Oracle® Utilities Data Model

Installation Guide

Release 11.4.1

E48729-02

September 2013

ORACLE®

Oracle Utilities Data Model Installation Guide, Release 11.4.1

E48729-02

Primary Authors: Reema Khosla, Thomas Van Raalte

Contents

Preface

The *Oracle Utilities Data Model Installation Guide* describes how to install and configure Oracle Utilities Data Model.

Audience

This guide is intended for anyone responsible for installing Oracle Utilities Data Model on a supported operating system platform.

Installation of Oracle Utilities Data Model requires basic knowledge of Oracle Database, Oracle OLAP, Oracle Data Mining, and Oracle Business Intelligence Suite Enterprise Edition.

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.

Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Related Documents

For more information about Oracle Utilities Data Model, see the following documents in the Oracle Utilities Data Model documentation set:

- *Oracle Utilities Data Model Implementation and Operations Guide*
- *Oracle Utilities Data Model Reference*
- *Oracle Utilities Data Model Release Notes*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.

Convention	Meaning
italic	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.

1

Hardware and Software Requirements

This chapter describes the hardware and software requirements of Oracle Utilities Data Model:

- Supported Platforms
- Hardware Requirements
- Software Requirements

Before you install Oracle Utilities Data Model, you must verify that all hardware and software requirements are met.

1.1 Supported Platforms

Oracle Utilities Data Model is supported on the following platforms. For each platform, the given operating system version or later versions are required:

- Linux *x*86-64
  - Asianux Server 3 SP2 and higher
  - Oracle Linux 5 Update 2 and higher
  - Oracle Linux 5 Update 5 (with the Oracle Unbreakable Enterprise Kernel for Linux)
  - Red Hat Enterprise Linux 5 Update 2
  - Red Hat Enterprise Linux 5 Update 5 (with the Oracle Unbreakable Enterprise Kernel for Linux)
  - Red Hat Enterprise Linux 6
  - SUSE Linux Enterprise Server 10 SP2
  - SUSE Linux Enterprise Server 11
- Oracle Solaris on SPARC (64-bit)
  - Oracle Solaris 10 U6 (5.10-2008.10)
  - Oracle Solaris 11 11/11 SPARC

1.2 Hardware Requirements

The Oracle Database installation guide for your platform includes procedures for checking that your installation meets the hardware and operating system requirements for Oracle Database.

Additionally, for a complete installation of Oracle Utilities Data Model, the minimum hardware requirement is disk space of at least 10 GB.

The minimum hardware requirement for Oracle Utilities Data Model Sample Reports installation is disk space of at least 25 GB.

1.3 Software Requirements

The minimum software requirements for Oracle Utilities Data Model are as follows:

- Operating System: For details of supported platforms, see "Supported Platforms" on page 1-1.
- Oracle Database 11*g* Release 2 Enterprise Edition (11.2.0.3 or later), including the options specified in "Oracle Database Requirements" on page 1-2.
- Oracle Business Intelligence Suite Enterprise Edition 11*g* (11.1.1.7 or later). See "Oracle Business Intelligence Suite Enterprise Edition" on page 1-2 (this is optional for installing Oracle Utilities Data Model and the Reports, but is required to view and use the reports).

Note: The recommended patches and software versions are accurate as of product release. For the latest recommendations for database supported platforms, see `https://support.oracle.com/`.

1.3.1 Oracle Database Requirements

Oracle Utilities Data Model requires Oracle Database 11*g* Release 2 Enterprise Edition (11.2.0.3 or later).

Installation of the Oracle Utilities Data Model component requires the following database options:

- Oracle Partitioning
- Oracle Online Analytical Processing (OLAP)
- Oracle Data Mining

Tip: To confirm that you have Oracle Data Mining and OLAP options installed, follow the instructions outlined in "Confirming that Oracle Data Mining and OLAP Options are Installed" on page 3-2.

Note: When you install Oracle Database, ensure that the database character set is Unicode (AL32UTF8) to support multilanguage installations. Oracle Utilities Data Model supports installation in one language, English.

After you download and install the database, upgrade to the latest patch. Patches are available from My Oracle Support at the following location:

`https://support.oracle.com`

1.3.2 Oracle Business Intelligence Suite Enterprise Edition

You must install Oracle Business Intelligence Suite Enterprise Edition to view and to use the Oracle Utilities Data Model reports. (Oracle Business Intelligence Suite

Enterprise Edition is not required for the installation of the Oracle Utilities Data Model component and the installation of Oracle Utilities Data Model Reports is valid without Oracle Business Intelligence Suite Enterprise Edition installed).

Oracle Business Intelligence Suite Enterprise Edition 11.1.1.7 can be downloaded from the "Oracle Business Intelligence 11*g* downloads" link on Oracle Technology Network at:

http://www.oracle.com/technetwork/middleware/bi-enterprise-edition/downloads/index.html

Installation instructions are included in the documentation.

2

Introduction to Oracle Utilities Data Model Installation

This chapter describes how to install Oracle Utilities Data Model and other components you use to create an Oracle Utilities Data Model data warehouse:

- Types of Installations Provided for Oracle Utilities Data Model
- Overview of the Installation Process

2.1 Types of Installations Provided for Oracle Utilities Data Model

Using the Oracle Universal Installer, you can perform two types of Oracle Utilities Data Model installation:

- Installation of the Oracle Utilities Data Model component, itself. You *must* install this component to create an Oracle Utilities Data Model data warehouse.
- Installation of reports (and schemas) that you can use for ideas about how to design your own reports. Installing the reports is optional.

Different items are installed depending on whether you install the database objects, or the reports and schemas.

Utilities Data Model Installation

When you perform a **Utilities Data Model** installation of Oracle Utilities Data Model, the Oracle Universal Installer installs the Oracle Utilities Data Model component without data. Specifically, the installer creates the following schema in the target database:

- `oudm_sys` which is the main schema for Oracle Utilities Data Model. This schema contains all the relational and OLAP components of Oracle Utilities Data Model, including the Oracle Utilities Data Model data mining results tables. This schema also contains all the mining components of Oracle Utilities Data Model.

  See: For detailed information about all created objects in the OUDM_SYS schema, see the *Oracle Utilities Data Model Reference*.

There is no data in this schema. You must populate data into the schema.

Sample Reports Installation

When you perform a **Sample Reports** installation of the Oracle Utilities Data Model, the installer creates the Oracle Utilities Data Model sample schema in the target database. Specifically, the installer installs:

- The following files that provide the data for the reports:
  - `oudm_sample.dmp.zip` which is a dump file of the schemas that contain the sample data for the relational and data mining components of Oracle Utilities Data Model.

    Tip: The default user name for the schema is `oudm_sample`.

  - `oudm_sample.eif` which is a dump file containing sample data for the Oracle Utilities Data Model analytic workspace (that is, the OLAP cubes).
- The following files that define and create the sample reports:
  - `oudm.rpd`
  - `oudmwebcat.zip`

Oracle Utilities Data Model Home Directory Structure

The installation image contains the following directories under *ORACLE_HOME*/`oudm`:

- `report`: which contains the sample report files required for Oracle Utilities Data Model installation.
- `pdm`: which contains the physical schema dump, creation scripts, and lookup value population in subdirectories:

Subdirectory	Description
`relational`	Relational schema installation scripts and relational related files
`relational/calendar`	Calendar data population package
`relational/ddl`	Relational schema installation scripts
`relational/intra_etl`	Intra-ETL files
`relational/lookup_value`	Lookup data population script
`relational/sample_schema`	Physical sample schema
`mining`	Data mining scripts and related files
`olap`	OLAP scripts and related files

2.2 Overview of the Installation Process

Installation of Oracle Utilities Data Model requires the following tasks:

1. Read *Oracle Utilities Data Model Release Notes* to identify any last minute changes.
2. Verify that your system is one of the supported platforms and that it satisfies the hardware and software requirements as described in Chapter 1, "Hardware and Software Requirements."
3. Identify and perform any necessary preinstallation tasks, as described in "Preinstallation Tasks" on page 3-1.
4. Install the Oracle Utilities Data Model component or the Oracle Utilities Data Model reports as described in "Installer Execution" on page 3-5.

   Tip: You can also perform a silent installation, see "Silent Installation" on page 3-8 for more information.

5. Identify and perform any necessary postinstallation tasks, as described in "Postinstallation Tasks" on page 3-10.
6. Install the additional components that you need to create an Oracle Utilities Data Model data warehouse or run the reports, as described in Chapter 4, "Installation of Additional Components."

Note 1: To deinstall Oracle Utilities Data Model, you do *not* simply run the Oracle Universal Installer in deinstall mode. To deinstall Oracle Utilities Data Model, follow the directions in Chapter 5, "Backup, Recovery, and Deinstallation of Oracle Utilities Data Model."

Note 2: You *must* deinstall Oracle Utilities Data Model before you reinstall it over an existing version of Oracle Utilities Data Model.

3

Installation of Oracle Utilities Data Model

This chapter describes how to install Oracle Utilities Data Model:

- Preinstallation Tasks
- Installer Execution
- Silent Installation
- Postinstallation Tasks

3.1 Preinstallation Tasks

Before you install the Oracle Utilities Data Model, perform the following tasks:

- Back up the Oracle Database.
- Ensure that the software required for Oracle Utilities Data Model is installed, as described in "Ensuring Required Software is Installed" on page 3-1.
- Set the maximum processes initialization parameter, as described in "Changing the Default Value for the Maximum Processes Initialization Parameter" on page 3-2.
- Increase the maximum number of data files, as described in "Changing the Maximum Data Files Option" on page 3-3.
- If you are using Oracle Database Vault, disable the option, as described in"Disabling Oracle Database Vault" on page 3-3.
- Ensure that the `tnsnames.ora` file includes a value for `SERVICE_NAME`, as described in "Ensuring a Value is Set for the Service Name" on page 3-4.
- Ensure that the `tnsnames.ora` file entry matches the SID, as described in "Oracle System Identifier (SID) and Service Name Parameter" on page 3-5.

3.1.1 Ensuring Required Software is Installed

As discussed in "Software Requirements" on page 1-2, you must have certain software installed before you can successfully install the Oracle Utilities Data Model component or the Oracle Utilities Data Model sample data and reports.

Take the following steps to ensure that for each type of installation, the required software is installed:

- Before you install Oracle Utilities Data Model:
  - Confirm that the required database options are installed by following the steps outlined in "Confirming that Oracle Data Mining and OLAP Options are Installed" on page 3-2.

- Before you install the sample data and reports for Oracle Utilities Data Model, confirm that Oracle Business Intelligence Suite Enterprise Edition is installed as described in "Confirming that Oracle Business Intelligence Suite Enterprise Edition is Installed" on page 3-2.

3.1.1.1 Confirming that Oracle Data Mining and OLAP Options are Installed

To check that the Oracle Data Mining and OLAP options are installed, log in as `SYS` and enter the following SQL queries:

```
SELECT VALUE FROM V$OPTION WHERE PARAMETER ='Data Mining';
SELECT VALUE FROM V$OPTION WHERE PARAMETER ='OLAP';
```

If these queries return `TRUE`, the options are installed.

3.1.1.2 Confirming that Oracle Business Intelligence Suite Enterprise Edition is Installed

To test that Oracle Business Intelligence Suite Enterprise Edition is installed, open the following link in a browser.

```
http://hostname:7001/analytics
```

The sample Oracle Business Intelligence Suite Enterprise Edition login window is displayed.

If Oracle Business Intelligence Suite Enterprise Edition is not installed, see "Oracle Business Intelligence Suite Enterprise Edition" on page 1-2.

Note: The `7001` value in the link is the value of the default Oracle Business Intelligence Suite Enterprise Edition port; if you specified a different port when you installed Oracle Business Intelligence Suite Enterprise Edition, use the value for that port.

3.1.2 Changing the Default Value for the Maximum Processes Initialization Parameter

Oracle Utilities Data Model requires that the initial value for the PROCESSES initialization parameter be set to a value greater than the default database installation value.

How to determine the current value for the PROCESSES parameter

To determine the current value for the maximum processes parameter, log in to the Oracle Database as DBA, and then execute the following SQL statement:

```
show parameter processes;
```

How to change the value for the maximum processes

To change the value for the maximum processes, issue the following statements. Depending on your database options, the value specified for processes should be set to a minimum value greater than or equal to 250.

```
alter system set processes=250 scope=spfile;
shutdown immediate
startup
```

3.1.3 Changing the Maximum Data Files Option

Oracle Utilities Data Model supports the partition of transaction-related fact tables according to your data volume estimation. You can specify the start year, end year and then the transaction related fact tables are partitioned by the date as one partition for each month.

In order to support the partition of transaction-related fact tables, you might need a different value for the maximum number of data files that is presently specified for the database.

How to determine the value for maximum number of data files

Use the following formula to determine the value that you need for the maximum number of data files:

```
Maximum Datafiles = Default Value + 300 + ((End year) - (Start year) + 1) * 12
```

How to determine the current value for the maximum number of data files

To determine the current value for the maximum number of data files, log in to the Oracle Database as DBA, and then execute the following SQL statement.

```
show parameter db_files
```

In the results for this statement, the `value` column shows the current maximum number of data files.

How to change the value for the maximum number of data files

To change the value for the maximum number of data files, issue the following statements where *new_number* is the new value that you want to specify.

```
alter system set db_files = new_number scope = spfile;
shutdown immediate
startup
```

3.1.4 Disabling Oracle Database Vault

The Oracle Utilities Data Model installer requires additional steps on a Vault-enabled database. For an Oracle Database with the Oracle Database Vault enabled, take the following steps to disable Oracle Database Vault before you install Oracle Utilities Data Model.

To find out if the Oracle Database is Vault-enabled, do the following:

```
SELECT * FROM V$OPTION WHERE PARAMETER = 'Oracle Database Vault';
```

If this command returns true, then the Oracle Database Vault is enabled.

To disable the Oracle Database Vault, do the following:

1. On UNIX systems, ensure that the environment variables, `ORACLE_HOME`, `ORACLE_SID`, and `PATH` are correctly set.
2. Log in to SQL*Plus as user `SYS` with the `SYSOPER` privilege.
3. Shut down the database.
4. From the command line, stop the Database Control console process and the listener. For example:

   ```
   sqlplus sys as sysoper
   Enter password: password
   ```

```
SQL> SHUTDOWN IMMEDIATE
SQL> EXIT
$ emctl stop dbconsole
$ lsnrctl stop listener_name
```

For Oracle RAC installations, shut down each database instance as follows:

```
$ srvctl stop database -d db_name
```

5. Disable Oracle Database Vault with the following commands (this is a UNIX system example):

```
cd $ORACLE_HOME/rdbms/lib
make -f ins_rdbms.mk dv_off
cd $ORACLE_HOME/bin
relink all
```

For Oracle RAC installations, run these commands on all nodes.

6. Startup the Oracle Database, Database Control console process, and listener. For example, on UNIX systems, log in to SQL*Plus as user `SYS` with the `SYSOPER` privilege and restart the database. Then from the command line, restart the Database Control console process and listener. For example:

```
sqlplus sys as sysoper
Enter password: password
SQL> STARTUP
SQL> EXIT
$ emctl start dbconsole
$ lsnrctl start listener_name
```

For Oracle RAC installations, restart each database instance as follows:

```
$ srvctl start database -d db_name
```

After you have installed Oracle Utilities Data Model, you reenable Oracle Database Vault, as described in "Reenabling Oracle Database Vault" on page 3-11.

For more information, see *Oracle Database Vault Administrator's Guide*.

3.1.5 Ensuring a Value is Set for the Service Name

Ensure that in `tnsnames.ora` file, the service name is provided. To do this, perform the following steps:

1. Go to the directory: `$ORACLE_HOME/network/admin`.
2. Edit `tnsnames.ora` to make sure the `SERVICE_NAME` value is provided. For example:

```
orcl11g =
(DESCRIPTION =
(ADDRESS = (PROTOCOL = TCP)(HOST = server1.us.oracle.com)(PORT = 1521))
(CONNECT_DATA =
(SERVER = DEDICATED)
(SERVICE_NAME = orcl)
)
)
```

3.1.6 Oracle System Identifier (SID) and Service Name Parameter

During installation, in the **Specify Database Connection Information** page provide a Net Service Name. The following rules for `tnsnames.ora` are mandatory for the **Utilities Data Model** option installation:

Non Oracle RAC Environment

For an environment other than Oracle RAC, the installer sets the Oracle System Identifier (SID) to the value of the lowercase tnsnames entry chosen by the user (as the **Net Service Name**). Thus, the tnsnames entry must accurately reflect the Net Service Name supplied as a parameter during installation.

For example, if the SID is `orcl11203`, you cannot set the tnsnames entry to OUDM_Test. If SID is `orcl11203`, then tnsnames entry must be set to `orcl11203`.

Oracle RAC Environment

For an Oracle RAC environment, the SID is set to lowercase tnsnames entry chosen by the user (as the **Net Service Name**). Thus, the tnsnames entry should accurately reflect the SID for the system on which the product is installed in an Oracle RAC environment.

Modify the `tnsnames.ora` entry name to match the SID of the database node for the system. After the installation, revert the tnsnames entry to the previous entry.

Follow the same procedure during deinstallation. When reinstalling or installing the Utilities Data Model option at a later stage, modify the tnsnames entry name.

For example, if the SID is `orcl2`, you cannot set the tnsnames entry to `localhost_orcl`. In this case, if the SID is `orcl2`, then the tnsnames entry must be set to `orcl2`.

3.2 Installer Execution

Before you install Oracle Utilities Data Model, perform the necessary preinstallation tasks described in "Preinstallation Tasks" on page 3-1.

> **Note:** You must install Oracle Utilities Data Model on the localhost where the database server is located. You can determine the value of your localhost by issuing the following command where *db_name* is the name of your Oracle database.
>
> `tnsname db_name`

Follow these steps to install Oracle Utilities Data Model:

1. Log in using the user ID that you plan to use to run the installation. You should use the same user ID to install Oracle Utilities Data Model as used to install the Oracle Database and Oracle Business Intelligence Suite Enterprise Edition.
2. Set the `ORACLE_HOME` environment variable to the location of the database where you want to install Oracle Utilities Data Model.

   For example, suppose Oracle home is in the directory `/loc/app/oracle/product/dbhome`

   In a Bourne, Bash, or Korn shell, use these commands to set `ORACLE_HOME`:

   ```
   $ ORACLE_HOME=/loc/app/oracle/product/dbhome
   $ export ORACLE_HOME
   ```

In a C shell, use this command to set ORACLE_HOME:

```
% setenv ORACLE_HOME /loc/app/oracle/product/dbhome
```

3. Start the installer from the directory that contains the Oracle Utilities Data Model installation files:

```
cd directory-containing-OUDM_installation-files
./runInstaller
```

4. The **Welcome** page is displayed. Click **Next**.

5. In the **Select Installation Type** page, select the type of Oracle Utilities Data Model installation that you want to perform:

   - If you want to install the Oracle Utilities Data Model component, select **Utilities Data Model**. Making this selection performs the installation as described in "Utilities Data Model Installation" on page 2-1.
   - If you want to install the Oracle Utilities Data Model reports and sample data, select **Sample Reports**. Making this selection performs the installation as described in "Sample Reports Installation" on page 2-1.

   Oracle Utilities Data Model supports English. The option provided to add support for one language in addition to English is not used at the time of this release.

   Click **Next**.

6. In the **Specify Home Details** page, verify that the **Name** and **Path** correspond to the database in which you want to install Oracle Utilities Data Model. You can click **Browse** to navigate to any valid local data file path.

   Click **Next**.

7. In the **Product-Specific Prerequisite Checks** page, if one or more items are flagged, manually verify that your environment meets the minimum requirements. For details about performing this manual verification, click the flagged item and review the details in the box at the bottom of the page.

   When the status of all items are checked as **Succeeded**, click **Next**.

8. In the **Specify Database Connection Information** page, provide the following information:

   - Select the **Net Service Name** which is the alias used for a connect descriptor to connect to the Oracle Database where Oracle Utilities Data Model will be installed.

     Tip: A net service name is a simple name for a service that resolves to a connect descriptor. Net service names are populated from the *OracleHome*/network/admin/tnsnames.ora file.

   - Enter the **Password for SYSTEM user** of the Oracle Database where Oracle Utilities Data Model will be installed.

   Click **Next**.

9. The **Specify OUDM Schema Information** page is displayed when you select to install the component, **Utilities Data Model**. In this dialog specify where all the data files that correspond to the Oracle Utilities Data Model tablespace should reside:

   - If you do *not* want to use the Automatic Storage Management (ASM) feature in Oracle Database, but instead want to explicitly specify a folder name, select

File System and enter a folder name. You can click **Browse** to navigate to any valid local data file path.

Click **Next**.

- If you have stored your Oracle database files using the Automatic Storage Management (ASM) feature, and you also want store Oracle Utilities Data Model data files using ASM, select **Automatic Storage Management (ASM)**.

  Click **Next**.

  In the **Select ASM Disk Group** page, select the disk group in which you want to install the Oracle Utilities Data Model data files.

  Click **Next**.

10. The **Specify OUDM Sample Schema Information** page displays when you select to install the **Sample Reports**. In this dialog you specify where all the data files that correspond to the Oracle Utilities Data Model sample schemas should reside:

    - If you do *not* want to use the Automatic Storage Management (ASM) feature in Oracle Database, but instead want to explicitly specify a folder name, select **File System** and enter a folder name. You can click **Browse** to navigate to any valid local data file path.

      Click **Next**.

    - If you have stored your Oracle database files using the Automatic Storage Management (ASM) feature, and you also want store Oracle Utilities Data Model data files using ASM, select **Automatic Storage Management (ASM)**.

      Click **Next**.

      In the **Select ASM Disk Group** page, select the disk group in which you want to install the Oracle Utilities Data Model data files.

      Click **Next**. When you install the sample reports, the next page shows the installer Summary that summarizes the information that you specified, as shown in step 13.

11. In the **Specify Calendar Date Range** page, specify the calendar date range by providing values for **Start Date** and **Number of Years**. The installer uses this information to populate the calendar data. A recommended **Number of Years** value is 15 years. Specifying larger **Number of Years** values proportionally increases the time it takes to implement the partitioning portion of Oracle Utilities Data Model install activity. The start year specified with **Start Date** should be the lowest possible dates from your historical data load (lowest possible CDR date typically). There is no easy method to incrementally extend the time dimension, so your initial choice for **Number of Years** should be specified to meet your needs for a reasonably long time.

    Start Date must be in the format `YYYY-MM-DD`; for example, 2011-01-01 stands for January 1, 2011. **Number of Years** must be a whole number.

    Note: These calendar dates have nothing to do with the number of years you will effectively keep the data. The calendar as such is totally independent of the Information Lifecycle Management process you may use.

    Click **Next**.

12. In the **Specify Partitions for reference and base tables** page, specify the number of Second Level hash partitions for each entity, Organization, Customer, Party, Account, Agreement, MeterReading, InitialReading, FinalReading, ServiceQuantity, and Interval Partition Start Date. Specify a value for each field. If you enter an invalid value, then the installer shows a dialog displaying the valid values. For each value you specify, you should choose a value that is a power of 2 (for example: 4, 8, 16, 32, 64 and so on). Enter a date for the Interval Partition Start Date in the specified format (`YYYY-MM-DD`).

    Click **Next**.

13. The installer summarizes the information that you specified. Check that this information is correct. If necessary, click **Back** to return to previous screens and make corrections. When you are satisfied with the information, click **Install**.

14. The Oracle Utilities Data Model component or sample reports are installed. If there are any problems, messages are displayed. After the installation finishes, the end of installation screen appears. Click **Exit** to exit the installer.

After you exit the installer, perform any necessary postinstallation tasks described in "Postinstallation Tasks" on page 3-10. Then install the other components that you need to create an Oracle Utilities Data Model warehouse, as described in Chapter 4, "Installation of Additional Components."

3.3 Silent Installation

A silent installation has no graphical output and no input by the user. It is accomplished by supplying Oracle Universal Installer with a response file and specifying the `-silent` flag on the command line. Use silent installation when you want the same installation parameter on more than one computer.

3.3.1 Selecting a Response File

Before performing a silent installation you must provide information specific to your installation in a response file. The installer fails if you attempt a to perform a silent installation using a response file that is not configured correctly. Response files are text files that you can create or edit in a text editor. The response file `udm.rsp` is located in the `/response` directory (located in the directory that contains the Oracle Utilities Data Model installation files). Edit the response file according to your requirements for silent installation. To use a response file, first copy it to your system.

Note: You must install Oracle Utilities Data Model on the localhost where the database server is located. You can determine the value of your localhost by issuing the following command where *db_name* is the name of your Oracle database.

```
tnsname db_name
```

3.3.2 Editing the Response File

Use any text editor to edit the response file to include information specific to your system. You must specify values for variables in your response file. Each variable listed in the response file is associated with a comment, which identifies the variable type. For example:

```
string = "Sample Value"
Boolean = True or False
```

```
Number = 1000
StringList = {"StringValue 1", "String Value 2"}
```

The values that are given as <*Value* Required> must be specified for silent installation. Remove the comment from the variable values in the response file before starting the Oracle Utilities Data Model installation.

3.3.3 Specifying a Response File and Starting the Installation

Before you specify a response file, ensure that all values in the response file are correct. To make Oracle Universal Installer use the response file at installation time, specify the location of the response file as a parameter when starting Oracle Universal Installer. To perform a silent installation, use the `-silent` parameter as follows:

```
./runInstaller -silent -responseFile absolute_path_and_filename
```

Caution: During installation, response files may be copied to subdirectories in the Oracle home. If you have provided passwords or other sensitive information in your response files, then for security purposes you should delete them after completing and verifying the installation.

3.3.4 Silent Installation Log Files

The success or failure of silent installations is logged in the `installActions.log` file. Additionally, the silent installation creates the `silentInstall.log` file. The log files are created in the `/oraInventory/logs` directory. The `silentInstall`*`Date_Time`*`.log` file contains the following line if the installation was successful:

```
The installation of Oracle Utilities Data Model was successful.
```

The corresponding `installActions`*`Date_Time`*`.log` file contains specific information regarding installation.

3.3.5 Security Tips for Silent Installations

The response file contains the installation password in clear text. To minimize security issues, follow these guidelines:

- Set the permissions on the response files so that they are readable only by the operating system user performing the silent installation.
- If possible, remove the response files from the system after the silent installation is completed.

3.3.6 Error Handling

Values for variables that are of the wrong context, format, or type are treated as if no value were specified. Variables that are outside any section are ignored. If you attempt a silent installation with an incorrect or incomplete response file, or if Oracle Universal Installer encounters an error, such as insufficient disk space, then the installation will fail.

3.4 Postinstallation Tasks

After you install Oracle Utilities Data Model, perform following steps as appropriate for your particular installation:

1. Obtain the IP Patch. The IP Patch includes additional documentation. To obtain the IP Patch and for the latest information about Oracle Utilities Data Model patch sets, go to My Oracle Support at `https://support.oracle.com`.
2. Unlock the `OUDM_SYS` account, as described in "Unlocking the OUDM_SYS Account" on page 3-10.
3. If you installed the Oracle Utilities Data Model sample reports, then perform the following steps:
   a. Unlock the `OUDM_SAMPLE` account, as described in "Unlocking the OUDM_SAMPLE Account" on page 3-10.
   b. If you do not want users to make changes to the schemas, grant only select privileges to those users as described in "Limiting User Privileges When You have Installed the Sample Reports" on page 3-11
   c. Install the RPD and Web Catalog, as described in "Installing RPD and Web Catalog for Oracle Business Intelligence Suite Enterprise Edition" on page 3-13.
4. Configure the OLAP working environment, as described in "Configuring the Working OLAP Environment" on page 3-11.
5. If you want to enable Oracle Database Vault and you disabled it before installation, then reenable Oracle Database Vault, as described in "Reenabling Oracle Database Vault" on page 3-11.
6. Ensure that the Oracle Utilities Data Model objects are valid, as described in "Ensuring Oracle Utilities Data Model Objects are Valid" on page 3-12.
7. If necessary, change the values specified for `PGA_AGGREGATE_TARGET` and `WORKAREA_SIZE_POLICY`, as described in"Ensuring PGA_AGGREGATE_TARGET is Set to the Proper Value" on page 3-12.

After performing these tasks, install other components that are required for your particular Oracle Utilities Data Model warehouse, as described in Chapter 4, "Installation of Additional Components."

3.4.1 Unlocking the OUDM_SYS Account

After running the installer the `OUDM_SYS` account is locked. To unlock this account:

1. Log in to the database as DBA.
2. Unlock the account by issuing the following SQL statement.

```
alter user oudm_sys account unlock;
```

3.4.2 Unlocking the OUDM_SAMPLE Account

After installing the Oracle Utilities Data Model sample reports, the `OUDM_SAMPLE` account is locked. To unlock this account:

1. Log in to the database as DBA.
2. Unlock the account by issuing the following SQL statement.

```
alter user oudm_sample account unlock identified by password;
```

3.4.3 Limiting User Privileges When You have Installed the Sample Reports

By default, when you perform a Sample Reports type of Oracle Utilities Data Model installation, the sample reports connect to OUDM_SYS schema directly. For security reasons, you may want to grant only select privileges to users who will be working with these reports. To grant only select privileges, perform the following steps:

1. Create a dedicated reporting user (for example, OUDM_Report).
2. Grant select privilege for all Oracle Utilities Data Model tables required for reporting to the user you created in Step 1. The easy way is to grant the select privilege for all Oracle Utilities Data Model tables, which start with one of the following prefixes: DWA, DWB, DWD, DWR, DWL.
3. Create a view (or synonym) in OUDM_REPORT schema, pointing to the OUDM_SYS tables.
4. In the Oracle Business Intelligence Suite Enterprise Edition repository, change the connection information to point to the new schema.

3.4.4 Configuring the Working OLAP Environment

To set up a working OLAP environment for an Oracle Utilities Data Model warehouse, configure the database with the following parameter and configuration settings:

- Set sga_target to 35% of available memory.
- Set pga_aggregate_target to 35% of available memory
- Set olap_page_pool_size=0. (This specifies dynamic page pool.)
- Set _olap_page_pool_hi=30 (that is, lower than default of 50).
- Set _olap_parallel_update_threshold and _olap_parallel_update_small_threshold to a high value (for example, ~2Gb.. 2147483647). These settings turn off parallel update for the analytic workspace.
- Set memory_max_target to value greater than SGA and PGA settings. This is the maximum amount of memory used for both SGA and PGA. The SGA and PGA settings specified are the minimum settings. (Note that failure to set memory_max_target leads to failure of instance startup (the next time these settings are validated which occurs if spfile had an older and distinct setting for memory_max_target).

The following statements illustrate changing these settings.

```
alter system set sga_target=1365M scope=spfile;
alter system set pga_aggregate_target=1365M scope=spfile;
alter system set memory_max_target=3030M scope=spfile;
alter system set olap_page_pool_size=0 scope=spfile;
alter system set "_olap_parallel_update_small_threshold"=2147483647 scope=spfile;
alter system set "_olap_page_pool_hi"=30 scope=spfile;
alter system set job_queue_processes=5 scope=spfile;
shutdown immediate;
startup;
```

3.4.5 Reenabling Oracle Database Vault

If you are using the Oracle Database Vault and disabled it before installation as described in "Disabling Oracle Database Vault" on page 3-3, reenable Oracle Database Vault by performing the following steps:

1. Shutdown the database, Database Control console process, and listener. For example on UNIX systems, ensure that the environment variables, ORACLE_HOME, ORACLE_SID, and PATH are correctly set. Log in to SQL*Plus as user SYS with the SYSOPER privilege and shut down the database. Then from the command line, stop the Database Control console process and listener. For example:

   ```
   sqlplus sys as sysoper
   Enter password: password
   SQL> SHUTDOWN IMMEDIATE
   SQL> EXIT
   $ emctl stop dbconsole
   $ lsnrctl stop listener_name
   ```

   For Oracle RAC installations, shut down each database instance as follows:

   ```
   $ srvctl stop database -d db_name
   ```

2. Enable Oracle Database Vault.

   ```
   cd $ORACLE_HOME/rdbms/lib
   make -f ins_rdbms.mk dv_on
   make -f ins_rdbms.mk ioracle
   ```

3. Startup the Oracle Database, Database Control console process, and listener. For example, on UNIX systems, log in to SQL*Plus as user SYS with the SYSOPER privilege and restart the database. Then from the command line, restart the Database Control console process and listener. For example:

   ```
   sqlplus sys as sysoper
   Enter password: password
   SQL> STARTUP
   SQL> EXIT
   $ emctl start dbconsole
   $ lsnrctl start listener_name
   ```

   For Oracle RAC installations, restart each database instance as follows:

   ```
   $ srvctl start database -d db_name
   ```

4. For Oracle RAC installations, repeat these steps for each node on which the database is installed.

For more information, see *Oracle Database Vault Administrator's Guide*.

3.4.6 Ensuring Oracle Utilities Data Model Objects are Valid

To ensure that all Oracle Utilities Data Model objects are valid, log in to the database as DBA and recompile all objects in oudm_sys by issuing the following SQL statements:

```
exec utl_recomp.recomp_serial('OUDM_SYS');
```

3.4.7 Ensuring PGA_AGGREGATE_TARGET is Set to the Proper Value

For good performance, ensure that the PGA_AGGREGATE_TARGET is set to the proper value which depends on the physical RAM of your Database Server. You also need to ensure that the WORKAREA_SIZE_POLICY parameter is set to AUTO.

> **See Also:** For information on tuning the PGA_AGGREGATE_TARGET initialization parameter, see *Oracle Database Performance Tuning Guide*.

Note: Setting PGA_AGGREGATE_TARGET to a nonzero value has the effect of automatically setting the WORKAREA_SIZE_POLICY parameter to AUTO.

3.4.8 Installing Oracle Business Intelligence Suite Enterprise Edition Catalog for Oracle Utilities Data Model

After Oracle Business Intelligence Suite Enterprise Edition is installed, follow these steps to install an Oracle Business Intelligence Suite Enterprise Edition catalog for Oracle Utilities Data Model:

Tip: In these directions, replace *BIEE_HOME* with the name of the directory where Oracle Business Intelligence Suite Enterprise Edition is installed, and replace *BIEE_DATA_HOME* with the name of the directory where Oracle Business Intelligence Suite Enterprise Edition data is stored.

1. Add a definition for oudm_db for the Oracle Utilities Data Model repository to use when connecting to the database. Add this definition to the file $ORACLE_HOME/network/admin/tnsnames.ora:

```
oudm_db =
(DESCRIPTION =
(ADDRESS = (PROTOCOL = TCP)(HOST = hostname.domain)(PORT = port-number))
(CONNECT_DATA =
(SERVER = DEDICATED)
(SERVICE_NAME = SID) # Change your SID, Hostname, and Listener PortNumber
)
)
```

Tip: Be careful to split these commands properly when you add them to the file; for example, do not add them as one long concatenated line of code.

3.4.9 Installing RPD and Web Catalog for Oracle Business Intelligence Suite Enterprise Edition

If you installed the Oracle Utilities Data Model Oracle sample reports, must deploy the Oracle Utilities Data Model RPD and Web Catalog on the Business Intelligence Suite Enterprise Edition 11*g* instance. For more information on deploying RPD and Web Catalog in BIEE, see *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

After you use the installer to install the sample reports, you can find the RPD file and the Web Catalog file in the $ORACLE_HOME/oudm/report directory:

oudm.rpd

oudmwebcat.zip

Note: You cannot deploy the RPD file from `$ORACLE_HOME/oudm/report` directory. You need to update the connection pool information for each physical schema available in the RPD as follows:

1. Open repository `oudm.rpd` using Oracle Business Intelligence Enterprise Edition.
2. Change the **Data source name** in connection pool of each physical schema in physical layer as appropriate for the system where you are deploying the Oracle Utilities Data Model RPD.

Before you deploy the Web Catalog, you must unzip `oudmwebcat.zip`.

Perform the following steps to deploy the Oracle Utilities Data Model RPD and Web Catalog.

1. Use your browser to open the weblogic Enterprise Manager portal:

   `http://SERVERNAME:7001/em`

   Log in with the weblogic admin ID and password.

   From the Business Intelligence tab select coreapplication, then select **Deployment** and click **Repository**. Next deploy the RPD and Web Catalog.

   Note: When you deploy the RPD you must provide an RPD password. Contact Oracle Support to obtain a temporary RPD password.

2. Use your browser to open the weblogic console portal:

   `http://SERVERNAME:7001/console/login/LoginForm.jsp`

   Log in with your weblogic admin ID and password. Go to your security realm and create a user named `oudm` and set a password for this user.

3. Follow the instructions to "Refreshing User GUIDs" to update the GUIDs. For more information, see *Oracle Fusion Middleware Security Guide for Oracle Business Intelligence Enterprise Edition*.

4

Installation of Additional Components

This chapter describes how to install Oracle components that you did not need to install before you installed the Oracle Utilities Data Model component or sample reports, but that you will use when you are creating an Oracle Utilities Data Model data warehouse:

- Creating an Oracle Business Intelligence Suite Enterprise Edition Catalog
- Installing Analytic Workspace Manager

4.1 Creating an Oracle Business Intelligence Suite Enterprise Edition Catalog

The sample reports provided with Oracle Utilities Data Model are created using the Oracle Business Intelligence Suite Enterprise Edition. In order to modify these reports or to use them as the basis for creating new reports you must have installed Oracle Business Intelligence Suite Enterprise Edition and have created an Oracle Business Intelligence Suite Enterprise Edition catalog for Oracle Utilities Data Model.

Installing Oracle Business Intelligence Suite Enterprise Edition

If you installed Oracle Utilities Data Model sample reports, you installed Oracle Business Intelligence Suite Enterprise Edition as a preinstallation step before you ran the installer. If you installed the Oracle Utilities Data Model component rather than the sample reports, then install Oracle Business Intelligence Suite Enterprise Edition by following the instructions given in "Oracle Business Intelligence Suite Enterprise Edition" on page 1-2.

You also need to create a catalog. For more information, see "Installing Oracle Business Intelligence Suite Enterprise Edition Catalog for Oracle Utilities Data Model" on page 3-13.

> **Tip:** To check that Oracle Business Intelligence Suite Enterprise Edition is installed, follow the instructions in "Confirming that Oracle Business Intelligence Suite Enterprise Edition is Installed" on page 3-2.

4.2 Installing Analytic Workspace Manager

Although not required before you install Oracle Utilities Data Model, you need to install the Analytic Workspace Manager to view and modify Oracle Utilities Data Model OLAP cubes. Analytic Workspace Manager 11*g* is installed as a standalone product. The latest version of Analytic Workspace Manager is available at the Oracle OLAP home page at

`http://www.oracle.com/technetwork/database/options/olap/index.html`

Installation instructions are included in the documentation.

5

Backup, Recovery, and Deinstallation of Oracle Utilities Data Model

This chapter explains how to deinstall Oracle Utilities Data Model:

- Backing Up and Recovering Oracle Utilities Data Model
- Before you Remove the Software
- Deinstallation Script Execution
- After you Remove the Software

5.1 Backing Up and Recovering Oracle Utilities Data Model

Backing up and recovering Oracle Utilities Data Model involves a two-step process to 1) backup or recover the relational objects, and 2) backup or recover the analytic workspace that is part of Oracle Utilities Data Model. These steps are outlined in the following topics:

- Exporting Oracle Utilities Data Model
- Importing Oracle Utilities Data Model

5.1.1 Exporting Oracle Utilities Data Model

Take the following steps to backup Oracle Utilities Data Model:

1. Backup the `OUDM_SYS` schema by executing the `expdp` utility.

   This utility exports all physical tables containing the data and trained mining models. For more information, see *Oracle Database Utilities*.

2. Backup the analytic workspace that is part of the Oracle Utilities Data Model. The analytic workspace is backed up as an EIF file, named `OUDM_BAK.EIF`, which is generated under the *`ORACLE_HOME`*`/oudm/pdm/olap` directory.

   a. Connect to the database with `OUDM_sys`.

   b. Issue the following SQL statements.

```
exec dbms_aw.execute('AW ATTACH OUDM');
exec dbms_aw.execute('CDA OUDM_OLAP_DIR');
exec dbms_aw.execute('EXPORT ALL TO EIF FILE ', 'OUDM_BAK.EIF', '
NOTEMPDATA');
exec dbms_aw.execute('AW DETACH OUDM');
```

5.1.2 Importing Oracle Utilities Data Model

Take the following steps to restore Oracle Utilities Data Model from the backup files:

1. Restore the `OUDM_SYS` schema by executing the `impdp` utility.

   This utility imports all physical tables containing the data and trained mining models. For more information, see *Oracle Database Utilities*.

2. Connect to the database with `OUDM_sys`, and import the analytic workspace that was saved as an EIF file, named `OUDM_BAK.EIF`, under the *`ORACLE_HOME`*`/oudm/pdm/olap` directory.

   ```
   exec dbms_aw.execute('IMPORT ALL TO EIF FILE ','OUDM_BAK.EIF');
   ```

5.2 Overview: Deinstalling Oracle Utilities Data Model

To deinstall Oracle Utilities Data Model, you do *not* simply run Oracle Universal Installer in deinstall mode. Instead, you perform the following tasks:

1. Backup Oracle Utilities Data Model, as described in "Exporting Oracle Utilities Data Model" on page 5-1.
2. Stop any sessions that use the Oracle Utilities Data Model schemas, as described in "Before you Remove the Software" on page 5-2.
3. Execute the deinstallation script, as described in "Deinstallation Script Execution" on page 5-3.
4. If you are deinstalling the sample reports, perform the tasks described in "After you Remove the Software" on page 5-3.

> **Note:** To deinstall Oracle Utilities Data Model, you do *not* simply run the Oracle Universal Installer in deinstall mode.

5.3 Before you Remove the Software

The deinstallation script removes the `OUDM_sys` schema. Consequently, before you run the deinstallation script, ensure that there are no active sessions that connect to the `OUDM_sys` schema.

Identifying if the OUDM_sys schema is active

To identify if there are active sessions connecting to the schema take the following steps:

1. Sign in as DBA.
2. Execute the following SQL statements:

   ```
   select SID,SERIAL# from v$session where USERNAME='OUDM_SYS';
   ```

If this query returns a session ID, then there is an active session.

Ending an active OUDM_sys schema session

To end an active session execute the following statement in which you replace *`sid`* and *`serial`* that are the session ID and serial number returned by the earlier queries.

```
alter system kill session 'sid,serial' ;
```

5.3.1 Match Oracle System Identifier with Net Service Name

The following rules for `tnsnames.ora` are mandatory for Oracle Utilities Data Model deinstallation.

Non Oracle RAC Environment

For a non Oracle RAC environment, the installer sets the SID to the value of the lowercase tnsnames entry chosen by the user during installation (as the **Net Service Name**). Thus, during deinstallation the tnsnames entry must accurately reflect the Net Service Name supplied as a parameter during installation.

For example, if the SID is `orcl11203`, you cannot set the tnsnames entry to `OUDM_Test`. If SID is `orcl11203`, then tnsnames entry must be set to `orcl11203`.

Oracle RAC Environment

For an Oracle RAC environment, the Oracle System Identifier (SID) is set to lowercase `tnsnames.ora` entry chosen by the user during installation (as the **Net Service Name**). Thus, the `tnsnames.ora` entry should accurately reflect the SID for the system on which product is deinstalled in an Oracle RAC environment.

Modify the `tnsnames.ora` entry name to match the SID of the database node for the system. After the deinstallation, revert the tnsnames entry to the previous entry.

For example, if the SID is `orcl2`, you cannot set the tnsnames entry to `localhost_orcl`. In this case, if the SID is `orcl2`, then the tnsnames entry must be set to `orcl2`.

5.4 Deinstallation Script Execution

To execute the Oracle Utilities Data Model deinstallation script:

1. Set the `ORACLE_HOME` to the location of the database on which to deinstall Oracle Utilities Data Model.

   For example, suppose that Oracle home is in the directory `/loc/app/oracle/product/dbhome`

   In a Bourne, Bash, or Korn shell, use these commands to set `ORACLE_HOME`:

   ```
   $ ORACLE_HOME=/loc/app/oracle/product/dbhome
   $ export ORACLE_HOME
   ```

   In a C shell, use this command to set `ORACLE_HOME`

   ```
   % setenv ORACLE_HOME /loc/app/oracle/product/dbhome
   ```

2. Execute the Oracle Utilities Data Model deinstallation script:

   ```
   $ORACLE_HOME/oudm/OUDM_deinstall.sh
   ```

3. When prompted, enter the `SYSTEM` password.

   The script deconfigures Oracle Utilities Data Model and executes the Oracle Universal Installer in deinstall silent mode.

If you are deinstalling the sample reports, after the deinstallation script runs, perform the tasks described in "After you Remove the Software" on page 5-3.

5.5 After you Remove the Software

If you are deinstalling the Oracle Utilities Data Model sample reports, follow these steps to perform additional cleanup:

1. Delete `oudm.rpd` in the directory *`BIHome`*`/Server/Repository`.
2. Delete the `OUDMwebcat` folder in *`BIDataHome`*`/web/catalog`.
3. Delete the following line from *`BIHome`*`/Server/Config/NQSConfig.INI`:

```
Star    =    oudm.rpd, DEFAULT
```

A

License Information

Product	Subproduct	Licensing Description
Oracle Utilities Data Model		Oracle Utilities Data Model is a standards-based, prebuilt approach to utilities data warehousing enabling a utilities company to realize the power of insight more quickly. Oracle Utilities Data Model includes the following: ■ Physical implementation of the data model consisting of a foundation layer in third-normal-form schema, as well as dimensional models leveraging star schemas and OLAP cubes. ■ Automatic data movement (intra-ETL) to populate the dimensional models based on data from the foundation layer. ■ Predefined data mining model for predictive analysis. ■ Prebuilt sample reports and dashboards. **Prerequisites**: Oracle Utilities Data Model requires the use of other Oracle software, which must be licensed separately. Contact your Oracle sales representative for additional information.

Index

W