query privileges that belong to this privilege package, along with the corresponding database.</p> <p>Each pair of query privileges and database name is contained in a sub-element called <code>Mapping</code>.</p> <p>Each <code>Mapping</code> sub-element contains two additional sub-elements: <code>RefDatabase</code>, which references the database name, and <code>RefQueryPrivilege</code>, which references the query privilege.</p> <p>See the syntax for the privilege package element to see the complete hierarchy for the <code>QueryPrivileges</code> child element.</p>
Filters	<p>References any data filters that belong to this privilege package by mapping an object name with the filter expression.</p> <p>Each pair of object name and filter expression is contained in a sub-element called <code>Mapping</code>. This sub-element has one attribute called <code>Status</code>. Valid values are <code>Enabled</code>, <code>Disabled</code>, and <code>Ignored</code>.</p> <p>Each <code>Mapping</code> sub-element contains two additional sub-elements: <code>RefObject</code>, which references the metadata object name, and <code>Expr</code>, which contains the filter expression.</p> <p>See the syntax for the privilege package element to see the complete hierarchy for the <code>Filters</code> child element.</p>
ObjectPrivileges	<p>References any object privileges that belong to this privilege package.</p> <p>Each object privilege is contained in a sub-element called <code>RefObjectPrivilege</code>.</p>

The privilege package tag does not include any attributes. Note that the schema lists attributes for none, read, write, readwrite, delete, grant, and all, but these attributes are not used. Instead, these permissions are exposed as part of the child element definitions.

### Syntax

```
<PrivilegePackage ...>
  <Description />
  <QueryPrivileges>
    <Mapping>
      <RefDatabase .../>
      <RefQueryPrivilege .../>
    </Mapping>
  </QueryPrivileges>
  <Filters>
    <Mapping status="">
      <RefObject .../>
      <Expr .../>
    </Mapping>
  </Filters>
  <ObjectPrivileges>
    <RefObjectPrivilege .../>
  </ObjectPrivileges>
</PrivilegePackage>
```

### Example

```
<PrivilegePackage name="PrivPack_4209:3417381144981469"
  id="4209:281602" uid="808626e7-1071-0000-714b-e31d00000000">
  <QueryPrivileges>
    <Mapping>
      <RefDatabase id="3023:68561"
        uid="0023840a-0bcf-0000-714b-e31d00000000"
        qualifiedName="&quot;Oracle Data Warehouse&quot;"/>
      <RefQueryPrivilege id="4204:281350"
        uid="808626e8-106c-0000-714b-e31d00000000"
        qualifiedName="&quot;QueryPriv_4204:3417391144981469&quot;"/>
    </Mapping>
  </QueryPrivileges>
  <Filters>
    <Mapping status="disable">
      <RefObject id="2035:365983"
        uid="80d105ed-07f3-0000-714b-e31d00000000"
        qualifiedName="&quot;Core&quot;.&quot;Fact - Sourcing - Response&quot;"/>
      <Expr>
        <![CDATA[cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE)
          = valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND ("Core"."Dim - Purchase
            Buyer"."Purchase Buyer Login" = valueof(NQ_SESSION."USER") OR
            cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE)=
            valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))]]>
      </Expr>
    </Mapping>
    <Mapping status="disable">
      <RefObject id="2035:366000"
        uid="80d105fe-07f3-0000-714b-e31d00000000"
        qualifiedName="&quot;Core&quot;.&quot;Fact - Sourcing - Negotiation Award
          &quot;"/>
      <Expr>
        <![CDATA[cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE)
          = valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND ("Core"."Dim - Purchase
```

```

        Buyer"."Purchase Buyer Login" = valueof(NQ_SESSION."USER") OR
        cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE) =
        valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))]]>
    </Expr>
</Mapping>
<Mapping status="disable">
    <RefObject id="2035:366038"
        uid="80d10624-07f3-0000-714b-e31d00000000"
        qualifiedName="&quot;Core&quot;.&quot;Fact - Sourcing - Negotiation
        &quot;"/>
    <Expr>
    <![CDATA[cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE)
        = valueof(NQ_SESSION.PRC_BU_MANAGE_NEG) AND ("Core"."Dim - Purchase
        Buyer"."Purchase Buyer Login" = valueof(NQ_SESSION."USER") OR
        cast("Core"."Dim - Procurement Business Unit"."Key Id" AS DOUBLE) =
        valueof(NQ_SESSION.PRC_BU_MANAGE_NEG_ViewOthers))]]>
    </Expr>
    </Mapping>
</Filters>
<ObjectPrivileges>
    <RefObjectPrivilege id="1500:281254"
        uid="808626e9-05dc-0000-714b-e31d00000000"
        qualifiedName="&quot;ObjPriv_1500:3417401144981469&quot;"/>
    </ObjectPrivileges>
</PrivilegePackage>

```

## 10.2.6 XML Elements: Object Privilege

The object privilege element corresponds to the set of object permissions you can apply to metadata objects such as logical or presentation columns. In the Administration Tool, you can set object permissions in the Presentation layer, or in the Object Permissions tab of the User/Application Role Permissions dialog.

The object privilege tag includes the following attributes:

**Table 10–18 Object Privilege Tag Attributes**

Attribute Name	Description
type	<p>Contains the type of privilege applied to the objects. Valid values are:</p> <ul style="list-style-type: none"> <li>▪ read: corresponds to the <b>Read</b> privilege in the Administration Tool</li> <li>▪ readWrite: corresponds to the <b>Read/Write</b> privilege in the Administration Tool</li> <li>▪ none: corresponds to the <b>No Access</b> privilege in the Administration Tool</li> </ul> <p>This attribute can contain the following other values: delete, write, grant, and all. These other values are for internal use.</p>

The object privilege tag includes the following child elements:

**Table 10–19 Object Privilege Child Elements**

Element Name	Description
Objects	<p>References the set of objects for which this privilege type applies.</p> <p>Each object is contained in a sub-element called RefObject.</p>

**Syntax**

```
<ObjectPrivilege ...
  type="">
  <Description />
  <Objects>
    <RefObject .../>
    <RefObject .../>
  </Objects>
</ObjectPrivilege>
```

**Example**

```
<ObjectPrivilege name="ObjPriv_1500:64621257864270"
  id="1500:6462" uid="80caa1bb-05dc-0000-714b-e31d00000000"
  type="read">
  <Objects>
    <RefObject id="4008:43061"
      uid="80cb6a2f-0fa8-0000-714b-e31d00000000"
      qualifiedName="&quot;Sample Sales&quot;..&quot;Time&quot;"/>
    <RefObject id="4008:43085"
      uid="80cb6a47-0fa8-0000-714b-e31d00000000"
      qualifiedName="&quot;Sample Sales&quot;..&quot;More Time Objects&quot;"/>
    <RefObject id="4008:43103"
      uid="80cb6a59-0fa8-0000-714b-e31d00000000"
      qualifiedName="&quot;Sample Sales&quot;..&quot;Products&quot;"/>
  </Objects>
</ObjectPrivilege>
```

**10.2.7 XML Elements: Query Privilege**

The query privilege element corresponds to the set of query privileges you can apply to users or application roles. In the Administration Tool, you can set query privileges in the Query Limits tab of the User/Application Role Permissions dialog.

The query privilege tag includes the following attributes:

**Table 10–20 Query Privilege Tag Attributes**

Attribute Name	Description
maxExecTime	The maximum number of minutes queries can run on a database.
maxExecTimePrivilege	Specifies the status of the maximum query run time limit. Valid values are: <ul style="list-style-type: none"> <li>■ <b>Enable:</b> Limits the time to the value specified in maxExecTime.</li> <li>■ <b>Disable:</b> Disables any limits set in maxExecTime.</li> <li>■ <b>Warn:</b> Does not enforce limits, but logs queries that exceed the set time limit in the Query log.</li> <li>■ <b>Ignore:</b> Inherits limits from the parent application role. If there is no time limit to inherit, no limit is enforced.</li> </ul>
maxRows	The maximum number of rows for users to retrieve from a database.



**Table 10–20 (Cont.) Query Privilege Tag Attributes**

Attribute Name	Description
maxRowsPrivilege	<p>Specifies the status of the maximum number of rows limit. Valid values are:</p> <ul style="list-style-type: none"> <li>▪ <b>Enable:</b> Limits the number of rows to the value specified. If the number of rows exceeds the <code>maxRows</code> value, the query is terminated.</li> <li>▪ <b>Disable:</b> Disables any limits set in <code>maxRows</code>.</li> <li>▪ <b>Warn:</b> Does not enforce limits, but logs queries that exceed the set limit in the Query log.</li> <li>▪ <b>Ignore:</b> Inherits limits from the parent application role. If there is no row limit to inherit, no limit is enforced.</li> </ul>
populatePrivilege	<p>Specifies whether the Populate privilege is granted or denied for a database. The Populate stored procedure writes the Cache/Saved Result Set value to the database when a criteria block is cached. Valid values are:</p> <ul style="list-style-type: none"> <li>▪ <b>Allow:</b> Explicitly grants the Populate privilege.</li> <li>▪ <b>Disallow:</b> Explicitly denies the Populate privilege.</li> <li>▪ <b>Ignore:</b> Inherits limits from the parent application role. If there is no limit to inherit, then the Populate privilege is allowed or disallowed based on the property <b>Allow populate queries by default</b> for the database object.</li> </ul>
execPhysicalPrivilege	<p>Specifies whether direct database requests can be executed by default. Valid values are:</p> <ul style="list-style-type: none"> <li>▪ <b>Allow:</b> Explicitly grants the ability to execute direct database requests.</li> <li>▪ <b>Disallow:</b> Explicitly denies the ability to execute direct database requests.</li> <li>▪ <b>Ignore:</b> Inherits limits from the parent application role. If there is no limit to inherit, then direct database requests are allowed or disallowed based on the property <b>Allow direct database requests by default</b> for the database object.</li> </ul>

The query privilege tag includes the following child elements:

**Table 10–21 Query Privilege Child Elements**

Element Name	Description
ExecTimeTable	<p>If database access has been restricted to particular time periods, lists the time periods and whether access is allowed or disallowed.</p> <p>Each time period is contained in a sub-element called <code>Item</code>. The <code>Item</code> child element has three attributes: <code>allow</code> (true or false), <code>startTime</code>, and <code>endTime</code>.</p>

### Syntax

```
<QueryPrivilege ...
  maxExecTime=" "
  maxExecTimePrivilege=" "
  maxRows=" "
  maxRowsPrivilege=" "
  populatePrivilege=" "
  execPhysicalPrivilege=" ">
<Description />
```

```

    <ExecTimeTable>
      <Item allow="" startTime="" endTime="" />
      <Item allow="" startTime="" endTime="" />
    </ExecTimeTable>
  </QueryPrivilege>

```

### Example

```

<QueryPrivilege name="QueryPriv_4204:275811265643135"
  id="4204:27581" uid="80cb1ae1-106c-0000-714b-e31d00000000"
  maxExecTime="600" maxRows="100000"
  populatePrivilege="enable" execPhysicalPrivilege="enable">
</QueryPrivilege>

```

## 10.2.8 XML Elements: User

The user element corresponds to the user object in the repository. These objects represent the metadata repository copies or versions of externally managed user objects.

The user tag includes the following attributes:

**Table 10–22 User Tag Attributes**

Attribute Name	Description
fullName	The full name of this user.
loggingLevel	The logging level for this user.
logStatisticsStatus	This attribute is not used.
guid	Global unique identifier for a given user, which is independent of the user name.

The user tag includes the following child elements:

**Table 10–23 User Child Elements**

Element Name	Description
RefPrivilegePackage	References the privilege package, or set of object privileges, data filters, and query privileges, that apply to this user.
Groups	References the application roles to which this user belongs. Each application role is contained in a sub-element called RefGroup.
DBSignOnList	References database login user names and passwords, along with the corresponding database, if this user has database-specific logins defined. Each pair of database credentials and database name is contained in a sub-element called Mapping. Each Mapping sub-element contains two additional sub-elements: RefDBSignOn, which references the database credentials, and RefDatabase, which references the database name. Note that passwords are encrypted. See the syntax for the user element to see the complete hierarchy for the DBSignOnList child element.

### Syntax

```
<User ...
```

```

        fullName=""
        loggingLevel=""
        guid="">
<Description />
<RefPrivilegePackage .../>
<Groups>
  <RefGroup .../>
  <RefGroup .../>
</Groups>
<DBSignOnList>
  <Mapping>
    <RefDBSignOn .../>
    <RefDatabase .../>
  </Mapping>
</DBSignOnList>
</User>

```

### Example

```

<User name="mgr" id="1501:577531"
  uid="80ca34ae-05dd-0000-714b-e31d00000000"
  guid="D289B2F1E54411DEBFF92BEEA2576FF2">
  <RefPrivilegePackage id="4209:588476"
    uid="80d92bbd-1071-0000-714b-e31d00000000"
    qualifiedName="&quot;PrivPack_4209:5884761253725358&quot;"/>
  <Groups>
    <RefGroup id="4206:577530"
      uid="80ca34b7-106e-0000-714b-e31d00000000"
      qualifiedName="&quot;Mgr&quot;"/>
  </Groups>
</User>

```

## 10.2.9 XML Elements: Group

The group element corresponds to the application role object in the repository metadata.

The group tag includes the following attributes:

**Table 10–24 Group Tag Attributes**

Attribute Name	Description
displayName	The custom Display Name for this application role.
logLevel	This attribute is not used.
logStatisticsStatus	This attribute is not used.
guid	Global unique identifier for a given application role, which is independent of the role name.

The group tag includes the following child elements:

**Table 10–25 Group Child Elements**

Element Name	Description
RefPrivilegePackage	References the privilege package, or set of object privileges, data filters, and query privileges, that apply to this application role.

**Table 10–25 (Cont.) Group Child Elements**

Element Name	Description
ChildGroups	References the set of application roles that belong to this application role. Each child application role is contained in a sub-element called RefGroup.

**Syntax**

```
<Group ...>
  displayName=" "
  guid=" "
  <Description />
  <RefPrivilegePackage .../>
  <ChildGroups>
    <RefGroup .../>
  </ChildGroups>
</Group>
```

**Example**

```
<Group name="Marketing Analytics User" id="4206:10"
  uid="0023e1a4-106e-0000-714b-e31d00000000"
  guid="Marketing Analytics User">
  <RefPrivilegePackage id="4209:281517"
  uid="0023e206-1071-0000-714b-e31d00000000"
  qualifiedName="&quot;PrivPack_4209:651191007624440&quot;"/>
  <ChildGroups>
    <RefGroup id="4206:26"
    uid="0023e1b5-106e-0000-714b-e31d00000000"
    qualifiedName="&quot;CM Marketing Analytics User&quot;"/>
  </ChildGroups>
</Group>
```

**10.2.10 XML Elements: DB Sign-On**

The DB sign-on element corresponds to the information provided in the Logons tab of the user object. If the repository has been set up for database-specific login IDs and passwords, you can set up database-specific credentials to allow privileged users to connect to the underlying databases at the level of authority granted to those users in the databases.

The DB sign-on tag includes the following attributes:

**Table 10–26 DB Sign-on Tag Attributes**

Attribute Name	Description
user	The user name for the underlying database.
password	The corresponding password for the underlying database. Note that passwords are encrypted.

The DB sign-on tag does not include any child elements.

**Syntax**

```
<DBSignOn ...
  user=" "
  password=" ">
```

```
<Description />
</DBSignOn>
```

**Example**

```
<DBSignOn name="LOGON_4211:2559932074113"
  id="4211:158" uid="309a5c29-0bf7-1000-8f7c-0ae593260000"
  user="my_db_user"
  password="BA0EAAB163">
</DBSignOn>
```

**10.2.11 XML Elements: FMW Security**

The FMW security element is not used.

**10.3 Other XML Elements**

The elements described in this section are miscellaneous elements that do not fit into any other category. These elements include:

- [Section 10.3.1, "XML Elements: Project"](#)
- [Section 10.3.2, "XML Elements: Query Object"](#)

**10.3.1 XML Elements: Project**

The project element corresponds to the project object in the repository metadata. Projects support multiuser development by enabling developers to work on projects in their area of responsibility.

The project tag includes the following child elements:

**Table 10–27 Project Child Elements**

Element Name	Description
Catalogs	References the subject areas that belong to the project. Each subject area is contained in a sub-element called RefPresentationCatalog.
FactTables	References the logical fact tables that belong to the project. Each fact table is contained in a sub-element called RefLogicalTable.
Groups	References the application roles that belong to the project. Each application role is contained in a sub-element called RefGroup.
Users	References the users that belong to the project. Each user is contained in a sub-element called RefUser.
Variables	References the variables that belong to the project. Each variable is contained in a sub-element called RefVariable.
InitBlocks	References the initialization blocks that belong to the project. Each initialization block is contained in a sub-element called RefInitBlock.
ListCatalogs	References the list catalogs that belong to the project. Each list catalog is contained in a sub-element called RefListCatalog.

**Table 10–27 (Cont.) Project Child Elements**

Element Name	Description
Tables	References the presentation tables that belong to the project. Each presentation table is contained in a sub-element called <code>RefPresentationTable</code> .
Columns	References the presentation columns that belong to the project. Each presentation column is contained in a sub-element called <code>RefPresentationColumn</code> .
Hierarchies	References the presentation hierarchies that belong to the project. Each presentation hierarchy is contained in a sub-element called <code>RefPresentationHierarchy</code> .
Levels	References the presentation levels that belong to the project. Each presentation level is contained in a sub-element called <code>RefPresentationLevel</code> .
ExcludedCatalogs	References any subject areas that do not belong to the project, but that are mapped to logical objects that do belong to the project. Each subject area is contained in a sub-element called <code>RefPresentationCatalog</code> .
ExcludedTables	References any presentation tables that do not belong to the project, but that are mapped to logical objects that do belong to the project. Each presentation table is contained in a sub-element called <code>RefPresentationTable</code> .
ExcludedColumns	References any presentation columns that do not belong to the project, but that are mapped to logical objects that do belong to the project. Each presentation column is contained in a sub-element called <code>RefPresentationColumn</code> .
ExcludedHierarchies	References any presentation hierarchies that do not belong to the project, but that are mapped to logical objects that do belong to the project. Each presentation hierarchy is contained in a sub-element called <code>RefPresentationHierarchy</code> .
ExcludedLevels	References any presentation levels that do not belong to the project, but that are mapped to logical objects that do belong to the project. Each subject area is contained in a sub-element called <code>RefPresentationLevel</code> .

The project tag does not include any attributes.

### Syntax

```
<Project ...>
  <Description />
  <Catalogs>
    <RefPresentationCatalog.../>
  </Catalogs>
  <FactTables>
    <RefLogicalTable .../>
  </FactTables>
```

```

<Groups>
  <RefGroup.../>
</Groups>
<Users>
  <RefUser .../>
</Users>
<Variables>
  <RefVariable .../>
</Variables>
<InitBlocks>
  <RefInitBlock.../>
</InitBlocks>
<ListCatalogs>
  <RefListCatalog .../>
</ListCatalogs>
<Tables>
  <RefPresentationTable.../>
</Tables>
<Columns>
  <RefPresentationColumn.../>
</Columns>
<Hierarchies>
  <RefPresentationHierarchy.../>
</Hierarchies>
<Levels>
  <RefPresentationLevel.../>
</Levels>
<ExcludedCatalogs>
  <RefPresentationCatalog.../>
</ExcludedCatalogs>
<ExcludedTables>
  <RefPresentationTable.../>
</ExcludedTables>
<ExcludedColumns>
  <RefPresentationColumn.../>
</ExcludedColumns>
<ExcludedHierarchies>
  <RefPresentationHierarchy.../>
</ExcludedHierarchies>
<ExcludedLevels>
  <RefPresentationLevel.../>
</ExcludedLevels>
</Project>

```

### Example

```

<Project name="FUSION_SPE"
  id="4213:281691" uid="80ca6265-1075-0000-714b-e31d00000000">
  <Catalogs>
    <RefPresentationCatalog id="4004:275486"
      uid="80ca9dbb-0fa4-0000-714b-e31d00000000"
      qualifiedName="&quot;Sales Manager Dashboard - Campaign&quot;"/>
    <RefPresentationCatalog id="4004:275495"
      uid="80ca9e05-0fa4-0000-714b-e31d00000000"
      qualifiedName="&quot;Sales Manager Dashboard - Lead&quot;"/>
    ...
  </Catalogs>
  <FactTables>
    <RefLogicalTable id="2035:9160"
      uid="00224fb6-07f3-0000-714b-e31d00000000"
      qualifiedName="&quot;Core&quot;.&quot;Fact - CRM - Order Item&quot;"/>

```

```

        <RefLogicalTable id="2035:9371"
            uid="00224fb8-07f3-0000-714b-e31d00000000"
            qualifiedName="&quot;Core&quot;.&quot;Fact - CRM - Service Request&quot;"/>
    ...
</FactTables>
<Groups>
    <RefGroup id="4206:1"
        uid="0023e1a2-106e-0000-714b-e31d00000000"
        qualifiedName="&quot;BIAdministrators&quot;"/>
</Groups>
<Users>
    <RefUser id="1501:2"
        uid="0021f847-05dd-0000-714b-e31d00000000"
        qualifiedName="&quot;Administrator&quot;"/>
</Users>
<Variables>
    <RefVariable id="3031:250"
        uid="808466f1-0bd7-0000-714b-e31d00000000"
        qualifiedName="&quot;User Hierarchy Level&quot;.&quot;HIER_LEVEL&quot;"/>
    <RefVariable id="3031:337"
        uid="80c96155-0bd7-0000-714b-e31d00000000"
        qualifiedName="&quot;GetCRMCalendar&quot;.&quot;CRM_CAL_ID&quot;"/>
    ...
</Variables>
<InitBlocks>
    <RefInitBlock id="3033:68605"
        uid="808466f2-0bd9-0000-714b-e31d00000000"
        qualifiedName="&quot;User Hierarchy Level&quot;"/>
    <RefInitBlock id="3033:68645"
        uid="80c9615a-0bd9-0000-714b-e31d00000000"
        qualifiedName="&quot;GetCRMCalendar&quot;"/>
    ...
</InitBlocks>
<ExcludedColumns>
    <RefPresentationColumn id="4010:1181008"
        uid="80ec06eb-0faa-0000-714b-e31d00000000"
        qualifiedName="&quot;Sales Manager Dashboard - Customer&quot;.&quot;
            Date&quot;.&quot;Day of Week&quot;"/>
    <RefPresentationColumn id="4010:1181009"
        uid="80ec06ec-0faa-0000-714b-e31d00000000"
        qualifiedName="&quot;Sales Manager Dashboard - Customer&quot;.&quot;
            Date&quot;.&quot;Day of Year&quot;"/>
    ...
</ExcludedColumns>
</Project>

```

### 10.3.2 XML Elements: Query Object

The query object element corresponds to the saved query object in the repository metadata. You can save a query from the Query Repository dialog in the Administration Tool.

The query object tag includes the following child elements:

**Table 10–28 Query Object Child Elements**

Element Name	Description
QueryString	Contains the query string that qualifies and defines the query.



The query object tag does not include any attributes.

**Syntax**

```
<QueryObject ...>
  <Description />
  <QueryString .../>
</QueryObject>
```

**Example**

```
<QueryObject name="samplequery"
  id="4217:970" uid="c7fdc3b1-0c00-1000-8e0b-0a9702490000">
  <QueryString>
    <![CDATA[ (128 = "*" ) AND (6 = Business Model) AND (0) ]]>
  </QueryString>
</QueryObject>
```



---

---

# Glossary

This glossary defines terms for Oracle Business Intelligence Enterprise Edition. See also the Oracle Fusion Middleware Master Glossary for additional terms and definitions.

## **action**

Provides functionality to navigate to related content or to invoke operations, functions or processes in external systems. You can include actions in analyses, dashboard pages, agents, scorecard objectives, scorecard initiatives, and KPIs.

See also [action link](#).

## **Action Framework**

The Action Framework is a component of the Oracle BI EE architecture and includes a J2EE application called the Action Execution Service (AES) and actions-specific JavaScript functionality deployed as part of Oracle BI EE. The action framework also includes client-side functionality for creating actions and invoking certain action types directly from the browser.

## **action link**

A link to an action that you have embedded in an analysis, dashboard page, scorecard objective, scorecard initiative, or KPI that, when clicked, runs an associated action.

See also [action](#).

## **ADF Business Intelligence Component**

Provides the developer the ability to include Oracle BI Presentation Catalog objects in ADF Applications. This component uses a SOAP connection to access the catalog.

## **Administration Server**

Part of the WebLogic server domain and runs the processes that manage Oracle Business Intelligence components. The Administration Server includes the Oracle WebLogic Server Administration Console, Oracle Fusion Middleware Control, and JMX MBeans. For a Simple Install type, the Administration Server also includes Java components for Oracle Business Intelligence such as Oracle BI Publisher and Oracle Real-Time Decisions.

See also [Fusion Middleware Control](#), [Java components](#) and [Managed Server](#).

## **Administration Tool**

See [Oracle BI Administration Tool](#).

**agent**

Enables you to automate your business processes. You can use agents to provide event-driven alerting, scheduled content publishing, and conditional event-driven action execution.

Agents can dynamically detect information-based problems and opportunities, determine the appropriate individuals to notify, and deliver information to them through a wide range of devices (e-mail, phones, and so on).

**aggregate persistence**

A feature that automates the creation and loading of aggregate tables and their corresponding Oracle Business Intelligence metadata mappings to enable aggregate navigation.

**aggregate table**

A table that stores precomputed results from measures that have been aggregated over a set of dimensional attributes. Each aggregate table column contains data at a given set of levels. For example, a monthly sales table might contain a precomputed sum of the revenue for each product in each store during each month. Using aggregate tables optimizes performance.

**aggregation rule**

In an Oracle BI repository, a rule applied to a logical column or physical cube column that specifies a particular aggregation function to be applied to the column data, such as SUM.

In Presentation Services, users can see the rules that have been applied in the repository. Users can also change the default aggregation rules for measure columns.

**alias table**

A physical table that references a different physical table as its source. You can use alias tables to set up multiple tables, each with different keys, names, or joins, when a single physical table must serve in different roles. Because alias table names are included in physical SQL queries, you can also use alias tables to provide meaningful table names, making the SQL statements easier to read.

**analysis**

A query that a user creates on the Criteria tab in Presentation Services. An analysis can optionally contain one or more filters or selection steps to restrict the results.

See also [filter](#) and [selection step](#).

**analysis criteria**

Consists of the columns, filters, and selection steps that you specify for an analysis.

See also [analysis](#).

**analysis prompt**

A prompt that is added to an analysis. When the user selects a prompt value, that value then determines the content that displays in the analysis that contains the prompt, only.

See [dashboard prompt](#) and [prompt](#).

**attribute**

The details of a dimension in an Oracle BI repository. Attributes usually appear as columns of a dimension table.

**attribute column**

In Presentation Services, a column that holds a flat list of values that are also known as members. No hierarchical relationship exists between these members, as is the case for members of a hierarchical column. Examples include ProductID or City.

See [hierarchical column](#).

**BI Composer**

BI Composer is a simple-to-use wizard that enables you to quickly and easily create, edit, or view analyses without the complexities of the Analysis editor.

**BI domain**

Contains configurable system components (the coreapplication) and Java components (the WebLogic server domain), and includes the Web-based management tools and applications that use resources.

A BI domain can be a set of middleware homes spread across one or more physical servers.

See also [BI instance](#).

**BI instance**

Refers to the system components (coreapplication) of a BI domain

See also [BI domain](#).

**BI object**

A piece of business intelligence content that is created with Presentation Services and saved to the Oracle BI Presentation Catalog. Examples of BI objects include analyses, dashboards, dashboard pages, scorecards, and KPIs.

**BI Search**

A search tool that resides outside of Presentation Services. BI Search is available from the Home Page after the administrator adds a link to the BI Search URL. BI Search provides a mechanism for searching for objects in the Oracle BI Presentation Catalog that is similar to a full-text search engine.

**bookmark link**

Captures the path to a dashboard page and all aspects of the page state.

See [prompted link](#).

**bridge table**

A table that enables you to resolve many-to-many relationships between two other tables.

**briefing book**

See [Oracle BI Briefing Books](#).

**business model**

An object in the Oracle BI repository that contains the business model definitions and the mappings from logical to physical tables. Business models are always dimensional,

unlike objects in the Physical layer, which reflect the organization of the data sources. Each business model contains logical tables, columns, and joins.

### **Business Model and Mapping layer**

A layer of the Oracle BI repository that defines the business, or logical, model of the data and specifies the mapping between the business model and the Physical layer schemas. This layer can contain one or more business models.

The Business Model and Mapping layer determines the analytic behavior that is seen by users, and defines the superset of objects available to users. It also hides the complexity of the source data models.

### **business owner**

The person responsible for managing and improving the business value and performance of a KPI or scorecard object, such as an objective, cause & effect map, and so on.

### **catalog**

See [Oracle BI Presentation Catalog](#).

### **cause & effect map**

A component of a scorecard that lets you illustrate the cause and effect relationships of an objective or KPI.

See also [Oracle Scorecard and Strategy Management](#).

### **chronological key**

A column in a time dimension that identifies the chronological order of the members within a dimension level. The key must be unique at its level.

### **Cluster Controller**

A process that serves as the first point of contact for new requests from Presentation Services and other clients. The Cluster Controller determines which Oracle BI Server in the cluster to direct the request to based on Oracle BI Server availability and load. It monitors the operation of servers in the cluster, including the Oracle BI Scheduler instances. The Cluster Controller is deployed in active-passive configuration.

### **column**

In an Oracle BI repository, columns can be physical columns, logical columns, or presentation columns.

In Presentation Services, indicates the pieces of data that an analysis returns. Together with filters and selection steps, columns determine what analyses contain. Columns also have names that indicate the types of information that they contain, such as Account and Contact.

See also [analysis](#), [attribute column](#), [hierarchical column](#), and [measure column](#).

### **column filter**

See [filter](#).

### **column prompt**

A type of filter that enables you to build specific value prompts on a data column to either exist alone on the dashboard or analysis or to expand or refine existing dashboard and analysis filters.

See also [prompt](#).

**complex join**

A join in the Physical layer of an Oracle BI repository that uses an expression other than equals.

**condition**

Objects that return a single Boolean value based on the evaluation of an analysis or of a key performance indicator (KPI). You use conditions to determine whether agents deliver their content and execute their actions, whether actions links are displayed in dashboard pages, or whether sections and their content are displayed in dashboard pages.

See also [action](#), [action link](#), [agent](#) and [key performance indicator \(KPI\)](#).

**connection pool**

An object in the Physical layer of an Oracle BI repository that contains the connection information for a data source.

See also [Physical layer](#).

**content designer**

The user who creates business intelligence objects such as analyses, dashboards, and scorecards.

**contextual event action**

A predelivered action that uses the Action Framework to pass content from the business intelligence object to another region on an ADF page.

See also [action](#), [Action Framework](#), and [action link](#).

**criteria**

See [analysis criteria](#).

**cube**

An OLAP (online analytical processing) data structure that lets data be analyzed more quickly and with greater flexibility than structures in relational databases. Cubes are made up of measures and organized by dimensions. Cubes in multidimensional data sources roughly correspond to star schemas in relational database models.

**currency prompt**

A prompt that enables the user to change the currency type that displays in the currency columns on an analysis or dashboard.

See also [prompt](#).

**custom view**

A component of a scorecard that lets you show a customized view of your business and strategy data.

See also [Oracle Scorecard and Strategy Management](#).

**dashboard**

An object that provides personalized views of corporate and external information. A dashboard consists of one or more pages. Pages can display anything that you can

access or open with a Web browser, such as results of analyses, images, alerts from agents, and so on.

### **dashboard prompt**

A prompt that is added to the dashboard. When the user selects a prompt value, that value then determines the content that displays in all analyses that are included on the dashboard.

See [analysis prompt](#) and [prompt](#).

### **Dashboard URL**

Used for incorporating or referencing the content of a specific dashboard in external portals or applications. It has several forms and optional arguments that you can use to control its behavior.

### **data source name (DSN)**

A data structure that contains the information about a specific database, typically used by an ODBC driver to connect to the database. The DSN contains information such as the name, directory, and driver of the database.

Connection pool objects in the Physical layer of the Oracle BI repository contain DSN information for individual data sources.

### **database hint**

Instructions placed within a SQL statement that tell the database query optimizer the most efficient way to execute the statement. Hints override the optimizer's execution plan, so you can use hints to improve performance by forcing the optimizer to use a more efficient plan. Hints are supported only for Oracle Database data sources.

### **dimension**

A hierarchical organization of logical columns (attributes). One or more logical dimension tables might be associated with at most one dimension.

A dimension might contain one or more (unnamed) hierarchies. There are two types of logical dimensions: dimensions with level-based hierarchies (structure hierarchies), and dimensions with parent-child hierarchies (value hierarchies).

A particular type of level-based dimension, called a time dimension, provides special functionality for modeling time series data.

See also [hierarchy](#).

### **dimension table**

A logical table that contains columns used by a particular dimension. A dimension table cannot be a fact table.

See also [fact table](#).

### **driving table**

A mechanism used to optimize the manner in which the Oracle BI Server processes multi-database joins when one table is very small (the driving table) and the other table is very large.

### **DSN**

See [data source name \(DSN\)](#).



**event polling table**

Event polling tables (also called event tables) provide information to the Oracle BI Server about which physical tables have been updated. They are used to keep the query cache up-to-date. The Oracle BI Server cache system polls the event table, extracts the physical table information from the rows, and purges stale cache entries that reference those physical tables.

**Essbase**

A multidimensional database management system available from Oracle that provides a multidimensional database platform upon which to build business intelligence applications. Also referred to as Oracle's Hyperion Essbase.

**fact table**

In an Oracle BI repository, a logical table in the Business Model and Mapping layer that contains measures and has complex join relationships with dimension tables.

See also [dimension table](#).

**filter**

Criteria that are applied to attribute and measure columns to limit the results that are displayed when an analysis is run. For measure columns, filters are applied before the query is aggregated and affect the query and thus the resulting values.

See also [prompt](#) and [selection step](#).

**foreign key**

A column or a set of columns in one table that references the primary key columns in another table.

**fragmentation content**

The portion, or fragment, of the set of data specified in a logical table source when the logical table source does not contain the entire set of data at a given level.

Fragmentation content is defined by the logical columns that are entered in the **Fragmentation content** box in the Content tab of the Logical Table Source dialog box.

**Fusion Middleware Control**

Provides Web-based management tools that enable you to monitor and configure Fusion Middleware components.

**global header**

An object in the user interface for Oracle BI Presentation Services that contains links and options that enable the user to quickly begin a task or locate a specific object within the Oracle BI Presentation Catalog. The global header always displays in the Presentation Services user interface, thus enabling users to quickly access links and search the catalog without having to navigate to the Home Page or Catalog page.

**Go URL**

Used to incorporate specific business intelligence results into external portals or applications. The Go URL is used when you add a result to your favorites or add a link to a request to a dashboard or external Web site. It has several forms and optional arguments that you can use to control its behavior.

### **hierarchical column**

In Presentation Services, a column that holds data values that are organized using both named levels and parent-child relationships. This column is displayed using a tree-like structure. Individual members are shown in an outline manner, with lower-level members rolling into higher-level members. For example, a specific day belongs to a particular month, which in turn is within a particular year. Examples include Time or Geography.

See also [attribute column](#).

### **hierarchy**

In an Oracle BI repository, a system of levels in a logical dimension that are related to each other by one-to-many relationships. All hierarchies must have a common leaf level and a common root (all) level.

Hierarchies are not modeled as separate objects in the metadata. Instead, they are an implicit part of dimension objects.

See also [dimension](#), [logical level](#), and [presentation hierarchy](#).

### **hierarchy level**

In Presentation Services, an object within a hierarchical column that either rolls up or is rolled up from other levels. Corresponds to a presentation level in an Oracle BI repository.

See also [presentation level](#).

### **home page**

Provides an intuitive, task-based entry way into the functionality of Presentation Services. The Home page is divided into sections that enable you to quickly begin specific tasks, locate an object, or access technical documentation.

### **image prompt**

A prompt that provides an image with different areas mapped to specific values. The user clicks an image area to select the prompt value that populates the analysis or dashboard.

See also [prompt](#).

### **initialization block**

Used to initialize dynamic repository variables, system session variables, and nonsystem session variables. An initialization block contains the SQL statements that are executed to initialize or refresh the variables that are associated with that block.

### **initiative**

Used in a scorecard, an initiative is a time-specific task or project that is necessary to achieve objectives. As such, you can use initiatives that support objectives as milestones as they reflect progress toward strategy targets.

See also [objective](#) and [Oracle Scorecard and Strategy Management](#).

### **Java components**

Fusion Middleware Control components that are deployed as one or more Java EE applications (and a set of resources) and are managed by Node Manager.

See also [Node Manager](#).

**key performance indicator (KPI)**

A measurement that defines and tracks specific business goals and strategic objectives. KPIs often times roll up into larger organizational strategies that require monitoring, improvement, and evaluation. KPIs have measurable values that usually vary with time, have targets to determine a score and performance status, include dimensions to allow for more precise analysis, and can be compared over time for trending purposes and to identify performance patterns.

See also [Oracle Scorecard and Strategy Management](#).

**KPI watchlist**

A method of distributing KPIs to end users. A watchlist is a collection of KPIs that are built by adding the KPIs that are stored in the Oracle BI Presentation Catalog. After a KPI watchlist is built and saved, it is stored as a catalog object and can be added to dashboards and scorecards.

See also [key performance indicator \(KPI\)](#).

**level**

See [hierarchy level](#).

**logical display folder**

Folders used to organize objects in the Business Model and Mapping layer of an Oracle BI repository. They have no metadata meaning.

**logical join**

Joins that express relationships between logical tables. Logical joins are *conceptual*, rather than physical, joins. In other words, they do not join to particular keys or columns. A single logical join can correspond to many possible physical joins.

**logical layer**

See [Business Model and Mapping layer](#).

**logical level**

In an Oracle BI repository, a component of a level-based hierarchy that either rolls up or is rolled up from other levels.

Parent-child hierarchies have implicit, inter-member levels between ancestors and descendants that are not exposed as logical level objects in the metadata. Although parent-child hierarchies also contain logical level objects, these levels are system generated and exist to enable aggregation across all members only.

See also [dimension](#) and [hierarchy](#).

**Logical SQL**

The SQL statements that are understood by the Oracle BI Server. The Oracle BI Server Logical SQL includes standard SQL, plus special functions (SQL extensions) like `AGO`, `TODATE`, `EVALUATE`, and others.

Clients like Presentation Services send Logical SQL to the Oracle BI Server when a user makes a request. In addition, Logical SQL is used in the Business Model and Mapping layer to enable heterogeneous database access and portability. The Oracle BI Server transforms Logical SQL into physical SQL that can be understood by source databases.

**logical table**

A table object in the Business Model and Mapping layer of an Oracle BI repository. A single logical table can map to one or more physical tables. Logical tables can be either fact tables or dimension tables.

See also [dimension table](#) and [fact table](#).

**logical table source**

Objects in the Business Model and Mapping layer of an Oracle BI repository that define the mappings from a single logical table to one or more physical tables. The physical to logical mapping can also be used to specify transformations that occur between the Physical layer and the Business Model and Mapping layer, and to enable aggregate navigation and fragmentation.

**Managed Server**

An individual J2EE application container (JMX MBean container). It provides local management functions on individual hosts for Java components and system components contained within the local middleware home, and refers to the Administration Server for all of its configuration and deployment information.

See also [Administration Server](#) and [Fusion Middleware Control](#).

**MDS**

Oracle Metadata Services. A core technology of the Application Development Framework. MDS provides a unified architecture for defining and using metadata in an extensible and customizable manner.

See also [MDS XML](#).

**MDS XML**

An XML format that is compatible with Oracle Metadata Services. MDS XML is a supported format for the Oracle BI repository. It enables integration with third-party source control management systems for offline repository development.

MDS XML format is different from the XML format generated by the Oracle BI Server XML API.

See also [MDS](#), [Oracle BI repository](#), and [Oracle BI Server XML API](#).

**measure column**

A column that can change for each record and can be added up or aggregated. Typical measures are sales dollars and quantity ordered. Measures are calculated from data sources at query time.

Measure columns are displayed in the Oracle BI repository, usually in fact tables, or in Presentation Services.

**metadata**

Data about data. Metadata objects include the descriptions of schemas (such as tables, columns, data types, primary keys, foreign keys, and so on) and logical constructs (like fact tables, dimensions, and logical table source mappings).

The Oracle BI repository is made up of the metadata used by the Oracle BI Server to process queries.

**metadata dictionary**

A static set of XML documents that describe metadata objects, such as a column, including its properties and relationships with other metadata objects. A metadata dictionary can help users obtain more information about metrics or attributes for repository objects.

**mission statement**

A statement in a scorecard that specifies the key business goals and priorities that are required to achieve your vision.

See also [Oracle Scorecard and Strategy Management](#) and [vision statement](#).

**multi-database join**

A join between two tables in an Oracle BI repository, where each table resides in a different database.

**Node Manager**

A daemon process that provides remote server start, stop, and restart capabilities when Java processes become unresponsive or terminate unexpectedly.

See also [Java components](#).

**OCI**

See [Oracle Call Interface \(OCI\)](#).

**ODBC**

See [Open Database Connectivity \(ODBC\)](#).

**object properties**

Information about an object and attributes that the owner can assign to an object. Examples of properties include name, description, date stamps, read-only access, and do not index flag.

See also [permissions](#).

**objective**

A required or desired outcome in a scorecard that forms your corporate strategy.

See also [initiative](#) and [Oracle Scorecard and Strategy Management](#).

**offline mode**

In the Oracle BI Administration Tool, a mode where a repository builder can edit a repository that is not loaded into the Oracle BI Server.

**online mode**

In the Oracle BI Administration Tool, a mode where a repository builder can edit a repository while it is available for query operations. Online mode also allows user session monitoring for users connected to the subject areas in the repository.

**opaque view**

A Physical layer table that consists of a `SELECT` statement. In the Oracle BI repository, opaque views appear as view tables in the physical databases, but the view does not actually exist.

### **Open Database Connectivity (ODBC)**

A standard interface used to access data in both relational and nonrelational databases. Database applications can use ODBC to access data stored in different types of database management systems, even if each database uses a different data storage format and programming interface.

### **OPMN**

See [Oracle Process Manager and Notification Server \(OPMN\)](#).

### **Oracle BI Administration Tool**

A Windows application that is used to create and edit Oracle BI repositories. The Administration Tool provides a graphical representation of the three parts of a repository: the Physical layer, the Business Model and Mapping layer, and the Presentation layer.

### **Oracle BI Briefing Books**

A collection of static or updatable snapshots of dashboard pages, individual analyses, and BI Publisher reports. You can download briefing books in PDF or MHTML format for printing and viewing. You also can update, schedule, and deliver briefing books using agents.

### **Oracle BI JavaHost**

A service that gives Presentation Services the ability to use functionality that is provided in Java libraries to support components such as graphs. The services are provided based on a request-response model.

### **Oracle BI Logical SQL View Object**

Provides the developer the ability to create a Logical SQL statement to access the Oracle BI Server and fetch business intelligence data and bind it to native ADF components for inclusion on an ADF page. This view object uses a BI JDBC connection to the Oracle BI Server.

### **Oracle BI Presentation Catalog**

Stores business intelligence objects, such as analyses and dashboards, and provides an interface where users create, access, and manage objects, and perform specific object-based tasks (for example, export, print, and edit). The catalog is organized into folders that are either shared or personal.

### **Oracle BI Presentation Services**

Provides the framework and interface for the presentation of business intelligence data to Web clients. It maintains a Presentation Catalog service on the file system for the customization of this presentation framework. It is a standalone process and communicates with the Oracle BI Server using ODBC over TCP/IP. It consists of components that are known as Answers, Delivers, and Interactive Dashboards.

See also [ODBC](#); [Oracle BI Server](#); [Oracle BI Presentation Catalog](#); [Oracle BI Presentation Services server](#).

### **Oracle BI Presentation Services server**

The Oracle BI Web server that exchanges information and data with the Oracle BI Server.

**Oracle BI Publisher**

A J2EE application that provides enterprise-wide publishing services in Oracle Business Intelligence. It generates highly formatted, pixel-perfect reports.

See also [report](#).

**Oracle BI Publisher report**

See [report](#).

**Oracle BI repository**

The set of Oracle Business Intelligence metadata that defines logical schemas, physical schemas, physical-to-logical mappings, aggregate table navigation, and other constructs. Oracle BI repositories can be in binary (RPD) format, in which repository metadata is contained in a single file with an extension of .rpd, or in a set of MDS XML documents. MDS XML format repositories are used for offline development only and cannot be loaded into the Oracle BI Server. Oracle BI repositories in both formats can be edited using the Oracle BI Administration Tool.

See also [metadata](#) and [Oracle BI Administration Tool](#).

**Oracle BI Scheduler**

An extensible scheduling application for scheduling results to be delivered to users at specified times. It is the engine behind the Oracle BI Delivers feature.

See also [results](#).

**Oracle BI Server**

A standalone process that maintains the logical data model that it provides to Presentation Services and other clients through ODBC. Metadata is maintained for the data model in a local proprietary file called the repository file. The Oracle BI Server processes user requests and queries underlying data sources.

**Oracle BI Server XML API**

Provides utilities to create a generic, XML-based representation of the Oracle BI repository metadata. You can use this XML file version of the repository to programmatically modify the metadata. The Oracle BI Server XML API objects correspond to metadata repository objects in an RPD file. These objects differ from XML objects in the Oracle BI Presentation Catalog.

The XML generated by the Oracle BI Server XML API is different from the MDS XML format used for Oracle BI repositories integrated with third-party source control management systems.

See also [MDS XML](#).

**Oracle Business Intelligence Mobile**

Oracle Business Intelligence Mobile allows you to view Oracle BI EE content on supported mobile devices such as the Apple iPhone and Apple iPad.

Using Oracle Business Intelligence Mobile, you can view and analyze BI content such as analyses and dashboards, BI Publisher content, scorecard content, and content delivered by agents.

**Oracle Business Intelligence Web Services**

See [Oracle Business Intelligence Session-Based Web Services](#) and [Oracle Business Intelligence Web Services for SOA](#).

### **Oracle Business Intelligence Session-Based Web Services**

An API that implements SOAP. These Web services are designed for programmatic use, where a developer uses one Web service to invoke many different business intelligence objects. These Web services provide functionality on a wide range of Presentation Services operations. These Web services enable the developer to extract results from Oracle BI Presentation Services and deliver them to external applications, perform Presentation Services management functions, and execute Oracle Business Intelligence alerts (known as Intelligent Agents).

See also [Oracle Business Intelligence Web Services for SOA](#).

### **Oracle Business Intelligence Web Services for SOA**

Contains three Web services, ExecuteAgent, ExecuteAnalysis, and ExecuteCondition, which are hosted by the bimiddleware J2EE application. These web services are designed to enable developers to use third-party Web services clients (for example, Oracle SOA Suite) to browse for and include business intelligence objects in service oriented architecture components.

See also [Oracle Business Intelligence Session-Based Web Services](#).

### **Oracle Call Interface (OCI)**

A connection interface that the Oracle BI Server can use to connect to Oracle Database data sources. You should always use OCI when importing metadata from or connecting to an Oracle Database.

### **Oracle OLAP**

Oracle Database has an OLAP Option that provides an embedded, full-featured online analytical processing server.

Oracle Business Intelligence supports Oracle OLAP as a data source. When you import metadata from an Oracle OLAP source, the Oracle OLAP objects appear in the Physical layer of the Administration Tool. Oracle OLAP objects include Analytic Workspaces, which are containers for storing related cubes.

### **Oracle Process Manager and Notification Server (OPMN)**

A process management tool that manages all system components (server processes), and supports both local and distributed process management, automatic process recycling and the communication of process state (up, down, starting, stopping). OPMN detects process unavailability and automatically restarts processes).

See also [system components](#).

### **Oracle Scorecard and Strategy Management**

A performance management tool that lets you describe and communicate your business strategy. You can drive and assess your corporate strategy and performance from the top of your organization down, or from the bottom up.

### **Oracle Technology Network (OTN)**

A repository of technical information about Oracle's products where you can search for articles, participate in discussions, ask the user community technical questions, and search for and download Oracle products and documentation.

### **parent-child hierarchy**

A hierarchy of members that all have the same type. All the dimension members of a parent-child hierarchy occur in a single data source. In a parent-child hierarchy, the



inter-member relationships are parent-child relationships between dimension members.

See also [dimension](#).

### **parent-child relationship table**

A table with values that explicitly define the inter-member relationships in a parent-child hierarchy. Also called a closure table.

### **pass-through calculation**

A calculation that is not computed by the Oracle BI Server but instead is passed to another data source. Enables advanced users to leverage data source features and functions without the need to modify the Oracle BI repository.

### **permissions**

Specify which users can access an object, and limit how users can interact with an object. Examples of permissions include write, delete, and change permissions.

See [object properties](#).

### **perspective**

A category in your organization with which to associate initiatives, objectives, and KPIs in a scorecard. A perspective can represent a key stakeholder (such as a customer, employee, or shareholder/financial) or a key competency area (such as time, cost, or quality).

See also [initiative](#), [key performance indicator \(KPI\)](#), [objective](#), and [Oracle Scorecard and Strategy Management](#).

### **physical catalog**

An object in the Physical layer of an Oracle BI repository that groups different schemas. A catalog contains all the schemas (metadata) for a database object.

### **physical display folder**

Folders that organize objects in the Physical layer of an Oracle BI repository. They have no metadata meaning.

### **physical join**

Joins between tables in the Physical layer of an Oracle BI repository.

### **Physical layer**

A layer of the Oracle BI repository that contains objects that represent physical data constructs from back-end data sources. The Physical layer defines the objects and relationships available for writing physical queries. This layer encapsulates source dependencies to enable portability and federation.

### **physical schema**

An object in the Physical layer of an Oracle BI repository that represents a schema from a back-end database.

### **physical table**

An object in the Physical layer of an Oracle BI repository, usually corresponding to a table that exists in a physical database.

See also [Physical layer](#).

### **presentation hierarchy**

An object in the Presentation layer of an Oracle BI repository that provides an explicit way to expose the multidimensional model in Presentation Services and other clients. Presentation hierarchies expose analytic functionality such as member selection, custom member groups, and asymmetric queries. Users can create hierarchy-based queries using presentation hierarchies.

In Presentation Services, presentation hierarchies are displayed as hierarchical columns.

See also [hierarchical column](#) and [presentation level](#).

### **Presentation layer**

Provides a way to present customized, secure, role-based views of a business model to users. It adds a level of abstraction over the Business Model and Mapping layer in the Oracle BI repository. The Presentation layer provides the view of the data seen by users who build analyses in Presentation Services and other client tools and applications.

See also [Business Model and Mapping layer](#).

### **presentation level**

In the Oracle BI repository, a component of a presentation hierarchy that either rolls up or is rolled up from other levels. Presentation levels are displayed as levels within hierarchical columns in Presentation Services.

See also [hierarchy level](#) and [presentation hierarchy](#).

### **Presentation Services**

See [Oracle BI Presentation Services](#).

### **Presentation Services server**

See [Oracle BI Presentation Services server](#).

### **presentation table**

An object in the Presentation layer of an Oracle BI repository that is used to organize columns into categories that make sense to the user community. A presentation table can contain columns from one or more logical tables. The names and object properties of the presentation tables are independent of the logical table properties.

### **primary key**

A column (or set of columns) where each value is unique and identifies a single row of a table.

### **process instance**

A unique process on an individual workstation that is associated with a BI instance.

See also [BI instance](#).

### **prompt**

A type of filter that enables the content designer to build and specify data values or the end user to choose specific data values to provide a result sets for an individual analysis or multiple analyses included on a dashboard or dashboard page. A prompt expands or refines existing dashboard and analysis filters.

The types of prompts are column prompts, currency prompts, image prompts, and variable prompts.

See also [column prompt](#), [currency prompt](#), [filter](#), [image prompt](#), and [variable prompt](#).

**prompted link**

Captures the path to a dashboard page and a simplified presentation of the dashboard prompt.

See [bookmark link](#).

**query**

Contains the underlying SQL statements that are issued to the Oracle BI Server. You do not have to know a query language to use Oracle Business Intelligence.

**query cache**

A facility to store query results for use by other queries.

**ragged hierarchy**

See [unbalanced hierarchy](#).

**report**

The response returned to the user from the execution of a query created using Oracle BI Publisher. Reports can be formatted, presented on a dashboard page, saved in the Oracle BI Presentation Catalog, and shared with other users.

See also [analysis](#).

**repository**

See [Oracle BI repository](#).

**repository variable**

See [variable](#).

**results**

The output returned from the Oracle BI Server for an analysis.

See also [analysis](#).

**scorecard**

See [Oracle Scorecard and Strategy Management](#).

**selection step**

A choice of values that is applied after the query is aggregated that affects only the members displayed, not the resulting aggregate values. Along with filters, selection steps restrict the results for an analysis.

See also [analysis](#) and [filter](#).

**session variable**

See [variable](#).

**skip-level hierarchy**

A hierarchy where some members do not have a value for a particular ancestor level. For example, in the United States, the city of Washington in the District of Columbia does not belong to a state. The expectation is that users can still navigate from the country level (United States) to Washington and below without the need for a state.

See also [hierarchy](#).

**snowflake schema**

A dimensional schema where one or more of the dimensions are partially or completely normalized.

**SQL**

See [structured query language \(SQL\)](#).

**star schema**

A relational schema that allows dimensional analysis of historical information. Star schemas have one-to-many relationships between the logical dimension tables and the logical fact table. Each star consists of a single fact table joined to a set of denormalized dimension tables.

**strategy map**

A component of a scorecard that shows how the objectives that have been defined for a scorecard and the KPIs that measure their progress are aligned by perspectives. It also shows cause and effect relationships.

See also [Oracle Scorecard and Strategy Management](#).

**strategy tree**

A component of a scorecard that shows an objective and its supporting child objectives and KPIs hierarchically in a tree diagram.

See also [Oracle Scorecard and Strategy Management](#).

**structured query language (SQL)**

A standard programming language for querying and modifying data. Oracle Business Intelligence supports standard SQL-92 with several value-added proprietary extensions.

See also [Logical SQL](#).

**subject area**

In an Oracle BI repository, an object in the Presentation layer that organizes and presents data about a business model. It is the highest-level object in the Presentation layer and represents the view of the data that users see in Presentation Services. Oracle BI repository subject areas contain presentation tables, presentation columns, and presentation hierarchies.

In Presentation Services, subject areas contain folders, measure columns, attribute columns, hierarchical columns, and levels.

**system components**

Server processes (not Java applications) that are managed by the Oracle Process Manager and Notification server (OPMN).

See also [Oracle Process Manager and Notification Server \(OPMN\)](#).

**transformation**

Work that is performed on data when moving from a database to another location (sometimes another database). Some transformations are typically performed on data when it is moved from a transaction system to a data warehouse system.

**unbalanced hierarchy**

A hierarchy where the leaves do not have the same depth. For example, an organization might choose to have data for the current month at the day level, data for the previous at the month level, and data for the previous five years at the quarter level.

See also [hierarchy](#).

**value hierarchy**

See [parent-child hierarchy](#).

**variable**

Objects in an Oracle BI repository that are used to streamline administrative tasks and dynamically modify metadata content to adjust to a changing data environment.

Variables are of the following types:

- Repository variables have a single value at any point in time. There are two types of repository variables: static and dynamic.
- Session variables are created and assigned a value when each user logs on. There are two types of session variables: system and nonsystem.

**variable prompt**

Enables the user to select a value specified in the variable prompt to display on the dashboard. A variable prompt is not dependent upon column data, but enables you to manipulate, for example add or multiply, the column data on an analysis.

See also [prompt](#).

**virtual physical table**

A physical table that is made from a stored procedure or a `SELECT` statement. Creating virtual tables can provide the Oracle BI Server and the underlying databases with the proper metadata to perform some advanced query requests.

**vision statement**

A short statement in a scorecard that describes what your organization wants to become sometime in the future. For example, it might be to become the most successful business in the South America Polypropylene Market.

See also [mission statement](#) and [Oracle Scorecard and Strategy Management](#).

**WebLogic server domain**

Contains Java components that are configured to participate in the servicing of SOAP, HTTP, and other forms of requests.

**WebLogic Scripting Tool (WLST)**

A command-line scripting interface that enables you to configure, manage, and persist changes to WebLogic Server instances and domains and to monitor and manage server run-time events.

**XML API**

See [Oracle BI Server XML API](#).



## A

---

Administration Tool, using for repository  
  development, 1-9  
aggregation rule element  
  in MDS XML schema, 2-19  
  in XML schema, 7-18  
APIs  
  Oracle BI Server XML API, 6-1  
appending objects, using Oracle BI Server XML  
  API, 6-2  
application roles  
  managing, 1-9

## B

---

bi-init, 1-3, 6-2, 6-3  
biserverxmlcli command-line tool, using, 6-5  
biserverxmlxec command-line tool, using, 6-4  
biserverxmlgen command-line tool  
  for generating MDS XML, 1-4  
  for generating XML, 6-3  
business model element  
  in MDS XML schema, 2-3  
  in XML schema, 7-3

## C

---

catalog link element  
  in MDS XML schema, 5-1  
  in XML schema, 10-1  
certification information, 1-9  
column mapping element  
  in MDS XML schema, 2-17  
  in XML schema, 7-16  
command-line tools  
  biserverxmlcli, 6-5  
  biserverxmlxec, 6-4  
  biserverxmlgen, 1-4, 6-3  
complex join element  
  in MDS XML schema, 3-19  
  in XML schema, 8-18  
connection pool element  
  in MDS XML schema, 3-12  
  in XML schema, 8-11  
connection pool settings, updating using Oracle BI

  Server XML API, 6-10  
cube column element  
  in MDS XML schema, 3-29  
  in XML schema, 8-26  
cube table element  
  in MDS XML schema, 3-21  
  in XML schema, 8-19  
custom authenticator element  
  in MDS XML schema, 5-14  
  in XML schema, 10-16

## D

---

data sources  
  supported by Oracle Business Intelligence, 1-9  
database element  
  in MDS XML schema, 3-1  
  in XML schema, 8-1  
databases, supported, 1-9  
DB sign-on element  
  in MDS XML schema, 5-24  
  in XML schema, 10-24  
dimension element  
  in MDS XML schema, 2-7  
  in XML schema, 7-6  
DSNs, setting up for the Oracle BI Server, 1-9

## G

---

generic elements and attributes, for Oracle BI Server  
  XML API, 1-4, 6-14  
group element  
  in MDS XML schema, 5-23  
  in XML schema, 10-23  
groups, managing, 1-9

## H

---

hardware requirements, 1-9

## I

---

id, about, 6-16  
init block element  
  in MDS XML schema, 5-11  
  in XML schema, 10-13

installation types, supported, 1-9

## J

---

JDKs, supported, 1-9

## L

---

LDAP server element

in MDS XML schema, 5-9

in XML schema, 10-11

list catalog element

in MDS XML schema, 5-4

in XML schema, 10-5

logging, managing, 1-9

logical column element

in MDS XML schema, 2-1

in XML schema, 7-1

logical complex join element

in MDS XML schema, 2-4

in XML schema, 7-4

logical display folder element

in MDS XML schema, 2-22

in XML schema, 7-20

logical elements, for Oracle BI Server MDS XML

API, 2-1

logical elements, for Oracle BI Server XML API, 7-1

logical foreign key element

in MDS XML schema, 2-11

in XML schema, 7-9

logical key element

in MDS XML schema, 2-12

in XML schema, 7-11

logical level element

in MDS XML schema, 2-5

in XML schema, 7-5

logical source folder element

in MDS XML schema, 2-18

in XML schema, 7-17

logical table element

in MDS XML schema, 2-8

in XML schema, 7-8

logical table source element

in MDS XML schema, 2-13

in XML schema, 7-12

## M

---

marketing elements elements, for Oracle BI Server

MDS XML API, 5-1

marketing elements elements, for Oracle BI Server

XML API, 10-1

MDS XML APIs

Oracle BI Server MDS XML API, 1-1

MDS XML schema

aggregation rule element, 2-19

business model element, 2-3

catalog link element, 5-1

column mapping element, 2-17

complex join element, 3-19

connection pool element, 3-12

cube column element, 3-29

cube table element, 3-21

custom authenticator element, 5-14

database element, 3-1

DB sign-on element, 5-24

dimension element, 2-7

group element, 5-23

init block element, 5-11

LDAP server element, 5-9

list catalog element, 5-4

logical column element, 2-1

logical complex join element, 2-4

logical display folder element, 2-22

logical foreign key element, 2-11

logical key element, 2-12

logical level element, 2-5

logical source folder element, 2-18

logical table element, 2-8

logical table source element, 2-13

measure definition element, 2-19

object privilege element, 5-18

override aggregation rule element, 2-20

physical catalog element, 3-4

physical column element, 3-10

physical dimension element, 3-24

physical display folder element, 3-5

physical foreign key element, 3-18

physical hierarchy element, 3-26

physical key element, 3-17

physical level element, 3-28

physical schema element, 3-4

physical table element, 3-6

presentation catalog element, 4-1

presentation column element, 4-5

presentation hierarchy element, 4-6

presentation level element, 4-7

presentation table element, 4-3

privilege package element, 5-15

project element, 5-24

qualified list item element, 5-4

qualifying key element, 5-6

query object element, 5-28

query privilege element, 5-20

sampling table element, 5-6

seg catalog element, 5-7

target level element, 5-2

user element, 5-21

variable element, 5-8

MDS XML, generating and executing with Oracle BI  
Server MDS XML API, 1-2

midsid, about, 1-5

measure definition element

in MDS XML schema, 2-19

in XML schema, 7-17

memory requirements, 1-9

migrating from test to production

environments, 6-10

migrating metadata, with Oracle BI Server XML

API, 6-6

minimum disk space requirements, 1-9



## N

---

naming restrictions for repository objects, 6-16  
NQSSConfig.INI  
    using, 1-9

## O

---

object identifiers, for Oracle BI Server MDS XML  
    API, 1-5  
object identifiers, for Oracle BI Server XML  
    API, 6-15  
object privilege element  
    in MDS XML schema, 5-18  
    in XML schema, 10-19  
ODBC DSN  
    for the Oracle BI Server, 1-9  
operating systems, supported, 1-9  
Oracle BI repository  
    maintaining versions with Oracle BI Server XML  
        API, 6-6  
    programmatically updating connection pool  
        settings, 6-10  
    programmatically updating using Oracle BI Server  
        XML API, 6-7  
Oracle BI repository, designing and building, 1-9  
Oracle BI Server  
    ODBC DSN configuration, 1-9  
    starting and stopping, 1-9  
Oracle BI Server MDS XML API  
    about, 1-1  
    about object identifiers, 1-5  
    command-line tool, 1-3  
Oracle BI Server MDS XML API elements  
    logical elements, 2-1  
    marketing elements, 5-1  
    other elements, 5-24  
    physical elements, 3-1  
    presentation elements, 4-1  
    security elements, 5-8  
Oracle BI Server Web services, using, 1-9  
Oracle BI Server XML API  
    about, 6-1  
    about object identifiers, 6-15  
    applying patches to online repositories, 6-6  
    command-line tools, 6-2  
    maintaining RPD versions with, 6-6  
    programmatically updating repositories, 6-7  
    using to append objects, 6-2  
    using to migrate metadata, 6-6  
    using to migrate to production  
        environments, 6-10  
    using XSL with, 6-12  
Oracle BI Server XML API elements  
    generic elements and attributes, 1-4, 6-14  
    logical elements, 7-1  
    marketing elements, 10-1  
    other elements, 10-25  
    physical elements, 8-1  
    presentation elements, 9-1  
    security elements, 10-10

Oracle Business Intelligence  
    logging, 1-9  
    starting and stopping, 1-9  
Oracle WebLogic Server, managing, 1-9  
other elements, for Oracle BI Server MDS XML  
    API, 5-24  
other elements, for Oracle BI Server XML API, 10-25  
override aggregation rule element  
    in MDS XML schema, 2-20  
    in XML schema, 7-19

## P

---

patches, applying to online repositories using Oracle  
    BI Server XML API, 6-6  
physical catalog element  
    in MDS XML schema, 3-4  
    in XML schema, 8-4  
physical column element  
    in MDS XML schema, 3-10  
    in XML schema, 8-9  
physical dimension element  
    in MDS XML schema, 3-24  
    in XML schema, 8-22  
physical display folder element  
    in MDS XML schema, 3-5  
    in XML schema, 8-5  
physical elements, for Oracle BI Server MDS XML  
    API, 3-1  
physical elements, for Oracle BI Server XML  
    API, 8-1  
physical foreign key element  
    in MDS XML schema, 3-18  
    in XML schema, 8-17  
physical hierarchy element  
    in MDS XML schema, 3-26  
    in XML schema, 8-23  
physical key element  
    in MDS XML schema, 3-17  
    in XML schema, 8-16  
physical level element  
    in MDS XML schema, 3-28  
    in XML schema, 8-26  
physical schema element  
    in MDS XML schema, 3-4  
    in XML schema, 8-4  
physical table element  
    in MDS XML schema, 3-6  
    in XML schema, 8-5  
platforms, supported, 1-9  
presentation catalog element  
    in MDS XML schema, 4-1  
    in XML schema, 9-1  
presentation column element  
    in MDS XML schema, 4-5  
    in XML schema, 9-5  
presentation elements, for Oracle BI Server MDS XML  
    API, 4-1  
presentation elements, for Oracle BI Server XML  
    API, 9-1

- presentation hierarchy element
  - in MDS XML schema, 4-6
  - in XML schema, 9-6
- presentation level element
  - in MDS XML schema, 4-7
  - in XML schema, 9-8
- presentation table element
  - in MDS XML schema, 4-3
  - in XML schema, 9-3
- privilege package element
  - in MDS XML schema, 5-15
  - in XML schema, 10-17
- processes, starting and stopping, 1-9
- production environments, moving to, 1-9
- project element
  - in MDS XML schema, 5-24
  - in XML schema, 10-25

## Q

---

- qualified list item element
  - in MDS XML schema, 5-4
  - in XML schema, 10-6
- qualifiedName, about, 6-15
- qualifying key element
  - in MDS XML schema, 5-6
  - in XML schema, 10-8
- query object element
  - in MDS XML schema, 5-28
  - in XML schema, 10-28
- query privilege element
  - in MDS XML schema, 5-20
  - in XML schema, 10-20

## S

---

- sampling table element
  - in MDS XML schema, 5-6
  - in XML schema, 10-8
- schema document, for Oracle BI Server XML API, 6-1
- security
  - managing, 1-9
- security elements, for Oracle BI Server MDS XML API, 5-8
- security elements, for Oracle BI Server XML API, 10-10
- seg catalog element
  - in MDS XML schema, 5-7
  - in XML schema, 10-9
- software requirements, 1-9
- source control management, using for repository development, 1-9
- starting Oracle Business Intelligence processes, 1-9
- stopping Oracle Business Intelligence processes, 1-9
- system requirements, 1-9

## T

---

- target level element
  - in MDS XML schema, 5-2

- in XML schema, 10-2
- test to production, 1-9
- third-party products, supported, 1-9

## U

---

- uid, about, 6-15
- user element
  - in MDS XML schema, 5-21
  - in XML schema, 10-22
- users, managing, 1-9

## V

---

- variable element
  - in MDS XML schema, 5-8
  - in XML schema, 10-10

## W

---

- Web services, for Oracle BI Server, 1-9

## X

---

- XML API
  - See* Oracle BI Server XML API
- XML schema
  - aggregation rule element, 7-18
  - business model element, 7-3
  - catalog link element, 10-1
  - column mapping element, 7-16
  - common elements and attributes, 1-4, 6-14
  - complex join element, 8-18
  - connection pool element, 8-11
  - cube column element, 8-26
  - cube table element, 8-19
  - custom authenticator element, 10-16
  - database element, 8-1
  - DB sign-on element, 10-24
  - dimension element, 7-6
  - group element, 10-23
  - init block element, 10-13
  - LDAP server element, 10-11
  - list catalog element, 10-5
  - logical column element, 7-1
  - logical complex join element, 7-4
  - logical display folder element, 7-20
  - logical foreign key element, 7-9
  - logical key element, 7-11
  - logical level element, 7-5
  - logical source folder element, 7-17
  - logical table element, 7-8
  - logical table source element, 7-12
  - measure definition element, 7-17
  - object privilege element, 10-19
  - override aggregation rule element, 7-19
  - physical catalog element, 8-4
  - physical column element, 8-9
  - physical dimension element, 8-22
  - physical display folder element, 8-5
  - physical foreign key element, 8-17

- physical hierarchy element, 8-23
- physical key element, 8-16
- physical level element, 8-26
- physical schema element, 8-4
- physical table element, 8-5
- presentation catalog element, 9-1
- presentation column element, 9-5
- presentation hierarchy element, 9-6
- presentation level element, 9-8
- presentation table element, 9-3
- privilege package element, 10-17
- project element, 10-25
- qualified list item element, 10-6
- qualifying key element, 10-8
- query object element, 10-28
- query privilege element, 10-20
- sampling table element, 10-8
- seg catalog element, 10-9
- target level element, 10-2
- user element, 10-22
- variable element, 10-10

XML, generating and executing with Oracle BI Server

- XML API, 6-2

XSL, using with Oracle BI Server XML API, 6-12

xudml\_mds\_admin.xsd file, 1-1

xudml\_mds\_core.xsd file, 1-1

xudml1.xsd file, 6-1

