Oracle® Business Intelligence Applications

Installation Guide

11*g* Release 1 (11.1.1.8.0)

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Provides the steps to set up Oracle BI Applications after exiting Oracle Fusion Applications Provisioning.

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Oracle Business Intelligence Applications Installation Guide, 11*g* Release 1 (11.1.1.8.0)

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Preface

Oracle Business Intelligence Applications is a comprehensive suite of prebuilt solutions that delivers pervasive intelligence across an organization, empowering users at all levels - from front line operational users to senior management - with the key information they need to maximize effectiveness. Intuitive and role-based, these solutions transform and integrate data from a range of enterprise sources and corporate data warehouses into actionable insight that enables more effective actions, decisions, and processes.

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

Audience

This document is intended for managers and implementers of Oracle BI Applications.

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

See the Oracle Business Intelligence Applications documentation library for a list of related Oracle Business Intelligence Applications documents:
http://docs.oracle.com/cd/E38317_01/index.htm.

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.
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.

What's New in This Guide

Oracle Business Intelligence Applications Installation Guide for 11*g* Release 1 (11.1.1.8.0) contains the following sections:

- **Chapter 1: Oracle BI Applications Architecture**

  This chapter provides an overview of the Oracle Business Intelligence Applications architecture.

- **Chapter 2: Preinstallation and Deployment Requirements for Oracle BI Applications**

  This chapter describes the preinstallation and deployment requirements for Oracle BI Applications.

- **Chapter 3: Setting Up Oracle BI Applications**

  This chapter provides instructions for performing post-installation setup tasks after exiting Oracle Fusion Applications provisioning.

- **Appendix A: Repository Creation Utility Screens**

  This appendix describes the screens contained in the Repository Creation Utility.

- **Appendix B: Generating DDL and Assigning Tablespaces to Tables and Indexes**

  This appendix describes how to generate DDL to deploy Business Analytics Warehouse tables and how to assign tablespaces to tables and indexes.

- **Appendix C: Customizing Oracle-Delivered Presentation Catalog Content**

  This appendix provides information about customizing the Oracle BI Presentation Catalog preconfigured content.

- **Appendix D: Available languages for Oracle BI Applications Release 11.1.1.8.0**

  This appendix provides a list of the available languages for Oracle BI Applications release 11.1.1.8.0.

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Oracle BI Applications Architecture

This chapter provides an overview of the Oracle Business Intelligence Applications architecture.

1.1 Oracle BI Applications Architecture

Figure 1–1 shows the Oracle BI Applications deployment architecture.

Figure 1–1   Oracle BI Applications Deployment Architecture
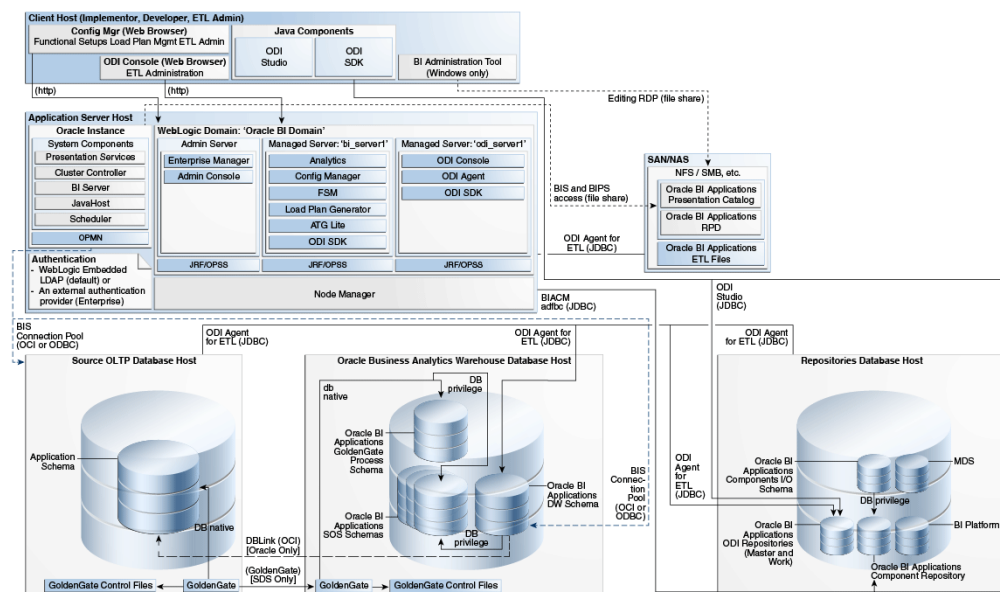
Components Deployed Into Manager Server "bi_server1"

- **Oracle BI Applications Configuration Manager -** This component is a Web application that enables you to perform system setups; functionally configure your BI Applications; and define, generate, run, and monitor load plans.

- **F**unctional Setup Manager** - (Depicted as FSM in Figure 1–1) This component is a Web application used by Configuration Manager for sequenced task implementation and task dependency management.

- **Load Plan Generator** - This component is a set of jar files used to create load plans in the ODI Repository.

- **ATGLite** - This component is a J2EE component used by Configuration Manager and Functional Setup Manager.

Components Deployed Into Managed Server "odi_server1"

- **ODI Console** - This component enables you to control and monitor ETL processes.

- **ODI Agent** - This component is a Java EE Agent, which handles schedules and orchestrates sessions.

Oracle BI Applications Repositories

- **Business Analytics Warehouse** - The Business Analytics Warehouse is a unified data repository for all customer-centric data, which supports the analytical requirements of the supported source systems. The Business Analytics Warehouse is supported only on Oracle Database.

- **Business Intelligence Applications Components Repository** (BIACOMP) - This is the repository for Configuration Manager and Functional Setup Manager. It contains load plan definitions as well as BI Applications product hierarchy, setup objects, such as parameters and domain mappings, and a list of functional tasks. This repository is supported only on Oracle Database.

- **Business Intelligence Applications I/O Schema** - This schema is a mirror schema and is used by all other components to read the BIACOMP schema. It supports read/write of configuration and functional setup data through ETL processes.

- **ODI Repository for BI Applications** - This repository contains the BI Applications-specific prebuilt ETL logic.

Client Tier

As depicted in Figure 1–1, the client host machine hosts the Configuration Manager and ODI Console, which users access through Web browsers. This tier also includes the **Load Plan Generator Plug-in**, a client version of the Load Plan Generator, which is deployed into ODI Studio and enables you to manage load plans from ODI Studio. The Load Plan Generator Plug-in requires ODI SDK to be installed.

Additional Tools

Golden Gate is an optional tool integrated with Oracle BI Applications. It enables you to optimize ETL loads and reduce impact on the source system, using a source-dependent data store.

For information about deploying Golden Gate in an Oracle BI Applications environment, see *Oracle Business Intelligence Applications Administrator's Guide*.

ETL Architecture

For information about ETL architecture, see the section titled "ETL Overview," in *Oracle Business Intelligence Applications ETL Guide*.

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Preinstallation and Deployment Requirements for Oracle BI Applications

This chapter describes the preinstallation and deployment requirements for Oracle BI Applications.

This section contains the following topics:

- Section 2.1, "Hardware Requirements"
- Section 2.2, "Guidelines for Setting Up Databases for Oracle BI Applications"
- Section 2.3, "Oracle-Specific Database Guidelines for Oracle Business Analytics Warehouse"

2.1 Hardware Requirements

The hardware requirements for Oracle BI Applications are as follows:

- 10-12 GB of free memory and 10 GB Swap Space for run-time requirements.
- 35 GB free disk space and 10 GB Swap Space to run the Business Analytics Applications Suite installer. This disk space will be released after the installer finishes.

For additional information about hardware requirements for Oracle BI EE and ODI, see *Oracle Fusion Middleware System Requirements and Specifications* at http://docs.oracle.com/html/E18558_01/fusion_requirements.htm.

2.2 Guidelines for Setting Up Databases for Oracle BI Applications

This section contains the following topics:

- Section 2.2.1, "Guidelines for Oracle Business Analytics Warehouse Databases"
- Section 2.2.2, "Why Use a Separate Database for the Oracle Business Analytics Warehouse?"

2.2.1 Guidelines for Oracle Business Analytics Warehouse Databases

The following guidelines will help you set up the data warehouse physical database for performance and growth:

- Allocate around 50 to 70 percent of the total available server memory to the database, assuming no other application is running on the same server.
- At a minimum, separate the data and index tablespaces. Create more tablespaces to separate heavily used tables and their indexes.

- Oracle recommends using 8k block size for Oracle warehouses. For more information about block size and Oracle databases, see the Oracle Database 11g Documentation Library on Oracle Technology Network.

- If you are using multiple disk storage systems, stripe the tablespace containers and files across as many disks as possible.

- Raw devices for tablespaces provide better performance as compared to cooked file systems.

- RAID-5 is known to give a good balance of performance and availability.

2.2.2 Why Use a Separate Database for the Oracle Business Analytics Warehouse?

Although it is technically possible to put the Oracle Business Analytics Warehouse in the same database as the transactional database, it is not recommended for performance reasons. The transactional database is structured as an online transaction processing (OLTP) database, whereas the Oracle Business Analytics Warehouse is structured as an online analytical processing (OLAP) database, each optimized for its own purpose. The reasons for not combining the two databases are the following:

- ETL is configured to maximize hardware resources; and, therefore, the warehouse should not share any resources with any other projects.

- The analytical queries interfere with normal use of the transactional database, which is entering and managing individual transactions.

- The data in a transactional database is normalized for update efficiency. Transactional queries join several normalized tables and will be slow (as opposed to pre-joined, de-normalized analytical tables).

- Historical data cannot be purged from a transactional database, even if not required for current transaction processing, because you need it for analysis. (By contrast, the analytical database is the warehouse for historical as well as current data.) This causes the transactional database to further slow down.

- Transactional databases are tuned for one specific application, and it is not productive to use these separate transactional databases for analytical queries that usually span more than one functional application.

- The analytical database can be specifically tuned for the analytical queries and Extract-Transform-Load (ETL) processing. These are quite different from transactional database requirements.

2.3 Oracle-Specific Database Guidelines for Oracle Business Analytics Warehouse

This section contains guidelines that are specific to Oracle databases, and contains the following topics:

- Section 2.3.1, "General Guidelines for Oracle Databases"

- Section 2.3.2, "Using Oracle Template Files"

2.3.1 General Guidelines for Oracle Databases

This section contains additional suggestions for optimizing performance for Oracle databases.

- Oracle BI Applications on Oracle databases support only binary sorting. If you are running an Oracle client, do one of the following:

- – Set the NLS_SORT parameter to BINARY.

- – Choose a NLS_LANG setting that includes binary.

  These settings are required for adequate performance from the dedicated Web client.

- It is recommended that you gather workload system statistics.

- To increase data throughput between Oracle BI Server and the Oracle database, change SDU and TDU settings in listener.ora. The default is 2 KB and can be increased to 8 KB.

- On the server side, edit the listener.ora file. Under the particular SID_LIST entry, modify SID_DESC as follows:

```
SID_LIST_LISTENER =
    SID_LIST =
        SID_DESC = (SDU=16384)(TDU=16384)
            ORACLE_HOME = /.....)
            SID_NAME = SOLAP)
    )
)
```

- Set the number of log file groups to 4.

- On the client side, edit the tnsnames.ora file. Modify the TNS alias by adding SDU= and TDU= as follows:

```
myhost_orcl.world=
    DESCRIPTION=(SDU=16384)(TDU=16384)
    ADDRESS = (PROTOCOL = TCP)(HOST=myhost)(PORT=1521))
CONNECT_DATA=(SID=ORCL))
```

2.3.2 Using Oracle Template Files

To configure the Business Analytics Data Warehouse on Oracle databases more easily, refer to the parameter template file init11gR2_template.ora file or init11gR2_Exadata_template.ora, which are stored in \<BI_Oracle_Home>\biapps\etl.

The parameter template file provides parameter guidelines based on the cost-based optimizer for Oracle 11gR2. Use these guidelines as a starting point. You will need to make changes based on your specific database sizes, data shape, server size (CPU and memory), and type of storage. The database administrator should make changes to the settings based on performance monitoring and tuning.

Copy the appropriate template file into your <ORACLE_HOME>/dbs directory. Then, review the recommendations in the template file, and make the changes based on your specific database configuration. The database administrator should make changes to the settings based on performance monitoring and tuning considerations.

> **Note:** The NLS_LENGTH_SEMANTICS parameter enables you to define byte- or character-length semantics. Oracle BI Applications supports BYTE and CHAR values for this parameter. If you are using MLS characters, then you can add this parameter to the parameter template file for your database version (that is, the init<*DB version*>.ora file).

3

Setting Up Oracle BI Applications

This chapter provides instructions for setting up Oracle BI Applications after exiting Oracle Fusion Applications provisioning. It covers setting up Oracle BI Applications in a single BI domain with the WebLogic Administration Server and Managed Server in the same domain home.

This chapter contains the following sections:

- Section 3.1, "Overview of Setting Up Oracle BI Applications"
- Section 3.2, "Prerequisites for Setting Up Oracle BI Applications"
- Section 3.3, "Tasks for Setting Up Oracle BI Applications"

3.1 Overview of Setting Up Oracle BI Applications

This section provides an overview of setting up Oracle BI Applications. It includes the following topics:

- Section 3.1.1, "About Setting Up Oracle BI Applications"
- Section 3.1.2, "Summary of Home Directories"

3.1.1 About Setting Up Oracle BI Applications

Oracle Business Intelligence Enterprise Edition is installed and provisioned as part of the Fusion Applications installation and provisioning process. The BI provisioning step creates a WebLogic domain, the BI Web application (J2EE) components, and the BI Server and BI Presentation Services, which are deployed on the machine that hosts the BI domain.

During the Fusion Applications installation, the software components of Oracle BI Applications are installed in the Business Intelligence Oracle Home but are not set up.

The following Oracle Business Intelligence provisioning occurs during Fusion Applications installation and provisioning:

- Analytics View Objects and the BI Broker servlet are deployed to the appropriate Fusion Applications WebLogic domains.

- The BI metadata repository file (OracleBIApps.rpd) is trimmed during BI provisioning to contain only those RPD projects for Oracle BI Applications that are relevant for the installed Fusion Applications offerings.

- The following are configured in the BI metadata repository file (OracleBIApps.rpd):

  – WebLogic connection pools for the applications pillars

- – SQL Bypass connections FSCM_OLTP, CRM_OLTP, HCM_OLTP, and FBI_OLTP

- – Static Variables

3.1.2 Summary of Home Directories

The following table defines the main Home directories for the components in an Oracle BI Applications deployment:

Table 3–1   Summary of Home Directories for Oracle BI Applications

Home Directory	Description
DOMAIN_HOME	Location of the Oracle WebLogic BI domain (for example, \instance\domains\\<*hostname*>\BIdomain).
ODI_HOME	Location of the ODI home directory.
MW_HOME	Location of the Oracle Fusion Middleware home (for example,\FMW_11g\). It includes the WebLogic home and one or more Oracle homes.
ORACLE_HOME (for Oracle Business Intelligence)	This is the root directory of Oracle Business Intelligence. For example, the Oracle home for Oracle Business Intelligence is typically *MW_HOME*\Oracle_BI1.
ORACLE_INSTANCE	Location of the Oracle Instance home (for example, *MW_HOME*\Oracle_BI1\instances\instance1).

3.2 Prerequisites for Setting Up Oracle BI Applications

Before you begin setting up Oracle BI Applications, do the following:

- Review *Oracle Fusion Middleware System Requirements and Specifications* and ensure your environment meets the minimum requirements:

  http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-requirements-100147.html

- Also review the Certification Matrix for Oracle BI Applications:

  http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html

- Install Oracle BI Applications using the Oracle Fusion Applications installation and provisioning process. See *Oracle Fusion Applications Installation Guide*.

- Read Chapter 2, "Preinstallation and Deployment Requirements for Oracle BI Applications."

- Obtain the following component passwords from the team who installed Oracle Fusion Applications:

  - **RPD password**. In the Installation Location dialog in the Oracle Fusion Applications provisioning wizard, an **RPD password** was entered to access the Oracle BI repository. Oracle Fusion Applications provisioning creates this password and makes it available so that Oracle BI Applications can access the metadata in the repository in the Oracle Fusion Applications environment

- **Host name**. In the Oracle Business Intelligence Configuration dialog, the **Host** where the Oracle Business Intelligence product was to be installed was entered.

- **Location of Oracle BI domain.** At the conclusion of the Oracle Fusion Applications provisioning process for Oracle Business Intelligence, the following entities are available:

  WebLogic domain

  Oracle BI Web application (J2EE) components

  Oracle BI Server and BI Presentation Services (deployed on the machine that hosts the domain)

  The resulting environment is referred to as the "Business Intelligence domain" or "BI domain." Consult with the team who installed Oracle Fusion Applications for the location of the BI domain.

  The following default values are used:

  Admin Server port - 10201

  Managed Server port - 10217

  WLS Admin user - FAadmin

3.3 Tasks for Setting Up Oracle BI Applications

This section provides detailed tasks for setting up Oracle BI Applications.

- Section 3.3.1, "Downloading Critical Oracle BI Applications Patches"
- Section 3.3.2, "Creating Database Instances for Schemas and Repositories"
- Section 3.3.3, "Creating Schemas Using Business Analytics Applications Suite RCU"
- Section 3.3.4, "Creating Oracle Business Analytics Warehouse Objects with the Oracle Sales Prediction Engine RCU"
- Section 3.3.5, "Updating ATGLite"
- Section 3.3.6, "Updating FSM"
- Section 3.3.7, "Installing Oracle BI Administration Tool"
- Section 3.3.8, "Creating a User for ETL"
- Section 3.3.9, "Extending the BI Domain"
- Section 3.3.10, "Starting the BI and ODI Managed Servers"
- Section 3.3.11, "Configuring Oracle HTTP Server"
- Section 3.3.12, "Configuring SSO and Portlet Provider for Oracle BI Applications Configuration Manager and FSM"
- Section 3.3.13, "Installing ODI Studio and Configuring User Access"
- Section 3.3.14, "Applying ODI Patch"
- Section 3.3.15, "Copying Source Files"
- Section 3.3.16, "Performing System Setup Tasks"
- Section 3.3.17, "Next Steps"

3.3.1 Downloading Critical Oracle BI Applications Patches

Oracle BI Applications release 11.1.1.8.0 requires the following critical patches.

- **Oracle BI Applications RCU**

  The Oracle BI Applications RCU (also referred to as the Business Analytics Applications RCU) .zip file for this release is provided as a patch. This patch must be downloaded from My Oracle Support.

- **ODI Patch**

  Download the latest ODI patch available for Fusion Applications Release 8 from My Oracle Support.

For details about the patch numbers, see *Oracle Business Intelligence Applications Release Notes*.

You will apply the patches later in the Oracle BI Applications setup process.

3.3.2 Creating Database Instances for Schemas and Repositories

Before you run the Business Analytics Applications Suite RCU and installer, you must create database instances to hold the following:

- Business Analytics Warehouse schema.

- Oracle BI Applications Components Repository (for Configuration Manager and Functional Setup Manager).

- ODI Repository for Oracle BI Applications (includes Master and Work repositories).

Note the following points:

- For this release of Oracle BI Applications, the following components are supported only on Oracle Database Enterprise Edition:

  - Business Analytics Warehouse

  - BI Applications Components Repository.

  - ODI Repository for BI Applications

- For the specific version of Oracle Database Enterprise Edition supported for this release of Oracle BI Applications, see the Certification Matrix for Oracle BI Applications at
  http://www.oracle.com/technetwork/middleware/ias/downloads/fusion-certification-100350.html.

- The Oracle Database Enterprise Edition must be configured with UNICODE.

- The Business Analytics Warehouse, BI Applications Components Repository, and ODI Repository can be installed on different database servers.

- The ODI Master and Work repositories are installed into the same schema.

- Review Section 2.2.1, "Guidelines for Oracle Business Analytics Warehouse Databases," for information about database requirements for the Business Analytics Warehouse.

3.3.3 Creating Schemas Using Business Analytics Applications Suite RCU

The Oracle BI Applications RCU for this release is provided as a patch. This patch must be downloaded from My Oracle Support. If you did not download the RCU .zip

file as instructed in Section 3.3.1, "Downloading Critical Oracle BI Applications Patches," download it now. See *Oracle Business Intelligence Applications Release Notes* for the patch number that contains the RCU .zip file.

Note: An Oracle BI Applications RCU .zip file named rcuHomeBIApps.zip is located in the Fusion Applications software repository under installers/biapps_rcu/<OS>. Do not use this RCU .zip file.

You run the Business Analytics Applications Suite RCU to create schemas for the following components:

- Business Analytics Warehouse

- Oracle BI Applications Components

- ODI Repository for BI Applications

Before you run the Business Analytics Applications Suite RCU, note the following points:

- On Windows machines, make sure that you unzip the downloaded RCU .zip file into a directory that does not have spaces in the directory path.

- The RCU uses .dmp files to create the required schemas. You must copy the .dmp files for each schema to a directory with global write access on the appropriate database server machines. (RCU writes log files to this directory.) The .dmp files are located in BIA_RCU_HOME/rcu/integration/biapps/schema.

- To create schemas with RCU on Oracle databases, you must possess the DBA privilege and be logged in as `SYSDBA` (for example, as user `SYS`, with the `SYSDBA` role selected).

- If you are creating schemas on different databases, then you will need to run RCU multiple times, once for each database connection, because the database connections are different for the different database servers.

To create the Oracle BI Applications schemas using the Business Analytics Applications Suite RCU:

1. Access the `bin` directory in the `BIA_RCU_HOME`.

2. Start RCU, as follows:

   - UNIX:

     `./rcu`

   - Windows:

     `rcu.bat`

3. On the Welcome screen, click **Next**.

4. On the Create Repository screen, select **Create**, and then click **Next**.

5. On the Database Connection Details screen, specify the connection details for the database in which you want to store the schemas. Note that you must possess the DBA privilege and be logged in as `SYSDBA` (for example, as user `SYS`).

   Specify the following database connection details:

Field Name	Action
Database Type	Select **Oracle Database**.
	Other database types are not supported in this release.

Field Name	Action
Host Name	Specify the fully qualified host name of the machine hosting the database. For example, `machine12345.example.com`
Port	Specify the port number over which the database communicates. The default port number for an Oracle database is 1521.
Service Name	Specify the service name for the database. Typically, the service name is the same as the global database name.
Username	Specify the user name for the database. The default user name is SYS. The user must have DBA or SYSDBA privileges.
Password	Specify the password for the username specified in the **Username** field.
Role	Select `SYSDBA`.

6. Click **Next** to display the Select Components screen.

7. On the Select Components screen, near the top of the dialog, select **Create a new Prefix**.

   The default prefix is DEV. You can change the prefix.

   RCU automatically creates the schema owner (schema name) in the format *prefix_schemaname*.

   Select the following options:

Schema Option	Default Schema Owner
Oracle Business Analytics Warehouse	<prefix>_DW (required for all deployments).
Oracle Business Applications Components	<prefix>_BIACOMP (required for all deployments).
	When you select the BI Applications Components Repository (BIACOMP), RCU will create an additional schema named BIACM_IO. Do not modify or delete this schema. It is required for metadata access by the different Oracle BI Applications components.
Oracle Data Integrator Master and Work Repository	<prefix>_BIA_ODIREPO (required for all deployments).

8. Click **Next** to display the Schema Passwords screen.

9. On the Schema Passwords screen, specify and confirm a password for the schemas, then click **Next** to proceed to the Custom Variables screen.

   > **Note:** The RCU uses .dmp files to create the required schemas. Before you perform the action in the Custom Variables screen, you must copy the .dmp files for each schema to a directory with global write access on the appropriate database server host machine. (RCU writes log files to this directory). The .dmp files are located in BIA_RCU_HOME\rcu\integration\biapps\schema.

10. In the Value field of the Custom Variables screen, for each schema enter the directory path of the folder on the database server that contains the .dmp file.

    Note: Do not include the name of the .dmp file in the directory path.

Click **Next** to proceed to the Map Tablespaces screen.

11. The Map Tablespaces screen displays the default and temporary tablespaces for the schemas. On this screen, do the following:

    a. Leave the default values for Default Tablespace and Temp Tablespace for each schema.

    b. Set the temporary tablespace size for the data warehouse tablespaces according to the values in the table below:

    - Click **Manage Tablespaces**.

    - In the left-side navigation panel, select the appropriate tablespace name.

    - In the main window, select the tablespace name under the Datafiles heading.

    - Click the Edit icon to display the Datafile dialog.

    - In the Edit Datafile dialog, set the temporary tablespace size according to the table below:

Tablespace	Value
<prefix>_DW_DATA	Size: **20** GB
	Maximum Size: **Unlimited**
	Leave the remaining default values.
<prefix>_DW_IDX	Size: **5** GB
	Maximum Size: **Unlimited**
	Leave the remaining default values.
<prefix>_DW_STG	Size: **10** GB
	Maximum Size: **Unlimited**
	Leave the remaining default values.
<prefix>_DW_TEMP	Size: **15** GB
	Maximum Size: **Unlimited**
	Leave the remaining default values.

Click **OK** to exit the Edit Datafile dialog. Then, click **Next** in the Map Tablespaces screen, and click **OK** in the message dialog to create the tablespaces for the schemas.

12. On the Summary screen, click **Create** to start the schema creation process.

    When the schemas are created with no errors, the Completion Summary screen is displayed.

13. On the Completion Summary screen, click **Close**.

3.3.4 Creating Oracle Business Analytics Warehouse Objects with the Oracle Sales Prediction Engine RCU

If your organization has deployed the Sales Prediction Engine module of Oracle Fusion Customer Relationship Management, you must also create Oracle Business Analytics Warehouse database objects (ODM tables, views, packages, ILS Processing tables, and so on) using the Sales Prediction Engine RCU. For instructions on creating the Sales Prediction Engine schema with the Sales Prediction Engine RCU, see *Oracle Fusion Applications Installation Guide*.

Before you create Oracle Business Analytics Warehouse database objects, ensure that you have a supported Oracle Business Analytics Warehouse that contains the Oracle BI Applications schemas. For more information, see Section 3.3.2, "Creating Database Instances for Schemas and Repositories."

3.3.5 Updating ATGLite

This section provides instructions for updating the ATGLite data in the BIACOMP schema.

To update ATGLite:

- Run the following command:

  ```
  java -jar biappsrepositoryutil.jar upgradeATG <mandatory parameters>
  ```

  Where the mandatory parameters are as follows:

Parameter	Description
bi.oracle.home	Full path of the Oracle BI home.
work.dir	Working directory to be used for the run.
	Log files will be created for each run and saved in this directory. The naming convention for the SQL log file is atgUpgradeSQLYYYY-MM_DD_HH_MM.log. Log files will be available only if they are not empty.
db.conn.sid.url	Connection to the database that hosts the BIACOMP schema. The format is host:port:SID. For example: host.domain:1521:orcl.
biacomp.user	BIACOMP schema owner.
biacomp.password	BIACOMP schema owner's password.
atg.db.seed.url	URL used to connect to the BIACOMP schema. (The ATG user is the BIACOMP schema owner.) The format is host:port/ServiceName. For example: host.domain:1521/orcl.domain.
db.sys.user	Database system user name.
db.sys.password	Database system user password.
	Note: If this parameter is not passed in the command line, then the tool will request the password at runtime.

Example

```
java -jar biappsrepositoryutil.jar upgradeATG
bi.oracle.home=scratch/MiddleWareHome/Oracle_BI1/
work.dir=scratch/workfolder biacomp.user=BIAPPS_BIACOMP
biacomp.password=password db.conn.sid.url=<host>:<database port>:<SID>
atg.db.seed.url=<host>:<database port>/<ServiceName> db.sys.user=sysuser
db.sys.password=password
```

3.3.6 Updating FSM

This section provides instructions for updating the FSM data in the BIACOMP schema.

To update FSM:

- Run the following command:

```
java -jar biappsrepositoryutil.jar upgradeFSM <mandatory parameters>
```

Where the mandatory parameters are as follows:

Parameter	Description
bi.oracle.home	Full path of the Oracle BI home.
work.dir	Working directory to be used for the run.
	Log files will be created for each run and saved in this directory. The naming convention for the SQL log file is fsmUpgradeSQLYYYY-MM_DD_HH_MM.log. Log files will be available only if they are not empty.
db.conn.sid.url	Connection to the database that hosts the BIACOMP schema. The format is host:port:SID. For example: host.domain:1521:orcl.
biacomp.user	BIACOMP schema owner.
biacomp.password	BIACOMP schema owner's password.
fsm.db.seed.url	URL used to connect to the BIACOMP schema. (The FSM user is the Business Analytics Warehouse schema owner.) The format is host:port/ServiceName. For example: host.domain:1521/orcl.domain.
db.sys.user	Database system user name.
db.sys.password	Database system user password.
	Note: If this parameter is not passed in the command line, then the tool will request the password at runtime.

Example

```
java -jar biappsrepositoryutil.jar upgradeFSM
bi.oracle.home=scratch/MiddleWareHome/Oracle_BI1/
work.dir=scratch/workfolder biacomp.user=BIAPPS_BIACOMP
biacomp.password=password db.conn.sid.url=<host>:<database port>:<SID>
fsm.db.seed.url=<host>:<database port>/<ServiceName> db.sys.user=sysuser
db.sys.password=password
```

3.3.7 Installing Oracle BI Administration Tool

The Oracle BI Administration Tool enables you to manage the metadata repository and is required in the Oracle BI Applications set-up process. If the Oracle BI Administration Tool has not been installed, then you must install it on a Windows machine.

You install Oracle BI Administration Tool using the Oracle Business Intelligence Enterprise Edition Plus Client Installer. The Installer executable is named biee_client_install.exe, and this file is available in the installed BI Middleware Home, in bi/clients/biserver.

Before you install the Oracle BI Administration Tool, ensure that the machine where you intend to perform the installation meets the following requirements:

- The machine is running a supported Microsoft Windows operating system.

- The machine has network connectivity with the machine that hosts your Oracle BI server.

For instructions on installing the Oracle BI Administration Tool, see "Installing and Uninstalling Oracle Business Intelligence Client Tools" in *Oracle Fusion Middleware Installation Guide for Oracle Business Intelligence Enterprise Edition*.

3.3.8 Creating a User for ETL

The ETL process must be run by a user with appropriate data security privileges granted on the Fusion Applications tables from which data is extracted into Oracle Business Analytics Warehouse. For this purpose, the enterprise role named FUSION_APPS_OBIA_BIEE_APPID is provisioned during install with the appropriate ETL security privileges.

Work with your security administrator to complete the steps below.

To create a user for ETL:

1. Use Oracle Identity Management (or an appropriate security tool) to create a new user and password.

    For example, you might create a new user named OBIA_ETL_USER.

2. Make the user a member of the Enterprise Role FUSION_APPS_OBIA_BIEE_APPID.

3. Make a note of the user credentials.

3.3.9 Extending the BI Domain

Follow the instructions below to extend the BI domain.

To extend the BI domain:

1. Using a text editor, create a response file with the parameters shown below. Enter the appropriate values for the parameters, and name the file response.rsp.

```
#DO NOT CHANGE THIS
Response File Version=1.0.0.0.0
[GENERIC]
MW_HOME=<MW_HOME>
ORACLE_HOME=<ORACLE_HOME>

WEBLOGIC_HOME=<WL_HOME>
ADMIN_USER_NAME=<ADMIN_USER>
ADMIN_PASSWORD=<ADMIN_PWD>

WLS_SINGLE_SERVER_INSTALL=false
#Make sure following flag value is true for extend DWskip_rpd__setup=true

DATABASE_CONNECTION_STRING_MDS=<DATABASE_CONNECTION_STRING_MDS>
DATABASE_SCHEMA_USER_NAME_MDS=<MDS_USERNAME>
DATABASE_SCHEMA_PASSWORD_MDS=<MDS_PASSWORD>
DATABASE_TYPE_MDS=Oracle Database

DOMAIN_HOSTNAME=<DOMAIN_HOST>
DOMAIN_PORT=<DOMAIN_PORT>
AUTOMATIC_PORT_DETECT=<AUTOMATIC_PORT_DETECT>
STATICPORT INI FILE LOCATION=<STATICPORT_INI_FILE_LOCATION>

DW_DATABASE_CONNECTION_STRING=<DW_DATABASE_CONNECTION_STRING>
DW_DATABASE_SCHEMA_USER_NAME=<DW_DATABASE_SCHEMA_USER_NAME>
DW_DATABASE_SCHEMA_PASSWORD=<DW_DATABASE_SCHEMA_PASSWORD>
DW_DATABASE_TYPE=Oracle Database
```

```
BIACOMP_DATABASE_CONNECTION_STRING=<BIACOMP_DATABASE_CONNECTION_STRING>
BIACOMP_DATABASE_SCHEMA_USER_NAME=<BIACOMP_DATABASE_SCHEMA_USER_NAME>
BIACOMP_DATABASE_SCHEMA_PASSWORD=<BIACOMP_DATABASE_SCHEMA_PASSWORD>
BIACOMP_DATABASE_TYPE=Oracle Database

ODI_REPOSITORY_DATABASE_CONNECTION_STRING=<ODI_REPOSITORY_DATABASE_CONNECTION_
STRING>
ODI_REPOSITORY_DATABASE_SCHEMA_USER_NAME=<ODI_REPOSITORY_DATABASE_SCHEMA_USER_
NAME>
ODI_REPOSITORY_DATABASE_SCHEMA_PASSWORD=<ODI_REPOSITORY_DATABASE_SCHEMA_
PASSWORD
ODI_REPOSITORY_DATABASE_TYPE=Oracle Database

#ODI_USER_NAME is referred as "BI Applications Administrator User" in config
screen
ODI_USER_NAME=<ODI_USER_NAME>
ODI_USER_PASSWORD=<ODI_USER_PASSWORD>
ODI_USER_CONFIRM_PASSWORD=<ODI_USER_CONFIRM_PASSWORD>

#Following section is only needed when ODI is configured with External LDAP
CONFIGURE_ODI_EXTERNAL_LDAP=true
# LDAP URL - ldap://<host>:<port>
LDAP_URL=<LDAP_URL>
LDAP_USER=<LDAP_USER>
LDAP_PASSWORD=<LDAP_PASSWORD>
LDAP_USERBASE_PREFIX=<LDAP_USERBASE_PREFIX>
LDAP_GROUPBASE_PREFIX=<LDAP_GROUPBASE_PREFIX>

[SYSTEM]
[APPLICATIONS]
CONFIGURE_OBIACM=true
CONFIGURE_ODI=true
[RELATIONSHIPS]
```

2. Execute the following command:

Platform	Command
Windows	Oracle_home\bin\configAppsInFAWithDW.bat ./response.rsp
UNIX and Linux	Oracle_home/bin/configAppsInFAWithDW.sh <path_to_response_file>

3.3.10 Starting the BI and ODI Managed Servers

Oracle BI Applications requires the BI and ODI Managed Servers (bi_server1 and odi_server1) to be started using Node Manager. This is required so that parameters, memory, and JVM arguments are appropriately set. If you do not start the BI and ODI Managed Servers, functionality loss and memory issues can occur in Oracle BI Applications Configuration Manager, Functional Setup Manager, and ODI.

To ensure that the BI and ODI Managed Servers are started using Node Manager, start them using the WebLogic Administration Console user interface. Do not start the BI and ODI Managed Servers using the Managed Server start scripts.

3.3.11 Configuring Oracle HTTP Server

Work with your Web administrator to configure Oracle HTTP Server so that URLs for Oracle BI Applications Configuration Manager and Functional Setup Manager (FSM)

point to the virtual host and port for the BI domain. Ensure that you configure the same Oracle HTTP Server for Oracle BI Applications Configuration Manager and FSM.

To configure Oracle HTTP Server:

1. Access the directory `APPTOP/instance/CommonDomain_
webtier/config/OHS/ohs1/moduleconf`

   where `APPTOP` is the Application home folder.

2. Open the file FusionVirtualHost_bi.conf.

3. Under the #BIEE section, add the following entries for Oracle BI Applications Configuration Manager and FSM:

   ■ Oracle BI Applications Configuration Manager entry:

   ```
   <LocationMatch ^/biacm >
               SetHandler weblogic-handler
                   WeblogicCluster host:port
           </LocationMatch>
   ```

   where `host` is the fully-qualified domain name of the WebLogic host where Oracle BI Applications Configuration Manager is deployed and `port` is the Administration Server port.

   ■ FSM entry:

   ```
   <LocationMatch ^/setup >
               SetHandler weblogic-handler
                   WeblogicCluster host:port
           </LocationMatch>
   ```

   where `host` is the fully-qualified domain name of the WebLogic host where FSM is deployed and `port` is the Administration Server port.

   Note: For each LocationMatch entry, make sure that you have a space character between the value and the closing '>' character.

4. Restart Oracle HTTP Server by accessing the directory `APPTOP/instance/CommonDomain_webtier/bin` and running the following commands:

   ```
   ./opmnctl stopall
   ```

   ```
   ./opmnctl startall
   ```

5. Provide the URL for Oracle BI Applications Configuration Manager to your end users.

3.3.12 Configuring SSO and Portlet Provider for Oracle BI Applications Configuration Manager and FSM

Oracle BI Applications Configuration Manager contains a link that launches Functional Setup Manager (FSM). Work with your Oracle BI Applications administrator and your security administrator to configure single sign-on (SSO) between Oracle BI Applications Configuration Manager and FSM using Oracle Access Manager. Without SSO configuration, no single sign-on capabilities are provided, however users with the appropriate Oracle BI Application duty roles can still access Oracle BI Applications Configuration Manager and FSM.

To configure Oracle BI Applications and FSM, do the following:

1. Configure SSO as described in Section 3.3.12.1, "How to configure SSO for Oracle BI Applications Configuration Manager and FSM".

2. Configure Portlet Provider as described in Section 3.3.12.2, "How to configure Portlet Provider for Oracle BI Applications Configuration Manager and FSM".

3.3.12.1 How to configure SSO for Oracle BI Applications Configuration Manager and FSM

To configure SSO for Oracle BI Applications Configuration Manager and FSM using Oracle Access Manager:

1. In a supported Web browser, log in to Oracle Access Manager, using the following URL:

   `http://<host>:<port>/oamconsole/`

   Where `host` is the host name and `port` is the port number for your Oracle Access Manager application.

2. Display the Policy Configuration tab.

3. Create a policy for Oracle BI Applications Configuration Manager, as follows:

   a. In the Browse pane, navigate to Application Domains\bi.

   b. Double-click the **Resources** node, to display the BI Resources page.

   c. Use the New Resource option to display the Create Resource page.

   d. Specify the following details:

      Resource type: `http`

      Host Identifier: `OraFusionApp`

      Resource URL: /biacm/.../*

   e. Save the details.

4. Determine whether there is an existing policy for FSM. For example, there might be an existing policy for the Resource URL /setup* in the Application Domains\fs domain.

   If there is an existing policy for FSM, then you can skip step 5 below and use this existing policy. If there is not an existing policy for FSM, then follow step 5 below to create a policy.

5. Create a policy for FSM, as follows:

   a. In the left hand Browse pane, navigate to Application Domains\bi.

   b. Double-click the **Resources** node, to display the bi Resources page.

   c. Use the New Resource option to display the Create Resource page.

   d. Specify the following details:

      Resource type: `http`

      Host Identifier: `OraFusionApp`

      Resource URL: /setup/.../*

   e. Save the details.

3.3.12.2 How to configure Portlet Provider for Oracle BI Applications Configuration Manager and FSM

To configure Portlet Provider for Oracle BI Applications Configuration Manager and FSM using Oracle Access Manager:

1. In a supported Web browser, login to Oracle Access Manager, using the following URL:

    ```
    http://<host>:<port>/oamconsole/
    ```

    Where *host* is the host name and *port* is the port number for your Oracle Access Manager application.

2. Display the Policy Configuration tab.

3. Create a policy for Oracle BI Applications Configuration Manager, as follows:

    a. In the Browse pane, navigate to Application Domains\bi.

    b. Select the **Resources** node.

    c. Use the New Resource option to display the Create Resource page.

    d. Specify the following details:

    Resource type: `http`

    Host Identifier: `OraFusionApp`

    Resource URL: /setup/portlets/…/*

    Protection Level: `Excluded`

    e. Save the details.

3.3.13 Installing ODI Studio and Configuring User Access

ODI Studio is typically installed on developer machines. The supported operating systems for ODI Studio are Windows 32-bit and 64-bit and Linux 32-bit.

ODI Studio is a desktop client that enables you to design and manage the ODI Repository.

Perform the following procedures in the order they appear:

■   Section 3.3.13.1, "Installing ODI Studio"

■   Section 3.3.13.2, "Configuring User Access for ODI Studio"

3.3.13.1 Installing ODI Studio

You install ODI Studio using the ODI installer.

Note the following points:

■   On the Select Installation Type screen, you must select **Developer Installation** as the installation type and both options under Developer Installation, that is, **ODI Studio (with local agent)** and **ODI SDK**.

■   On the Repository Configuration screen, you must select the **Skip Repository Configuration** option.

For instructions on installing ODI Studio, see *Oracle Fusion Middleware Installation Guide for Oracle Data Integrator*.

3.3.13.2 Configuring User Access for ODI Studio

The ODI Repository is configured for external authentication against WebLogic Server's embedded LDAP server. ODI Studio must be configured to use the appropriate security files for authentication. You must perform these steps on all installations of ODI Studio.

Note: You must perform these steps even if ODI Studio has been installed on the machine where Oracle Home for BI resides.

To configure user access for ODI Studio:

1. Copy cwallet.sso and jps-config-jse.xml from:

    ```
    <MW_Home>/user_projects/domains/bifoundation_domain/odi-client-config/embedded
    ```

    To:

    ```
    <ODI_Home>/oracledi/client/odi/bin
    ```

2. Edit <ODI_Home>/oracledi/client/odi/bin/odi.conf by updating the JPS configuration file name as follows:

    ```
    AddVMOption -Doracle.security.jps.config=./jps-config-jse.xml
    ```

    If you do not successfully complete these steps, you will receive the following error message: "ODI-10188: Error while login from OPSS../jps-config.xml (No such file or directory) ."

3. Perform steps 1 and 2 on all instances of ODI Studio.

    Note: You must perform these steps even if ODI Studio has been installed on the machine where Oracle Home for BI resides.

If the BI Applications Administrator password or any ODI users' passwords were changed, administrators need to regenerate security files and redistribute the files to all instances of ODI Studio.

To regenerate security files:

1. Execute the wlst.sh script:

    ```
    ORACLE_HOME/common/bin/wlst.sh <MW_Home>/Oracle_
    BI1/bifoundation/install/createJPSArtifactsODI.py embedded --ADMIN_USER_NAME
    <Administrator> --DOMAIN_HOSTNAME <Hostname> --DOMAIN_PORT 7001 --DOMAIN_HOME_
    PATH <MW Home>/user_projects/domains/bifoundation_domain
    ```

    Where ADMIN_USER_NAME is the WebLogic Server administrator user.

    The updated JPS configuration file and credential wallet are created at location:

    ```
    <MW_Home>/user_projects/domains/bifoundation_domain/odi-client-config/embedded
    ```

2. Copy these updated files to <ODI_Home>/oracledi/client/odi/bin on all ODI Studio instances.

3. Make sure that the odi.conf file is edited correctly, as described in step 2 in the previous procedure for configuring user access for ODI Studio.

    The odi.conf file is located in <ODI_Home>/oracledi/client/odi/bin.

3.3.14 Applying ODI Patch

You need to apply the latest ODI patch for Fusion Applications to ODI Agent and ODI Console in the BI Domain and to all instances of ODI Studio. This patch is available on

My Oracle Support. See *Oracle Business Intelligence Applications Release Notes* for the patch number. For instructions on applying the patch, see the readme file that accompanies the patch.

If you did not download the ODI patch as instructed in Section 3.3.1, "Downloading Critical Oracle BI Applications Patches," download it now and apply it.

3.3.15 Copying Source Files

During installation of Oracle BI Applications, source files are installed in the BI_Oracle_Home/biapps/etl directory. These files are used during the ETL process and will be configured by functional developers. You must copy these files to a location that ODI Agent deployed in WebLogic Server can access but that is outside of the Oracle Home directory; otherwise, when the Oracle BI Applications environment is upgraded or patched, these files will be overwritten.

To copy source files:

1. Navigate to the BI_Oracle_Home/biapps/etl directory.

2. Copy all files under the BI_Oracle_Home/biapps/etl directory into a location that ODI Agent deployed in WebLogic Server can access but is outside of the Oracle Home directory.

   Avoid copying the files to a location with a long directory path.

   Note: Depending on your deployment, there may be files in the BI_Oracle_Home/biapps/etl directory that you will not use.

3.3.16 Performing System Setup Tasks

You must perform the system setups in this section to complete integration of the Oracle BI Applications components and to ready the system for functional configurations and data loads. Perform the tasks in the order they appear:

- Section 3.3.16.1, "Setting the Business Analytics Warehouse Connection in ODI"
- Section 3.3.16.2, "Registering Source Systems and Propagating Connection Details to ODI"
- Section 3.3.16.3, "Enabling Offerings for Deployment"
- Section 3.3.16.4, "Editing Preferred Currency Display Names and Enabling Document Currency"
- Section 3.3.16.5, "Setting Languages for Data Load into the Business Analytics Warehouse"
- Section 3.3.16.6, "Restoring the BI Metadata Repository File for Oracle BI Applications"
- Section 3.3.16.7, "Mapping Externally Conformed Domains"
- Section 3.3.16.8, "Running the Domains Load Plan"
- Section 3.3.16.9, "Granting Users Access to Configuration Manager, FSM and ODI"

3.3.16.1 Setting the Business Analytics Warehouse Connection in ODI

Use ODI Studio to set the connection properties in the ODI Repository of the physical schema associated with the 'BIAPPS_DW_FILE' physical server.

To set the Business Analytics Warehouse physical schema connection in ODI:

1. Log into ODI Studio using the BI Applications Administrator credentials.

2. In the navigation pane, go to Topology, and expand Technologies, and then expand File.

3. Double-click BIAPPS_DW_FILE.

4. In the Definition pane, for the Directory (Schema) and Directory (Work Schema) properties, specify the src_files directory and include the subfolders data_files/src_files/BIA_11.

   For example:

   ```
   <source file home>/biapps/etl/data_files/src_files/BIA_11
   ```

3.3.16.2 Registering Source Systems and Propagating Connection Details to ODI

Follow this procedure to register a source system and propagate the connection details to ODI.

To register a source system:

1. Launch Oracle BI Applications Configuration Manager using the URL http://<host>.<port>/biacm, and log in as the BI Applications Administrator user.

2. In Oracle BI Applications Configuration Manager, select the **Define Business Intelligence Applications Instance** link, which appears under System Setups on the Tasks pane.

   The Source Systems tab is displayed.

3. Click the **Add** icon.

   The Register Source dialog is displayed.

4. Specify the following properties:

Property	Description
Product Line	Select Oracle Fusion.
Product Line Version	Select the version number of the source instance product line.
Source Instance Name	Specify a name for the source instance.
	This is the name given by the BI Applications System Administrator to a transactional system that serves as a source of data for BI Applications data load. The source instance is important because functional setup tasks and the setting of values for objects such as parameters and domain maps are performed in relation to a source instance.
Description	(Optional) Enter additional information about the source instance.
Data Source Number	Enter a unique number to identify the source instance.
	The Data Source Number value specifies a data source so that the data can be identified in the Oracle Business Analytics Warehouse. Each source instance must have a unique Data Source Number.
Data Server Details	A read-only list of data servers is displayed.

   Click **Next** to display the Register Source in Oracle Data Integrator Topology page.

5. To register the source in ODI, do the following:

   a. Select **Global** from the Context drop-down list.

b. In the Technology: Oracle BI tab, specify the following properties:

Property	Description
ODI Data Server Name	Specify a name for the ODI Data Server that indicates Fusion Applications is the source of data. This name must be unique across all ODI data servers in the ODI Repository.
JDBC Driver	This property indicates the name of the JDBC driver for the Oracle BI Server. For example: `oracle.bi.jdbc.AnaJdbcDriver`. Oracle recommends that you use the default value. **Note:** Data from the Fusion Applications transactional system is retrieved from the Oracle BI Server.
JDBC URL	Specify the JDBC URL for the Oracle BI Server. The format for the URL is the following: `jdbc:oraclebi://<sid>:<port>`
Database Username	Specify the user name of the ETL user. This is the user created in Section 3.3.8, "Creating a User for ETL."
Database Password	Specify the password for the ETL user.
Test	Use this button to test the connection to the Oracle BI Server.

c. In the Technology: File System tab, specify the following properties:

Property	Description
ODI Data Server Name	Specify a name for the file system data server. This ODI Data Server Name must be unique across all ODI data servers in the ODI Repository.
Host Name	Specify the name of the host machine where the file system (source files used for ETL) resides. This is the machine to which you copied the source files in the procedure Section 3.3.15, "Copying Source Files."
Path To File	Specify the directory where you copied the source files in Section 3.3.15, "Copying Source Files." The directory path must include the appropriate source-specific folder for your environment. The source-specific folders are located in /biapps/etl/data_files/src_files. For example: `/<source file home>/biapps/etl/data_files/src_files/FUSION_1_0.`
Array Fetch Size	The number of rows requested by ODI on each communication with the data server. **Note:** This column might be hidden. To view this column, click **View**, **Columns**, **Show All**.
Batch Update Size	The number of rows in a single INSERT command. **Note:** This column might be hidden. To view this column, click **View**, **Columns**, **Show All**.
JDBC Driver	Oracle recommends that you use the default value. **Note:** This column might be hidden. To view this column, click **View**, **Columns**, **Show All**.

Property	Description
JDBC URL	Oracle recommends that you use the default value.
	Note: This column might be hidden. To view this column, click **View**, **Columns**, **Show All**.

    d. Click **Save and Close**.

    This information is passed to ODI where the connections are created.

> **Note:** The connection details are not propagated to the ODI Repository until you have entered and saved the information on both the Register Source in Configuration Manager page and the Register Source in Oracle Data Integrator Topology page.

3.3.16.3 Enabling Offerings for Deployment

Use Oracle BI Applications Configuration Manager to enable the Oracle BI Applications offerings that you have purchased and are deploying. The setup data relating to offerings is made visible in Configuration Manager when you enable the offering.

By default, if you have multiple source instances and you enable an offering, then the offering is enabled for all source instances. If an offering will not source from all source instances, then you can disable the source instances from which the offering will not source. For example, suppose you have two source instances, Oracle EBS and PeopleSoft, and you are deploying Financial Analytics. If Financial Analytics will only source from PeopleSoft, then you would disable the Oracle EBS source instance for the Financial Analytics offering.

To enable Oracle BI Applications offerings for deployment:

1. Log in to Oracle BI Applications Configuration Manager as the BI Applications Administrator user.

2. Select the **Manage BI Applications** link to display the Manage Business Intelligence Applications dialog.

3. Select the **BI Application Offerings** tab.

4. Select the **Enabled** check box next to each offering you want to deploy.

    Enabling an offering makes the setup data associated with that offering available in Configuration Manager.

5. Click **Save** to save your changes.

6. To exit this dialog, click **Done**.

To disable a source instance from which an offering will not source:

1. Go to the **Business Intelligence Application Offerings and Associated Sources** tab.

2. Expand the appropriate offering.

3. Deselect the **Enabled** check box for the source you want to disable.

4. Click **Save**.

3.3.16.4 Editing Preferred Currency Display Names and Enabling Document Currency

Oracle Business Intelligence is installed with a set of preferred currencies with preconfigured preferred currency names and preferred currency codes. Preferred currency names are used on Oracle Business Intelligence dashboards in the Currency drop-down on the My Account dialog\Preferences tab for a user logged into Oracle Business Intelligence.

You can use the Manage Preferred Currencies dialog to edit the default currency display names. You edit preferred currency name values to change the currency labels that are displayed in all modules associated with BI dashboards. For example, you might want to change the 'Local Currency' label from 'Ledger Currency' to 'Local Currency'.

To edit currency display names:

1. Login to Oracle BI Applications Configuration Manager as the BI Applications Administrator user.

2. From the **Tasks** bar, click **Manage Preferred Currencies** to display the Manage Preferred Currencies dialog.

3. Select a currency in the Preferred Currencies list. Selecting the currency displays the associated modules in the bottom table.

4. Click the value in the **Preferred Currency Name** column (or click the Edit icon) to display the Preferred Currency Name dialog.

5. In the Preferred Currency Name field, specify a currency name. This is the name that will appear for end users in the Currency drop-down list, located in Preferences tab of the My Accounts dialog of Oracle Business Intelligence.

6. Click **Save and Close**.

Enabling Document Currency

By default, document currency is excluded from the Currency drop-down list (located in the Preferences tab of the My Accounts dialog in Oracle Business Intelligence). To include Document currency in the Currency drop-down list, you must remove a specific filter from all of the following security groups in the BI metadata repository (RPD):

- OBIA_PROJECT_CURRENCY_PREFERENCES
- OBIA_HCM_CURRENCY_PREFERENCES
- OBIA_SCM_CURRENCY_PREFERENCES
- OBIA_FINANCIAL_CURRENCY_PREFERENCES
- OBIA_MFG_CURRENCY_PRFERENCES
- OBIA_PROCUREMENT_CURRENCY_PREFERENCES
- OBIA_MARKETING_CURRENCY_PREFERENCES
- OBIA_PARTNER_CURRENCY_PREFERENCES
- OBIA_CRM_CURRENCY_PREFERENCES
- OBIA_SALES_CURRENCY_PREFERENCES

Note: The security groups listed above are displayed in Oracle BI Administration Tool on the Application Roles tab on the Identity Manager dialog.

To enable document currencies:

1. In Oracle BI Administration Tool, click **Manage**, then **Identity,** to display the Identity Manager dialog.

2. In the Identity Manager dialog, click **BI Repository**.

3. Display the **Application Roles** tab.

4. For each of the security groups in the RPD list above, do the following:

   a. Double-click the security group to display the **Application Role - <Name>** dialog.

   b. Click **Permissions**, and then display the **Data Filters** tab.

   c. In the **Data Filter** column, remove the following filter:

   ```
   AND "Core"."Fact - Preference List"."Currency Preference
   Code" <> 'Document Currency'
   ```

   For example, the filter before editing:

   ```
   "Core"."Fact - Preference List"."Module Code" = 'PROJECT_
   AN' AND "Core"."Fact - Preference List"."Currency
   Preference Flag" in ('W', 'B') AND   "Core"."Fact -
   Preference List"."Currency Preference Code" <> 'Document
   Currency'
   ```

   For example, the filter after editing:

   ```
   "Core"."Fact - Preference List"."Module Code" = 'PROJECT_
   AN' AND "Core"."Fact - Preference List"."Currency
   Preference Flag" in ('W', 'B')
   ```

5. Save the changes.

   If you edited the metadata repository in Offline mode, then you must use Oracle Fusion Middleware Control to upload the RPD file.

   Tip: In Oracle Fusion Middleware Control, use the Upload BI Server Repository area on the Business Intelligence\coreapplication\Deployment\Repository tab. For detailed instructions on how to upload an RPD file, see the section "Using Fusion Middleware Control to Upload a Repository and Set the Oracle BI Presentation Catalog Location" in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

3.3.16.5 Setting Languages for Data Load into the Business Analytics Warehouse

Oracle BI Applications supports data loads in multiple languages. You specify the languages for data loads in Oracle BI Applications Configuration Manager.

To specify Oracle Business Analytics Warehouse languages:

1. Log in to Oracle BI Applications Configuration Manager as a user with the Business Intelligence Applications Administrator duty role.

2. Select the **Manage BI Applications** link to display the Manage Business Intelligence Applications dialog.

3. Display the **Warehouse Languages** tab.

4. Specify the languages from which data is to be extracted from the list of languages displayed in the table by selecting **Installed** from the Installed drop down. American English is the default installed language. All other languages are disabled.

> **Note:** When you mark a language as Installed, the Data Load Parameter LANGUAGE_LIST is populated internally with the list of selected languages. This parameter list is used during data extraction to extract data in the selected languages.

5. Set the Base Language by selecting the **Language** record and clicking the **Set Base Language** icon in the table toolbar. By default, American English is the Base Language.

> **Note:** The base language is used to generate pseudo-translation records in Oracle Business Analytics Warehouse for any languages missing in the Source system.

6. Click **Save** to save your changes.

3.3.16.6 Restoring the BI Metadata Repository File for Oracle BI Applications

The BI metadata repository is trimmed during the BI Provisioning phase in a Fusion Applications installation to contain only RPD projects for Oracle Fusion Transactional Business Intelligence (OTBI). Oracle BI Applications requires a full (that is, untrimmed) RPD for ETL. To deploy Oracle BI Applications, you must restore the Golden RPD and merge it with updates and customizations in the Runtime RPD.

> **Note:** The trimmed BI metadata repository is referred to as the Runtime RPD, and is located in:
>
> ```
> BI_INSTANCE\bifoundation\OracleBIServerComponent\coreapplication_
> obis1\repository\OracleBIApps.rpd
> ```
>
> The full (that is, untrimmed) BI metadata repository is referred to as the Golden RPD, and is located in:
>
> ```
> BI_ORACLE_
> HOME/biapps/admin/provisioning/OracleBIServerComponent/OracleBIApps
> .rpd
> ```

To restore the BI Metadata Repository file for Oracle BI Applications perform the following tasks:

1. Section 3.3.16.6.2, "Create Directories and Copy in the RPD Files".

2. Section 3.3.16.6.3, "Open the Runtime RPD and Obtain a List of Projects".

3. Section 3.3.16.6.4, "Extract the Trimmed Metadata from the Golden RPD".

4. Section 3.3.16.6.5, "Equalize the Runtime RPD and the Golden RPD".

5. Section 3.3.16.6.6, "Create a Patch for the New RPD".

6. Section 3.3.16.6.7, "Apply the Patch for the New RPD".

7. Section 3.3.16.6.8, "Upload the New RPD".

3.3.16.6.1 Before you start Before you start, you need the following:

■ A copy of the Runtime RPD.

- The password for the Runtime RPD. To obtain the password, go to the LDAP's Credential Store, and navigate to cn=oracle.bi.system, cn=CredentialStore, cn=FusionDomain, cn=JPSContext, cn=FAPolicies, and obtain the password.

- A copy of the Golden RPD.

- The password for the Golden RPD (the default is Admin123).

3.3.16.6.2 Create Directories and Copy in the RPD Files Create the following directory structure and set up the RPD files.

1. Create the following directories:

   Work\

   Work\GoldenRPD

   Work\RuntimeRPD

   Work\ExtractRPD

   Work\Patch

   Work\RestoredRPD

   Work\EqualizeRPD

2. Copy the Golden RPD and the Runtime RPD to the corresponding folders:

   a. Copy the Golden RPD (OracleBIApps.rpd) to the \Work\GoldenRPD directory and rename it GoldenRPD.rpd.

   Note: The Golden RPD is located in the following location:

   ```
   BI_ORACLE_
   HOME/biapps/admin/provisioning/OracleBIServerComponent/OracleBIApps.rpd
   ```

   b. Copy the Runtime RPD (OracleBIApps.rpd) to the \Work\RuntimeRPD directory, and rename it RuntimeRPD.rpd.

   Note: The Runtime RPD is located in the following location:

   ```
   BI_INSTANCE\bifoundation\OracleBIServerComponent\coreapplication_
   obis1\repository
   ```

3.3.16.6.3 Open the Runtime RPD and Obtain a List of Projects

1. In Oracle BI Administration Tool, open the Runtime RPD in Offline mode.

   For example, open C:\Work\RuntimeRPD\RuntimeRPD.rpd.

2. From the menu, choose Manage, then Projects, to display the Projects Manager dialog.

3. Note down or copy into a file the project names in this list, using the upper and lower case letters and spaces exactly as displayed.

   For example, "Fusion Incentive Compensation Transactional Analysis," "Fusion Marketing Transactional Analysis." You will use this list of project names in the next task.

3.3.16.6.4 Extract the Trimmed Metadata from the Golden RPD

1. Open a command prompt.

2. Navigate to the bin directory of the Oracle BI Administration Tool installation, and open the bi_init.bat file.

For example, C:_CLIENT_INSTALL_DIR_
\\oraclebi\\orahome\\bifoundation\\server\\bin\\bi_init.bat.

3. Edit the bi_init.bat file, and copy into memory the sections where the environment variables are being set.

For example, copy the following commands:

```
set ORACLE_HOME=C:\RUP3\oraclebi\orahome
set ORACLE_INSTANCE=C:\RUP3\oraclebi\orainst
set ORACLE_BI_APPLICATION=coreapplication
```

4. In the command prompt, execute the environment commands by pasting in the commands from Step 3 and pressing Enter.

5. In the command prompt, execute the extractprojects command using the following parameters and values:

-B *<Path>*\\GoldenRPD.rpd

-O *<Path>*\\ExtractRPD.rpd

-I "Project 1" -I "Project 2" -I "Project *<n>*"

Note: You must specify the Project names that you obtained in Section 3.3.16.6.3, "Open the Runtime RPD and Obtain a List of Projects.".

-P Password of the Golden RPD.

Note: The -I 'Project Name' command must be repeated for each project.

For example,
C:\\RUP3\\oraclebi\\orahome\\bifoundation\\server\\bin>extractprojects.exe -B
C:\\Work\\GoldenRPD\\GoldenRPD.rpd -O
C:\\Work\\ExtractRPD\\ExtractRPD.rpd -P Admin123 -I "Fusion Incentive
Compensation Transactional Analysis" -I "Fusion Marketing Transactional
Analysis" -I "Fusion Partner Transactional Analysis" -I "Fusion Sales Transactional
Analysis" -I "Marketing Analytics Fusion Edition" -I "Partner Analytics Fusion
Edition" -I "Sales Analytics Fusion Edition"

The output from the extractprojects command is an RPD named ExtractRPD.rpd that will be referred to as the Extract RPD. The Extract RPD contains the same set of projects as the Runtime RPD.

3.3.16.6.5 Equalize the Runtime RPD and the Golden RPD In a command project, execute the equalizerpd command using the following parameters and values:

-C *<Path>*\\ExtractRPD.rpd

-B Password of the Extract RPD

-F *<Path>*\\RuntimeRPD.rpd

-E Password of the Runtime RPD

-O *<Path>*\\EqualizeRPD.rpd

For example:
C:\\RUP3\\oraclebi\\orahome\\bifoundation\\server\\bin>equalizerpds.exe -C
C:\\Work\\ExtractRPD\\ExtractRPD.rpd -B Admin123 -F
C:\\Work\\RuntimeRPD\\RuntimeRPD.rpd -E welcome1 -O
C:\\Work\\EqualizeRPD\\EqualizedRPD.rpd

The output from the equalizerpd command is an RPD named EqualizeRPD.rpd that will be referred to as the Equalized RPD. This Equalized RPD contains the merged metadata from the Runtime RPD and the Golden RPD.

3.3.16.6.6 Create a Patch for the New RPD The patch being created is a diff between the Equalized RPD and the Extracted RPD, this patch will contain the all the configuration and customization changes that have been made.

1. In Oracle BI Administration Tool, open the Equalized RPD.

2. Choose File, then Compare, to display the Compare repositories dialog.

3. From the Compare repositories dialog, open the Extract RPD as the Original Repository.

4. When prompted, specify the Golden RPD (that is, Admin123) password to open the Extract RPD.

    The Oracle BI Administration Tool analyzes the RPDs and displays a list of differences.

5. Click Create Patch to display Create Patch dialog, and specify a patch file name and location (for example: C:\Work\Patch\patch.xml).

6. Click Save.

3.3.16.6.7 Apply the Patch for the New RPD Apply the patch obtained from the previous task using the biserverxmlexec command with the following commands and parameters:

-P Password of GoldenRPD

-I Path_Name\File_Name of the Patch.xml file

-S Password of the RuntimeRPD

-B *<Path>*\GoldenRPD.rpd

-O *<Path>*\RestoreRPD.rpd

Note: RestoreRPD.rpd referred here is the name of the Restored RPD

For example:
C:\RUP3\oraclebi\orahome\bifoundation\server\bin>biserverxmlexec.exe -P Admin123 -I C:\Work\Patch\patch.xml -S welcome1 -B C:\Work\GoldenRPD\GoldenRPD.rpd -O C:\Work\RestoreRPD\RestoreRPD.rpd

3.3.16.6.8 Upload the New RPD Use Oracle Fusion Middleware Control to upload the new RPD.

For example, if you specified the output file in the previous task as '-O C:\Work\RestoreRPD\RestoreRPD.rpd', then you upload RestoreRPD.rpd.

Tip: In Oracle Fusion Middleware Control, use the Upload BI Server Repository area on the Business Intelligence\coreapplication\Deployment\Repository tab.

For detailed instructions on how to upload an RPD file, see the section "Using Fusion Middleware Control to Upload a Repository and Set the Oracle BI Presentation Catalog Location" in *Oracle Fusion Middleware System Administrator's Guide for Oracle Business Intelligence Enterprise Edition*.

3.3.16.7 Mapping Externally Conformed Domains

Before you run the domains load plan, you must complete the mapping of externally conformed domains using the Manage Externally Conformed Domains page in Oracle BI Applications Configuration Manager. For instructions on completing this procedure, see *Oracle Business Intelligence Applications Release Notes*.

3.3.16.8 Running the Domains Load Plan

You must define, generate, and run a domains load plan to load source-specific data into Oracle BI Applications Configuration Manager tables. This enables Configuration Manager to display the appropriate source-specific values as choices in drop-down lists for setup objects.

Note: Before you perform this step you must have completed the procedure Section 3.3.16.2, "Registering Source Systems and Propagating Connection Details to ODI."

To define, generate and run the domains load plan:

1. Define the domains load plan:

    a. In the Tasks pane of Oracle BI Applications Configuration Manager, select **Manage Load Plans**, which appears under the Load Plans Administration heading.

    The Manage Load Plans page is displayed.

    b. In the Load Plans toolbar, click the **Add** icon.

    The Create Load Plan page is displayed.

    c. On the first page of the Create Load Plan series, specify the following information:

Field	Description
Name	Enter a unique name for the load plan.
Description	(Optional) Enter additional information about the load plan.
Load Plan Type	Select **Domain-only Extract and Load (SDE and SIL).**
Source Instances	Select a source instance. If you do not select an instance, then all instances are selected by default.

    d. Click **Next.**

    The second page of the Create Load Plan series is displayed.

    e. In the Available Fact Groups tab, select the fact groups you want to include in the domains load plan definition.

    Note that fact groups might belong to a hierarchy of fact groups. You can select only the top level parent fact group and not a child fact group.

    A load plan must contain at least one fact group. Multiple fact groups may be selected from one or more data sources.

    f. Click **Save**. A submenu is displayed with the following options:

    Click **Save** to save the load plan. After a load plan is saved, it is displayed in the Load Plans master list.

    Click **Save and Generate Load Plan** to save the load plan and immediately generate it.

Note that the generation process in Oracle BI Applications Configuration Manager propagates the load plan properties to the ODI Repository, where the load plan is built

2. If you did not generate the load plan upon saving in the previous step, then generate it by doing the following:

   a. In the Load Plans master list, select the domains load plan you defined in step 1.

   b. In the Load Plans toolbar, click the **Generate** icon.

   The Generation Status column indicates the progress of the generation process. The process must complete successfully before you can move on to the next step. Click the **Refresh** icon to refresh the display.

3. Run the domains load plan by selecting it in the master list, and clicking the **Execute** icon on the toolbar.

3.3.16.9 Granting Users Access to Configuration Manager, FSM and ODI

Work with your security administrator to grant users access to Oracle BI Applications Configuration Manager, Functional Setup Manager, and ODI.

Access to Configuration Manager and Functional Setup Manager is controlled through the following duty roles.

- BI Applications Administrator Duty

- BI Applications Functional Developer Duty

- BI Applications Implementation Manager Duty

- Load Plan Operator Duty

- Load Plan Administrator Duty

The security administrator must grant the appropriate duty roles to a user based on the user's job responsibilities. For information on the Configuration Manager and Functional Setup Manager screens that each duty role has access to, see *Oracle Business Intelligence Applications Security Guide*.

The BI Applications administrator, load plan operator, and load plan administrator users will require appropriate access to ODI. In addition to these users being created in the LDAP system, you must create these users in the ODI Repository and grant them the Supervisor profile or an appropriate ODI profile. The BI Applications administrator must be granted the Supervisor role in ODI. Work with your security administrator to grant the duty roles.

For more information about managing security in ODI, see *Oracle Fusion Middleware Developer's Guide for Oracle Data Integrator*.

3.3.17 Next Steps

After you complete the setup tasks described above, Oracle BI Applications is ready for functional configuration, which is accomplished using Oracle BI Applications Configuration Manager and Functional Setup Manager. To enable functional configuration, you must provide the Oracle BI Applications Configuration Manager URL to your implementation managers and functional developers. To learn about the functional configuration process for Oracle BI Applications, see *Oracle Business Intelligence Applications Configuration Guide*.

Furthermore, after Oracle BI Applications analyses and dashboards have been tested and the data validated, the Oracle BI Applications system administrator will need to inform the Fusion Applications Administrator to enable the appropriate embedded analyses and dashboard (ADR) regions in Fusion Applications. The ADR regions are enabled using Functional Setup Manager for Fusion Applications.

A

Repository Creation Utility Screens

This appendix describes the options available when you run the Repository Creation Utility.

- Welcome
- Create Repository
- Database Connection Details
- Select Components
- Schema Passwords
- Custom Variables
- Map Tablespaces
- Summary
- Completion Summary

A.1 Welcome

This is the first screen that appears when RCU is started. Note the navigation pane on the left that summarizes the tasks that RCU will help you complete. Each item in the navigation pane represents a specific screen that will prompt you for information required to create or drop your schemas.

Click **Skip This Page Next Time** if you do not want to see the Welcome screen the next time you start RCU.

A.2 Create Repository

Use this screen to select the action you want to perform, as described in the following table:

Table A–1   RCU Actions

Action	Description
Create	Select this option to create component schemas in the database.
Drop	Select this option to remove component schemas from the database.

A.3 Database Connection Details

Use this screen to specify the connection credentials to the database in which you will be creating or dropping your schemas. Select one of the following depending on your database:

- Specifying Connection Credentials for Oracle Databases and Oracle Databases Enabled for Edition-Based Redefinition

- Specifying Connection Credentials for Oracle MySQL Databases

- Specifying Connection Credentials for Microsoft SQL Server Databases

- Specifying Connection Credentials for IBM DB2 Databases

Click **Next** when you are finished entering the connection credentials for your database. A screen indicating the progress of the installer establishing the connection with the specified database will appear. If an error occurs while the connection is being established, the error message(s) appear in the Messages field on the Database Connection Details screen.

Specific database requirements for the various schemas can be found in the *Oracle Fusion Middleware System Requirements and Specifications* document.

For certified database versions, see the *System Requirements and Supported Platforms for Oracle Fusion Middleware 11gR1* document, which is available on the Oracle Fusion Middleware Supported System Configurations page.

> **Note:**   If you are running the RCU for Oracle Business Analytics Applications Suite, see the *Oracle Business Intelligence Applications Installation Guide* for information about this screen.

A.3.1 Specifying Connection Credentials for Oracle Databases and Oracle Databases Enabled for Edition-Based Redefinition

For Oracle databases and Oracle databases enabled for edition-based redefinition, specify the following connection credentials:

Table A–2   Oracle Database Connection Credentials

Field	Description
Host Name	Enter the name of the server where your database is running. Use the following format: `examplehost.exampledomain.com` For Oracle RAC databases, specify the VIP name or one of the node names in this field.
Port	Enter the port number for your database. The default port number for Oracle databases is 1521.

Table A–2 (Cont.) Oracle Database Connection Credentials

Field	Description
Service Name	Specify the service name for the database. Typically, the service name is the same as the global database name.
	If you are unsure what the service name for your database is, you can obtain it from the SERVICE_NAMES parameter in the database's initialization parameter file. If the initialization parameter file does not contain the SERVICE_NAMES parameter, then the service name is the same as the global database name, which is specified in the DB_NAME and DB_DOMAIN parameters.
	For Oracle RAC databases, specify the service name of one of the nodes in this field. For example:
	`examplehost.exampledomain.com`
Username	Enter the user name for your database. The default user name is SYS.
Password	Enter the password for your database user.
Role	Select the database user's role from the drop-down list:
	■ Normal
	■ SYSDBA
	All schemas installed on an Oracle database require the SYSDBA role. If you are creating schemas for Oracle Internet Directory (OID), you must use the user SYS and the SYSDBA role. See "Required Privileges for Oracle Databases" in the System Requirements and Specifications document for more information.

A.3.2 Specifying Connection Credentials for Oracle MySQL Databases

For MySQL databases, specify the following connection credentials:

Table A–3 Oracle MySQL Database Connection Credentials

Field	Description
Host Name	Enter the host name, IP address, or complete server name in host\server format of the server where your database is running.
	For Oracle RAC databases, specify the VIP name or one of the node names in this field.
Port	Enter the port number for your database.
Database Name	Specify the name of your database.
Username	Specify the name of a user with DBA or SYSDBA privileges.
Password	Enter the password for your database user.

A.3.3 Specifying Connection Credentials for Microsoft SQL Server Databases

For Microsoft SQL Server databases, specify the following connection credentials:

Table A–4 Microsoft SQL Server Database Connection Credentials

Field	Description
Unicode Support	Select Yes or No from the drop-down list.
	NOTE: Oracle SOA Infrastructure schemas are created with Unicode support (database tables created with NVARCHAR) only, regardless of the option selected in this field.

Table A–4 (Cont.) Microsoft SQL Server Database Connection Credentials

Field	Description
Server Name	Enter the host name, IP address, or complete server name in host\server format of the server where your database is running.
Port	Enter the port number for your database.
Database Name	Specify the name of your database.
Username	Enter the user name for your database. The user must have SYSDBA or DBA privileges.
Password	Enter the password for your database user.

A.3.4 Specifying Connection Credentials for IBM DB2 Databases

For IBM DB2 databases, specify the following connection credentials:

Table A–5 IBM DB2 Database Connection Credentials

Field	Description
Server Name	Enter the host name, IP address, or complete server name in host\server format of the server where your database is running.
Port	Enter the port number for your database.
Database Name	Specify the name of your database.
Username	Specify the name of a user with DB Owner privileges. The default user name for IBM DB2 databases is db2admin.
Password	Enter the password for your database user.

A.4 Select Components

Use this screen to select the component schemas you want to create or drop.

The following topics are covered in this section:

- Creating Database Users for IBM DB2 Databases
- Creating Prefixes
- Selecting Components and Dependencies
- Specifying Custom Schema Names
- Checking Schema Prerequisites

> **Note:**   If you are creating schemas, you must remember the prefix and schema names for the components you are installing; you will need this information during the configuration phase of Fusion Middleware product installation. Oracle recommends that you write these values down.

- Dropping Schemas

> **Note:**   If you are running the RCU for Oracle Business Analytics Applications Suite, see the *Oracle Business Intelligence Applications Installation Guide* for information about this screen.

A.4.1 Creating Database Users for IBM DB2 Databases

IBM DB2 authenticates its database users using equivalent operating system users. Therefore, prior to running RCU, one operating system user must be created for each schema. The operating system user name must match the schema owner name and must contain only lowercase letters; no all-uppercase or mixed-case names are allowed. For example, if you create a schema named DEV_ODI using RCU, then the operating system user must be named dev_odi (all lowercase letters).

A.4.2 Creating Prefixes

Prefixes are used to create logical groupings of schemas in a database. For example, if you want to create two versions of the MDS schema in the database, you can use different prefixes to uniquely identify each one (for example, TEST_MDS and PROD_MDS). Note that the prefix name and schema name are separated by an underscore (_) character.

> **Note:**   The Oracle Internet Directory (ODS) component cannot be prepended with a custom prefix; there can only be one repository for this component per database.

If you want to create a new prefix for your schemas, select **Create a New Prefix** and specify a new prefix name in the field. The prefix name must be a minimum of one character in length and cannot exceed 12 alphanumeric characters (0-9, a-z, or A-Z) in length (not including the underscore character). Prefixes should not start with a number. No whitespace or special characters are allowed.

> **Note:**   For IBM DB2 databases, prefixes are limited to four characters in length (not including the underscore character).

The default new prefix is DEV. If DEV already exists as a prefix, then DEV1 is used; if DEV1 exists, then DEV2 is the default, and so on.

Use existing prefixes to add additional components to an existing repository in the database. To use an existing prefix, select **Select an Existing Prefix** and choose a prefix from the drop-down list.

A.4.3 Selecting Components and Dependencies

When you select a component, any other components that may be required by the component you select are also selected. For example, if you select **SOA and BPM Infrastructure**, then all schemas in this category are selected along with the **Metadata Services** schema. The **Metadata Services** schema is required by each component in **SOA and BPM Infrastructure**.

If a component has a plus sign (+) next to its name, then there are sub components available. Click on the plus sign (+) to expand the category to view all sub components. If you want to select a component with all its subcomponents, click on the top-most box with the plus sign (+).

A.4.4 Specifying Custom Schema Names

Click on the name of any schema in the "Schema Owner" column to change the name of the schema. Schema names can only contain alphanumeric characters (0-9, a-z, or A-Z) and are case-sensitive.

> **Note:** The Oracle Internet Directory (ODS) component cannot be prepended with a custom prefix; there can only be one repository for this component per database.

A.4.5 Checking Schema Prerequisites

Click **Next** when you are finished specifying your prefix, schema names, and selecting components. A screen indicating the progress of component prerequisite checking appears. If an error occurs during the prerequisite checking, the error message(s) appear in the Messages field on the Select Components screen.

A.4.6 Dropping Schemas

To remove schemas from the database:

1. Select the prefix associated with the schema or schemas you want to drop.

2. select the component(s) whose schemas you want to drop.

A.5 Schema Passwords

Use this screen to specify the password for your schemas.

There are three ways to specify schema passwords; they are described in the following table:

Table A–6   Options for Specifying Schema Passwords

Option	Description
Use same password for all schemas	Select this option if you want to use a single password for all schemas and their auxiliary schemas. In the Password field, enter your password. Enter your password again in the Confirm Password field.
Use main schema passwords for auxiliary schemas	Select this option if you want to specify different passwords for the main schemas, but still have the same password used for their respective auxiliary schemas. If you select this option, only the main schemas will be visible in the table. For each schema, you must enter each schema's password in the Password column in the table, and enter the same password in the Confirm Password column.
Specify different passwords for all schemas	Select this option if you want to specify unique passwords for the main schemas and auxiliary schemas. If you select this option, all main schemas and auxiliary schemas will be visible in the table. For each schema and auxiliary schema, you must enter the password in the Password column in the table, and enter the same password in the Confirm Password column.

> **Note:** You must remember the passwords you enter on this screen; you will need this information during the configuration phase of Fusion Middleware product installation. Oracle recommends that you write these values down.

A.6 Custom Variables

Use this screen to specify additional configuration information required by the components during runtime.

The RCU uses .dmp files to create the required schemas. Before you perform the action in this screen, you must copy the .dmp files for each schema to a directory with global write access on the appropriate database server host machine. (RCU writes log files to this directory). The .dmp files are located in BIA_RCU_ HOME\rcu\integration\biapps\schema.

In the Value field in the Custom Variables screen, for each schema enter the directory path of the folder that contains the .dmp file.

Note: Do not include the name of the .dmp file in the directory path.

A.7 Map Tablespaces

Use this screen to specify your tablespace mapping information.

This screen only appears if you selected the **Create** option on the Create Repository screen. The following topics are covered:

- Default Tablespace Mappings
- Changing Default and Temporary Tablespaces
- Viewing and Changing Additional Tablespaces
- Managing Tablespaces and Datafiles

Click **Next** when you are finished with your tablespace information. A screen will appear asking you to confirm the creation of tablespaces for any new schemas.

> **Note:** RCU only creates tablespaces for those components associated with RCU.

After you click **OK** to continue, a screen indicating the progress of the tablespace creation will appear.

A.7.1 Default Tablespace Mappings

The default tablespace mapping for each component is shown in "Repository Creation Utility Schemas, IDs, and Tablespaces" in the *Oracle Fusion Middleware Repository Creation Utility User's Guide*.

In the Default Tablespace and Temp tablespace columns, you can click on the tablespace cell to select from a list of available additional tablespace names.

> **Note:** OID tablespace names cannot be user specified.

A.7.2 Changing Default and Temporary Tablespaces

To change the default tablespace for a component, select the tablespace name in the "Default Tablespace" column, then select the tablespace name you want to use from the drop-down list. You can have your components use as many or as few tablespaces as desired to suit your configuration.

To change the temporary tablespace for a component, select the tablespace name in the "Temp Tablespace" column, then select the tablespace name you want to use from the drop-down list.

A.7.3 Viewing and Changing Additional Tablespaces

Some components have additional tablespaces associated with their schemas. If this is the case, the **Additional Tablespaces** button will appear on this screen. If none of the selected components have additional tablespaces, then this button will not appear.

To view additional tablespaces associated with the selected components, click the **Additional Tablespaces** button.

To change the tablespace you want to use for a component, click in the "Tablespace Name" column and select the tablespace you want to use from the drop-down list.

A.7.4 Managing Tablespaces and Datafiles

To manage your tablespaces and datafiles, click the **Manage Tablespaces** button.

The following topics are covered in this section:

- Adding, Modifying, and Removing Tablespaces
- Adding, Modifying, and Removing Datafiles

A.7.4.1 Adding, Modifying, and Removing Tablespaces

Only tablespaces that will be created by RCU can be modified or removed. Tablespaces that existed before RCU was launched are visible on this screen but are grayed out and cannot be modified or removed.

Only tablespaces that are used by a component are created. You can specify a new tablespace here, but unless it is actually used by a component it will not be created.

To modify a tablespace, select the tablespace name on the left-hand portion of the screen, and edit the fields as described in the following table:

Table A–7   Modifying a Tablespace

Field	Description
Name	Edit the tablespace name this field to change the name of your tablespace.
Type	Specify whether you want this tablespace to be a temporary tablespace or permanent tablespace.
Block Size (KB)	Specify the block size (in Kilobytes) to be used for data retrieval.
Storage Type	Select **Use Bigfile Tablespace** if you want to create a bigfile tablespace; this is typically used if you have single large files instead of multiple small files. Select **Use Automatic Segment Space Management** if you want to use bitmaps to manage the free space within segments.

To add a tablespace, click **Add** and specify the same details as above (for modifying a tablespace) for your new tablespace.

To remove a tablespace, select the tablespace name from the navigation tree, then click **Remove**. This tablespace will not get created.

A.7.4.2 Adding, Modifying, and Removing Datafiles

In the Datafiles section, specify the datafiles that make up the selected tablespace. Select one of the following for more information:

- Adding a Datafile

- Modifying a Datafile

- Deleting a Datafile

A.7.4.2.1 Adding a Datafile To add a datafile, click the icon with the plus sign (+).

The Add Datafile screen appears.

Provide the information described in the following table:

Table A–8   Adding a Datafile

Field	Description
File Name	Specify the name of the datafile.
	NOTE: Datafile names must be less than 30 characters in length, and names with a dash or hyphen (-) character are not permitted.
File Directory	Specify the location where this datafile will reside.
Size	Specify the initial size of the datafile. Use the drop-down list to specify the size in kilobytes (KB), megabytes (MB), or gigabytes (GB).
Automatically extend datafile when full (AUTOEXTEND)	Select **Automatically extend datafile when full (AUTOEXTEND)** if you want to automatically extend the size of your datafile when it becomes full. In the "Increment" field, specify the size by which your datafile should be increased each time it becomes full. Use the drop-down list to specify the size in kilobytes (KB), megabytes (MB), or gigabytes (GB).
	If you want to limit maximum size of the datafile, specify this value in the "Maximum Size" field.

A.7.4.2.2 Modifying a Datafile To modify or edit a datafile, select the icon next to the datafile name you want to edit, then click the icon with the pencil.

The Edit Datafile screen appears:

Provide the information described in the following table:

Table A–9   Modifying a Datafile

Field	Description
File Name	Specify the name of the datafile.
	NOTE: Datafile names must be less than 30 characters in length, and names with a dash or hyphen (-) character are not permitted.
File Directory	Specify the location where this datafile resides.
Size	Specify the initial size of the datafile. Use the drop-down list to specify the size in kilobytes (KB), megabytes (MB), or gigabytes (GB).

Table A–9   (Cont.) Modifying a Datafile

Field	Description
Automatically extend datafile when full (AUTOEXTEND)	Select **Automatically extend datafile when full (AUTOEXTEND)** if you want to automatically extend the size of your datafile when it becomes full. In the "Increment" field, specify the size by which your datafile should be increased each time it becomes full. Use the drop-down list to specify the size in kilobytes (KB), megabytes (MB), or gigabytes (GB).
	If you want to limit maximum size of the datafile, specify this value in the "Maximum Size" field.

A.7.4.2.3   Deleting a Datafile To delete a datafile, select the icon next to the datafile name you want to delete, then click the icon with the "X".

A.8 Summary

This screen provides a summary of the actions that are about to be performed.

Review the information on this screen, and click **Create** to begin schema creation, or **Drop** to begin schema removal.

A screen will appear indicating the progress of the actions being performed.

A.9 Completion Summary

This screen provides a summary of the actions that were performed.

The log file names for each component that are visible in the "Logfile" column. The main RCU log and component log files are written to the following directory on UNIX operating systems:

```
RCU_HOME/rcu/log/logdir.date_timestamp
```

On Windows operating systems:

```
RCU_HOME\rcu\log\logdir.date_timestamp
```

If there were any problems encountered during schema creation, you can troubleshoot the issue using the log files.

If errors are encountered during a Create operation, or if a Create operation fails for any component, the **Cleanup for failed components** checkbox appears on this page and is selected by default. If selected, RCU will perform cleanup operations for the component that failed during the Create operation. If you choose not to select this checkbox, you can cleanup the failed component at a later time by performing a Drop operation for the failed component(s).

B

Generating DDL and Assigning Tablespaces to Tables and Indexes

This appendix describes how to generate DDL to deploy Business Analytics Warehouse tables and how to assign tablespaces to tables and indexes.

This appendix contains the following topics:

- Section B.1, "Overview"
- Section B.2, "Generating the Business Analytics Warehouse DDL"
- Section B.3, "Patching Oracle BI Applications"
- Section B.4, "Assigning Tablespaces"

B.1 Overview

The Business Analytics Warehouse tables are automatically deployed during the installation process when the Business Analytics Applications Suite Repository Creation Utility (RCU) executes a shipped DDL script. The RCU does not prompt for which tablespace to assign to the individual tables and related indexes nor does it provide a mechanism for you to alter the shipped DDL. To introduce changes to the Business Analytics Warehouse data model, you use ODI to generate a new DDL script.

You may want to regenerate the Business Analytics Warehouse DDL for the following reasons:

- You may want to modify the Business Analytics Warehouse, either by modifying existing tables or creating new ones.
- You may want to have separate development environments. In this case you will need to use ODI to generate the DDL to be executed in these environments to deploy the Business Analytics Warehouse tables rather than run the RCU for each environment.
- The default tablespace assigned to the Business Analytics Warehouse database user is used for all tables and indexes when those objects are created by the RCU. You may want to assign different tablespaces to the DW tables other than the default tablespace associated with the database user.
- If a patch or upgrade is applied that alters an ODI data store or introduces a new ODI data store, the corresponding database table will need to be altered or created.

You can make changes directly in the database but these changes need to be synchronized with the ODI Repository. This is done by running the Oracle BI Applications reverse knowledge module (RKM) to bring in the changes into ODI. If

this RKM is not run, ODI will not be aware of these changes, which can lead to problems when populating the affected warehouse table.

B.2 Generating the Business Analytics Warehouse DDL

Follow this procedure to generate Business Analytics Warehouse DDL.

To generate Business Analytics Warehouse DDL:

1. Launch ODI Studio, and display the Designer navigator.

2. In the Projects editor, expand the following folders: Components, DW, Oracle, Generate DW DDL.

3. Execute the GENERATE_DW_DDL scenario:

   Specify the following information:

Option	Description
CREATE_SCRIPT_FILE	If set to True, this will create a .sql file with the DDL script. This is useful to see what the changes are. If no value is provided for the SCRIPT_LOCATION option, the procedure will create a file in the oracledi directory named biappsddl.sql.
REFRESH_MODE	FULL or INCREMENTAL
	FULL will generate the DDL for the entire data warehouse using CREATE statements. The Table Mask option is ignored.
	INCREMENTAL will compare the ODI data stores with the tables in the database. This option should be used with the Table Mask option because this process can take a very long time comparing the entire data warehouse.
CHARCLAUSE	Provided for Unicode support. If set to True, the CHAR clause will be included in the DDL.
RUN_DDL	If set to True, the DDL will run against your warehouse.
SCRIPT_LOCATION	If you are creating a script, this field indicates the path where the script will be created.
TABLE_MASK	Default % will compare all tables. If you want to create DDL for a subset of tables only or just a single table, you can change this value. For instance, to create a diff script for dimension tables, you would set this value to W_%_D.

Keep the following in mind when introducing changes in ODI:

- **Full mode** generates a script that creates all tables and sequences, regardless of what may already be deployed in the database. **Incremental mode** compares the ODI and database definition of the tables and columns. Neither mode creates, modifies or drops indexes.

- **Add or modify columns**:

  - **Add column:** ODI allows duplicate column names but you will get an error when deploying the DDL to the database.

  - **Modify column:**

    - Column renaming in ODI will be treated as a drop of the existing column and a new column will be added in the database. This means any existing data

in that column is lost. The procedure works on column name. When generating the DDL, the procedure compares the database and ODI definitions of the columns. If a column has been renamed in ODI, that column will not be found in the database so it is added.

- Changes to datatype, scale, precision, nullability are supported as ALTER statements

- You should avoid altering preconfigured columns. They should introduce their own custom column if they need a change in functionality.

- Existing columns can be changed to a larger size but should not be reduced to a smaller size. Similarly, column data types can be changed to one that already accommodates existing data (CHAR to VARCHAR, DATE to DATETIME) but should not be changed to less accommodating datatype (VARCHAR to NUMBER). ODI does not prevent users from making this kind of change but when deploying the DDL, users will likely encounter issues.

- **Delete column:** You should not delete preconfigured columns. You should only delete custom columns. If a column is deleted from the ODI Repository, it will be dropped from the table using an ALTER statement. This is done by identifying those columns that exist in the database but do not exist in ODI. (Thus, renaming the column in ODI results in a drop and add statements being generated).

- **Add or modify indexes**

  - **Add index**: ODI allows duplicate index names and duplicate index definitions, but you will get an error when deploying the DDL on the database.

  - **Modify index**:

    - Indexes are only dropped and created during the execution of a load plan. Indexes are not synchronized by this procedure.

    - Changes to preconfigured indexes is fully supported. Changes to uniqueness and active/inactive are supported. The primary use case is to make a preconfigured index active or inactive

    - Changes to preconfigured index names should be avoided. If a load plan previously executed and created the index, the index will continue to exist with the old name in the database. Because ODI is not aware of this index, problems may occur during the execution of the load plan.

  - **Delete index:**

    - You should only delete custom indexes and not preconfigured indexes.

    - If you do not want a preconfigured index, you should inactivate it.

- **Add or drop a table:** You can add a new table or delete an existing table in OD.

  - If a table is added in ODI and does not exist in the database, it will be added using a CREATE TABLE statement.

  - If a table is deleted from ODI and still exists in the database, a DROP TABLE statement will be generated.

  - You should not delete preconfigured tables.

- **Add or drop a sequence:**

  You should add a sequence in ODI for new tables that includes the ROW_WID column and that follows the format <TABLE_NAME>_SEQ. You should add a

sequence in ODI for new tables that includes the SCD1_WID column and that follows the <TABLE_NAME>_S1W naming convention.

- If a sequence is added in ODI and does not exist in the database, it will be added using a CREATE SEQUENCE statement.

- Sequences deleted from ODI are not dropped from the database.

B.3 Patching Oracle BI Applications

Patching of Oracle BI Applications may require changes to database objects, such as modifying existing tables or introducing new tables. Oracle will provide a patch file that you will use to merge changes with the existing ODI Repository definition. These changes will then need to be deployed to the database. New tables, columns and indexes that you introduced are retained. Any changes you made to preconfigured tables, columns, and indexes must go through a conflict resolution process.

B.4 Assigning Tablespaces

Using the Designer navigator in Oracle Studio, you can assign default tablespaces for the data warehouse tables, such as the W_%_D and W_%_F tables, their associated indexes, and the staging tables, such as the W_%_DS and W_%_FS tables. Indexes are not created by this utility but are created during the ETL process and will reflect the tablespace assigned in ODI.

To assign tablespaces to data warehouse tables:

1. Launch ODI Studio, and display the Designer navigator.

2. In the Models editor, expand Oracle BI Applications model.

3. Edit the Oracle BI Applications model and assign the OBI Tablespace flexfields with the tablespace values to be used for these objects. All data warehouse tables and indexes will use the tablespaces defined here.

4. (Optional) Individual tables can be overridden to use a different tablespace from those assigned at the model level. Edit the particular data store and assign the OBI Tablespace flexfield with the tablespace to be used for this table.

5. (Optional) To assign the tablespace for individual indexes, edit the constraint and assign the OBI Tablespace flexfield value to match the tablespace name to be used.

C

Customizing Oracle-Delivered Presentation Catalog Content

This appendix provides information about customizing the Oracle BI Presentation Catalog preconfigured content.

This appendix contains the following topic:

- Section C.1, "Customizing Oracle-Delivered Presentation Catalog Content"

C.1 Customizing Oracle-Delivered Presentation Catalog Content

The Oracle BI Applications artifacts delivered by Oracle in the Oracle BI Presentation Catalog such as dashboards, analyses, prompts, and filters, are read-only and can be changed only by a user with the BI Platform Administrator role. If you want to customize analyses or dashboards, Oracle recommends that you do not directly modify the Oracle-delivered content. Instead, copy the content you want to change and modify only the copied content.

Note: The BI Platform Administrator role is available only to on-premise and on-demand customers. The role is not available to Oracle Cloud customers.

For information about changing permissions for dashboards and analyses, see the chapter about managing objects in Oracle BI Presentation Catalog in *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Enterprise Edition (Oracle Fusion Applications Edition)* for the Oracle BI Enterprise Edition release that you are using.

D

Available Languages for Oracle BI Applications Release 11.1.1.8.0

This appendix provides a list of the available languages for Oracle BI Applications release 11.1.1.8.0.

This appendix contains the following topics:

- Section D.1, "Available Languages for Release 11.1.1.8.0"

D.1 Available Languages for Release 11.1.1.8.0

The available languages for Oracle BI Applications release 11.1.1.8.0 are listed in Table D–1.

Table D–1   Available Languages for Release 11.1.1.8.0

Language	Code
Arabic	l_ar
Chinese (Simplified)	l_zh-CN
Chinese (Traditional)	l_zh-TW
Croatian	l_hr
Czech	l_cs
Danish	l_da
Dutch	l_nl
English	l_en
Finnish	l_fi
French	l_fr
French-Canadian	l_fr-CA
German	l_de
Greek	l_el
Hebrew	l_he
Hungarian	l_hu
Italian	l_it
Japanese	l_ja
Korean	l_ko

Table D–1   (Cont.) Available Languages for Release 11.1.1.8.0

Language	Code
Norwegian	l_no
Polish	l_pl
Portuguese	l_pt
Portuguese (Brazilian)	l_pt-BR
Romanian	l_ro
Russian	l_ru
Slovak	l_sk
Spanish	l_es
Swedish	l_sv
Thai	l_th
Turkish	l_tr