Oracle® Airlines Data Model

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Oracle Airlines Data Model Installation Guide, 11g Release 2 (11.2)

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Preface

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

Audience

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

Installation of Oracle Airlines 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 Airlines Data Model, see the following documents in the Oracle Airlines Data Model documentation library

- Oracle Airlines Data Model Implementation and Operations Guide
- Oracle Airlines Data Model Reference
- Oracle Airlines 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.
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 Airlines Data Model:

- Supported Platforms
- Hardware Requirements
- Software Requirements

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

Supported Platforms

Oracle Airlines Data Model 11g Release 3 (11.3.1) 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
 - Oracle Linux 4 Update 7
 - Oracle Linux 5 Update 2
 - Oracle Linux 5 Update 5 (with the Oracle Unbreakable Enterprise Kernel for Linux)
 - Red Hat Enterprise Linux 4 Update 7
 - Red Hat Enterprise Linux 5 Update 2
 - Red Hat Enterprise Linux 5 Update 5 (with the Oracle Unbreakable Enterprise Kernel for Linux)
 - SUSE Linux Enterprise Server 10 SP2
 - SUSE Linux Enterprise Server 11

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 Airlines Data Model, the minimum hardware requirement is disk space of at least 10 GB (including at least 2 GB for the

software files in the Oracle home directory and at least 8 GB disk space for the data files).

Software Requirements

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

- Operating System: For details of supported platforms, see "Supported Platforms" on page 1-1.
- Oracle Database 11g Release 2 Enterprise Edition, including the options specified in "Oracle Database Requirements" on page 1-2.
- Oracle Business Intelligence Suite Enterprise Edition 11.1.1.5 or higher. See "Oracle Business Intelligence Suite Enterprise Edition" on page 1-2 (this is Optional for Oracle Airlines Data Model and Sample Reports installation steps but is required to deploy the Oracle Airlines Data Model sample reports RPD and webcat and to view the sample reports on the Business Intelligence Suite Enterprise Edition 11g instance).

Oracle Database Requirements

Oracle Airlines Data Model requires Oracle Database 11g Release 2 Enterprise Edition.

Tip: When you install the Database ensure that the database character set is Unicode (AL32UTF8) to support multi-language installations since Oracle Airlines Data Model permits the installation of support for English and one other language.

Installation of the Oracle Airlines Data Model component requires the following options to the Database:

- 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.

After you download and install the Database, upgrade to the latest patch. Patches are available from My Oracle Support (http://metalink.oracle.com).

Oracle Business Intelligence Suite Enterprise Edition

You must have the Oracle Business Intelligence Suite Enterprise Edition installed before you use the Oracle Airlines Data Model sample reports (Oracle Business Intelligence Suite Enterprise Edition is required to deploy the Oracle Airlines Data Model sample reports RPD and webcat and to view the sample reports).

Oracle Business Intelligence Suite Enterprise Edition 11.1.1.5 or higher can be downloaded from the "Oracle Business Intelligence 11g downloads" link on Oracle Technology Network at:

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

Installation instructions are included in the documentation.

Introduction to Oracle Airlines Data Model Installation

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

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

Types of Installations Provided for Oracle Airlines Data Model

Using the Oracle Universal Installer you can perform two types of Oracle Airlines Data Model installations:

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

Note: The reports and dashboards that are used in examples and delivered with Oracle Airlines Data Model are provided only for demonstration purposes. They are not supported by Oracle.

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

Airlines Data Model Installation

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

oadm_sys which is the main schema for Oracle Airlines Data Model. This schema contains all the relational, mining, and OLAP components of Oracle Airlines Data Model, including the Oracle Airlines Data Model data mining results tables.

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

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

Sample Reports Installation

When you perform a **Sample Reports** installation of the Oracle Airlines Data Model, the installer creates the Oracle Airlines Data Model sample schema in the target database, and copies and configures all the sample reports to your OBIEE server. Specifically, the installer installs:

- The following files that provide the data for the sample reports:
 - oadm_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 Airlines Data Model.

Tip: The default user name for the schema is oadm_sample.

- oadm_sample.eif which is a dump file containing sample data for the Oracle Airlines Data Model analytic workspace (that is, the OLAP cubes).
- The following files that define and create the sample reports:
 - oadm.rpd
 - oadmwebcat.zip

Oracle Airlines Data Model Home Directory Structure

The installation image contains the following directories under ORACLE_HOME/oadm:

- report: which contains the sample report files for Oracle Airlines Data Model installation.
- pdm: which contains the physical schema dump, creation scripts, and lookup value population scripts, as listed in the following table.

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

Overview of the Installation Process

Installation of Oracle Airlines Data Model requires the following tasks:

- 1. Read Oracle Airlines 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 pre-installation tasks, as described in "Pre-installation Tasks" on page 3-1.
- **4.** Install the Oracle Airlines Data Model component or the Oracle Airlines Data Model sample reports, as described in "Installer Execution" on page 3-4.

Tip: you can also perform a silent installation, see "Silent Installation" on page 3-7 for more information.

- **5.** Identify and perform any necessary post-installation tasks, as described in "Post-Installation Tasks" on page 3-9.
- 6. Install the additional components that you need to create an Oracle Airlines Data Model data warehouse or run the sample reports, as described in Chapter 4, "Installation of Additional Components."

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

Note 2: You *must* deinstall Oracle Airlines Data Model before you re-install it over an existing version of Oracle Airlines Data Model.

Installation of Oracle Airlines Data Model

This chapter describes how to install Oracle Airlines Data Model:

- Pre-installation Tasks
- Installer Execution
- Silent Installation
- Post-Installation Tasks

Pre-installation Tasks

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

- Back up the Oracle Database.
- Ensure that the software required for Oracle Airlines Data Model is installed, as described in "Ensuring that 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 3-2.
- If you are using the Database Vault Option, disable the option, as described in"Disabling the Data Vault Option on the Database" on page 3-3.
- Ensure that the tnsnames.ora file includes a value for SERVICE_NAME, as described in "Ensuring That a Value is Set for the Service Name" on page 3-4.

Ensuring that 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 Airlines Data Model component or the Oracle Airlines 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 Airlines 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 Airlines 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.

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.

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. (Note that the 9704 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.)

http://hostname:9704/analytics

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

Use Administrator for both the user name (ID) and the password. (There is no password for the id Administrator.)

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

Changing the Default Value for the Maximum Processes Initialization Parameter

Oracle Airlines 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 as DB with DBA account, 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
```

Changing the Maximum Data Files Option

Oracle Airlines 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 as DB with DBA account, 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
```

Disabling the Data Vault Option on the Database

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

To disable the Vault option, 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 the Oracle Database Vault option 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 Database, Database Control console process, and listener. For example, on UNIX, 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

Once you have installed Oracle Airlines Data Model, you re-enable the Vault, as described in "Re-Enabling the Vault Option on the Database" on page 3-11.

Ensuring That a Value is Set for the Service Name

Ensure that in this 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)
)
)
```

Installer Execution

Before you install Oracle Airlines Data Model, perform the necessary pre-installation tasks described in "Pre-installation Tasks" on page 3-1.

Note: You must install Oracle Airlines 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 Airlines 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 Airlines 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 on which to install Oracle Airlines Data Model.

For example, suppose that Oracle Home is in the directory /loc/app/oracle/product/11.2/

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

\$ ORACLE_HOME=/loc/app/oracle/product/11.2/ \$ export ORACLE_HOME

In a C shell, use this command to set ORACLE_HOME

% setenv ORACLE_HOME /loc/app/oracle/product/11.2/

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

cd directory-containing-OADM_installation-files ./runInstaller

- 4. The Welcome page is displayed. Click Next.
- **5.** In the **Select Installation Type** page, select the type of Oracle Airlines Data Model installation that you want to perform:
 - If you want to install the Oracle Airlines Data Model component, select Airlines Data Model. Making this selection performs the installation described in "Airlines Data Model Installation" on page 2-1.
 - If you want to install the Oracle Airlines Data Model sample reports and sample data, select Sample Reports. Making this selection performs the installation described in "Sample Reports Installation" on page 2-2.

Oracle Airlines Data Model supports English and 9 other languages. To add support for one language in addition to English, click **Product Languages** and select the language.

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 Airlines 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 Airlines 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 Airlines Data Model will be installed.

Click Next.

- **9.** The **Specify Schema Information** page shows when you select to install the component, **Airlines Data Model**. In this dialog specify where all of the data files that correspond to the Oracle Airlines 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 (make sure that the selected location is one where the database can create data files). 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 Airlines 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 Airlines Data Model data files.

Click Next.

- **10.** The **Specify Sample Schema Information** page shows when you select to install the **Sample Reports**. In this dialog you specify where all of the data files that correspond to the Oracle Airlines 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 Airlines 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 Airlines 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 12.

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. Specifying larger Number of Years values proportionally increases the time it takes to implement the partitioning portion of Oracle Airlines Data Model install activity. The start year specified with Start Date should be the lowest possible dates from your historical data load. 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, 2011-01-20 stands for January 20, 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.** The installer summarizes the information that you specified on the **Summary** page. 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**.
- **13.** The Oracle Airlines 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 end the installer.

After you exit the installer, perform any necessary post-installation tasks described in "Post-Installation Tasks" on page 3-9. Then install the other components that you need to create an Oracle Airlines Data Model warehouse, as described in Chapter 4, "Installation of Additional Components."

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.

Selecting a Response File

Before performing a silent installation, you must provide information specific to your installation in a response file. The installer will fail if you attempt an 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 (adm.rsp) is located in the /response directory in the directory that contains the Oracle Airlines 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 Airlines 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
```

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 Airlines Data Model installation.

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.

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 silentInstallDate_ Time.log file contains the following line if the installation was successful:

The installation of Oracle Airlines Data Model was successful.

The corresponding installActionsDate_Time.log file contains specific information regarding installation.

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.

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.

Post-Installation Tasks

Once you have executed the Installer take the following steps to perform post-installation steps, cleanup, and configuration:

- 1. After you install Oracle Airlines Data Model, obtain the IP Patch. The IP Patch includes additional documentation. To obtain the IP Patch and for the latest information about Oracle Airlines Data Model patch sets, go to My Oracle Support at https://support.oracle.com.
- Unlock the OADM_SYS account, as described in "Unlocking the OADM_SYS Account" on page 3-10.
- **3.** If you installed the Oracle Airlines Data Model sample reports, unlock the OADM_SAMPLE account, as described in "Unlocking the OADM_SAMPLE Account" on page 3-10.
- 4. If you installed the Oracle Airlines Data Model sample reports, then recompile the OLAP Views, as described in "Recompiling OLAP Views" on page 3-10.
- 5. If you installed the Oracle Airlines Data Model sample reports and 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 3-10.
- **6.** Configure the OLAP working environment, as described in "Configuring the Working OLAP Environment" on page 3-10.
- 7. If you want to use the Database Vault Option and disabled it before installation re-enable the options, as described in "Re-Enabling the Vault Option on the Database" on page 3-11.
- 8. Ensure that the Oracle Airlines Data Model objects are valid, as described in "Ensuring That Oracle Airlines Data Model Objects Are Valid" on page 3-12.
- **9.** If necessary, change the values specified for PGA_AGGREGATE_TARGET and WORKAREA_SIZE_POLICY, as described in"Ensuring That PGA_AGGREGATE_TARGET is Set to the Proper Value" on page 3-12.
- **10.** If you installed the Oracle Airlines Data Model sample reports, install the BIEE 11g rpd and WebCat, as described in "Installing RPD and WebCat for Business Intelligence Suite Enterprise Edition" on page 3-13.

After performing these tasks, install the other components that you need to create an Oracle Airlines Data Model warehouse, as described in Chapter 4, "Installation of Additional Components."

Unlocking the OADM_SYS Account

At the end of the installation, the OADM_SYS account is locked. To unlock this account:

1. Log in the Database with a DBA id and password.

Note: The password is case sensitive.

2. Unlock the accounts by issuing the following SQL statements.

alter user oadm_sys account unlock;

Unlocking the OADM_SAMPLE Account

At the end of the installation of the Oracle Airlines Data Model sample reports, the OADM_SAMPLE account is locked. To unlock this account:

1. Log in the Database with a DBA id and password.

Note: The password is case sensitive.

2. Unlock the account by issuing the following SQL statement.

alter user oadm_sample account unlock identified by cpassword>;

Recompiling OLAP Views

After you unlock the oadm_sample account, login with this account and execute the following statements to recompile the OLAP views in the sample schema:

ALTER VIEW CUST_RVN_VIEW_OLAPC COMPILE; ALTER VIEW CUST_RVN_VIEW_FIN COMPILE;

Limiting User Privileges When You have Installed the Sample Reports

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

- 1. Create a dedicated reporting user (for example, OADM_Report).
- 2. Grant select privilege for all Oracle Airlines 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 Airlines Data Model tables, which start with one of the following prefixes: DWA, DWB, DWD, DWR, DWL.
- **3.** Create a view (or synonym) in OADM_Report schema, pointing to the OADM_ SYS tables.
- **4.** In the Oracle Business Intelligence Suite Enterprise Edition repository, change the connection information to point to the new schema.

Configuring the Working OLAP Environment

To set up a working OLAP environment for an Oracle Airlines 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
 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;
```

Re-Enabling the Vault Option on the Database

If you are using the Database Vault Option and disabled it before installation as described in "Disabling the Data Vault Option on the Database" on page 3-3, re-enable the Vault option by taking the following steps:

 Shutdown the Database, Database Control console process, and listener. For example on UNIX, 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 the Oracle Database Vault option.

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

3. Startup the Database, Database Control console process, and listener. For example, on UNIX, 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.

Ensuring That Oracle Airlines Data Model Objects Are Valid

To ensure that all Oracle Airlines Data Model objects are valid, log in to the database with a DBA id and password and recompile all objects in OADM_SYS by issuing the following SQL statements:

```
exec utl_recomp_serial('OADM_SYS');
```

Ensuring That PGA_AGGREGATE_TARGET is Set to the Proper Value

For good performance, you need to 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: 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.

Installing Oracle Business Intelligence Suite Enterprise Edition Catalog for Oracle Airlines Data Model

Once Oracle Business Intelligence Suite Enterprise Edition is installed, follow these steps to install an Oracle Business Intelligence Suite Enterprise Edition catalog for Oracle Airlines 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.

 Add a definition for oadm_db for the Oracle Airlines Data Model repository to use when connecting to the database. Add this definition to the file \$ORACLE_ HOME/network/admin/tnsnames.ora:

```
oadm_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.

Note: If you want to use another database name, you must change the tnsname in the Oracle Business Intelligence Suite Enterprise Edition repository. See the Oracle Business Intelligence Suite Enterprise Edition documentation for directions for defining a database connection in repository.

Installing RPD and WebCat for Business Intelligence Suite Enterprise Edition

If you installed the Oracle Airlines Data Model Oracle sample reports, you need to deploy the Oracle Airlines Data Model RPD and webcat on the Business Intelligence Suite Enterprise Edition 11g instance. For more information on deploying RPD and webcat in BIEE, see the 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 webcat file in the directory \$ORACLE_HOME/oadm/report, in the following files:

oadm.rpd

oadmwebcat.zip

Before you deploy the webcat, you need to unzip oadmwebcat.zip.

Perform the following steps to deploy the Oracle Airlines Data Model rpd and webcat.

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

http://SERVERNAME:7001/em

Login with the weblogic admin ID and password.

Go to Business Intelligence --> coreapplication --> Deployment--> Repository

and then deploy the rpd and webcat.

Notice that when you deploy the rpd you need to provide the rpd password, you can find Oracle Airlines Data Model rpd password in IP patch. For information on obtaining the IP Patch, see the *Oracle Airlines Data Model Release Notes*.

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

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

Login with your weblogic admin ID and password. Go to your security realm and create a user named "oadm" and set a password for this user.

3. Following the instructions to "Refresh the User GUIDs" to update the GUIDs. For more information, see *Oracle Fusion Middleware Administrator's Guide*.

Installation of Additional Components

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

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

Creating an Oracle Business Intelligence Suite Enterprise Edition Catalog

The sample reports provided with Oracle Airlines 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 Airlines Data Model.

Installing Oracle Business Intelligence Suite Enterprise Edition

If you installed Oracle Airlines Data Model sample reports, you installed Oracle Business Intelligence Suite Enterprise Edition as a pre-installation step before you ran the installer. If you installed the Oracle Airlines Data Model component rather than the sample reports, then install Oracle Business Intelligence Suite Enterprise Edition at this time 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 Airlines Data Model" on page 3-12.

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.

Installing Analytic Workspace Manager

Although not required before you install Oracle Airlines Data Model, you need to install the Analytic Workspace Manager in order to view and modify Oracle Airlines 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/technology/products/bi/olap/olap.html. Installation instructions are included in the documentation.

Backup, Recovery, and Deinstallation of Oracle Airlines Data Model

This chapter explains how to deinstall Oracle Airlines Data Model:

- Backing Up and Recovering Oracle Airlines Data Model
- Pre-Deinstallation Tasks
- Deinstallation Script Execution
- Post-Deinstallation Tasks

Backing Up and Recovering Oracle Airlines Data Model

Backing up and recovering Oracle Airlines 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 Airlines Data Model. These steps are outlined in the following topics:

- Exporting Oracle Airlines Data Model
- Importing Oracle Airlines Data Model

Exporting Oracle Airlines Data Model

Take the following steps to backup Oracle Airlines Data Model:

1. Backup the OADM_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 Airlines Data Model. The analytic workspace is backed up as an EIF file, named OADM_BAK.EIF, which is generated under the ORACLE_HOME/oadm/pdm/olap directory.
 - a. Connect to the Database with oadm_sys.
 - **b.** Issue the following SQL statements.

```
exec dbms_aw.execute('AW ATTACH OADM');
exec dbms_aw.execute('CDA OADM_OLAP_DIR');
exec dbms_aw.execute('EXPORT ALL TO EIF FILE ','OADM_BAK.EIF','
NOTEMPDATA');
exec dbms_aw.execute('AW DETACH OADM');
```

Importing Oracle Airlines Data Model

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

1. Restore the OADM_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*.

 Connect to the Database with oadm_sys, and import the analytic workspace that was saved as an EIF file, named OADM_BAK.EIF, under the ORACLE_ HOME/oadm/pdm/olap directory.

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

Overview: Deinstalling Oracle Airlines Data Model

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

- 1. Backup Oracle Airlines Data Model, as described in "Exporting Oracle Airlines Data Model" on page 5-1.
- **2.** Stop any sessions that use the Oracle Airlines Data Model schemas, as described in "Pre-Deinstallation Tasks" on page 5-2.
- 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 "Post-Deinstallation Tasks" on page 5-3.

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

Pre-Deinstallation Tasks

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

Identifying if the oadm_sys schema is active

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

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

select SID,SERIAL# from v\$session where USERNAME='OADM_SYS';

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

Ending an active oadm_sys schema session

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

alter system kill session 'sid, serial' ;

Deinstallation Script Execution

To execute the Oracle Airlines Data Model deinstallation script:

1. Set the ORACLE_HOME to the location of the Database on which to deinstall Oracle Airlines Data Model.

For example, suppose that Oracle Home is in the directory /loc/app/oracle/product/11.2/

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

\$ ORACLE_HOME=/loc/app/oracle/product/11.2/ \$ export ORACLE_HOME

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

% setenv ORACLE_HOME /loc/app/oracle/product/11.2/

2. Execute the Oracle Airlines Data Model deinstallation script:

\$ORACLE_HOME/oadm/oadm_deinstall.sh

3. When prompted, enter the SYSTEM password.

The script de-configures Oracle Airlines 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 "Post-Deinstallation Tasks" on page 5-3.

Post-Deinstallation Tasks

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

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

Star = oadm.rpd, DEFAULT

License Information

Product	Subproduct	Licensing Description
Oracle Airlines Data Model		Oracle Airlines Data Model is a pre-built approach to airline data warehousing enabling an airline company to realize the power of insight more quickly.
		Oracle Airlines 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.
		 Pre-defined data mining models for Customer Segmentation Analysis, Customer Loyalty Analysis, Customer Life Time Value Analysis, and Frequent Flyer Passenger Prediction.
		 Pre-built sample reports and dashboards.
		Prerequisites : Oracle Airlines Data Model requires Oracle Database Enterprise Edition, and the Oracle Partitioning option.
		Use of certain Oracle Airlines Data Model features, or other Oracle programs may require a license for other Oracle software. Please contact your Oracle sales representative for additional information.

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