Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards

Installation Guide

Release 2.5.0

E48999-01

December 2013

ORACLE

Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Installation Guide, Release 2.5.0

E48999-01

Contents

Chapter 5

Chapter 6

Chapter 7

Chapter 8

Chapter 9

Appendix A

Appendix B

Appendix C

Appendix D

Appendix E

Preface

This guide describes how to install and configure Oracle Utilities Extractors and Schema, and Oracle Utilities Analytics Dashboards version 2.5.0, including:

- **Audience**
- **Prerequisite Knowledge**
- **Related Documents**
- **Conventions**
- **Acronyms**

Audience

This guide is intended for anyone interested in the process of installing, upgrading or configuring Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards v2.5.0.

Prerequisite Knowledge

Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards use several technologies. You should have knowledge of the following before configuring and administering Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards:

- Oracle Data Warehouse concepts:

  http://docs.oracle.com/cd/E11882_01/server.112/e25554/toc.htm

- Oracle Warehouse Builder:

  http://docs.oracle.com/cd/E11882_01/owb.112/e10581/toc.htm

- Oracle Data Integrator:

  http://docs.oracle.com/cd/E21764_01/integrate.1111/e12641/overview.htm

- Oracle GoldenGate:

  http://docs.oracle.com/cd/E35209_01/doc.1121/e29397.pdf

- Oracle WebLogic Server:

  http://docs.oracle.com/cd/E15051_01/wls/docs103/pdf.html

- Oracle Business Intelligence Enterprise Edition:

  http://docs.oracle.com/cd/E28280_01/bi.1111/e10544/toc.htm

Related Documents

For more information, refer to the following documents in the Oracle Utilities Analytics documentation library:

- *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards User's Guide*
- *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide*
- *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Installation Guide*
- *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Quick Install Guide*
- *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Release Notes*
- *Oracle Utilities Analytics Dashboards for Oracle Utilities Meter Data Analytics Metric Reference Guide*
- *Oracle Utilities Analytics Dashboards for Oracle Utilities Customer Analytics, Revenue Analytics, and Credit & Collections Analytics Metric Reference Guide*
- *Oracle Utilities Analytics Dashboards for Oracle Utilities Exception Analytics Metric Reference Guide*
- *Oracle Utilities Analytics Dashboards for Oracle Utilities Mobile Workforce Analytics Metric Reference Guide*
- *Oracle Utilities Analytics Dashboards for Oracle Utilities Distribution Analytics and Outage Analytics Metric Reference Guide*
- *Oracle Utilities Analytics Dashboards for Oracle Utilities Work and Asset Analytics Metric Reference Guide*
- *Oracle Utilities Analytics Dashboards for Oracle Utilities Operational Device Analytics Metric Reference Guide*
- *Oracle Utilities Extractors and Schema for Oracle Utilities Customer Care and Billing Data Mapping Guide*
- *Oracle Utilities Extractors and Schema for Oracle Utilities Meter Data Management Data Mapping Guide*
- *Oracle Utilities Extractors and Schema for Oracle Utilities Mobile Workforce Management Data Mapping Guide*
- *Oracle Utilities Extractors and Schema for Oracle Utilities Network Management System Data Mapping Guide*
- *Oracle Utilities Extractors and Schema for Oracle Utilities Operational Device Management Data Mapping Guide*
- *Oracle Utilities Extractors and Schema for Oracle Utilities Work & Asset Management Data Mapping Guide*

Conventions

The following text conventions are used in this document:

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

Convention	Meaning
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Acronyms

The list of acronyms used in this guide is as explained below:

- **APEX**: Oracle Application Express
- **CC&B**: Oracle Utilities Customer Care and Billing
- **CDC**: Changed Data Capture
- **ELT**: Extraction, Loading and Transformation
- **ETL**: Extraction, Transformation, and Loading
- **MDM**: Oracle Utilities Meter Data Management
- **MWM**: Oracle Utilities Mobile Workforce Management
- **NMS**: Oracle Utilities Network Management System
- **OBIEE**: Oracle Business Intelligence Enterprise Edition
- **ODI**: Oracle Data Integrator
- **ODM**: Oracle Utilities Operational Device Management
- **OGG**: Oracle GoldenGate
- **OUA**: Oracle Utilities Analytics
- **OWB**: Oracle Warehouse Builder
- **WAM**: Oracle Utilities Work and Asset Management

Chapter 1

Introduction

This chapter provides an overview of the installation of Oracle Utilities Analytics. This includes:

- **About Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards**
- **About Oracle Utilities Analytics Installation**
- **What's New in Oracle Utilities Analytics v2.5.0?**

About Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards

Oracle Utilities Extractors and Schema provides the out of the box extraction and transformation, and loads data from the source application to data warehouse. Oracle Warehouse Builder is used to validate and load the data to the data warehouse.

With Oracle Utilities Analytics release 2.5.0, the extraction, transformation and load processes have started to move to Oracle GoldenGate (OGG) and Oracle Data Integrator (ODI). Over next few releases, all the old extractors will move from Oracle Warehouse Builder to Oracle Data Integrator.

In release 2.5.0, the following products support Oracle GoldenGate and Oracle Data Integrator based Extract, Load and Transform (ELT):

- Oracle Utilities Customer Care & Billing (CCB)
- Oracle Utilities Operational Device Management (ODM)

The following products will continue to use Oracle Warehouse Builder based Extract, Transform and Load (ETL) in the release 2.5.0:

- Oracle Utilities Network Management System (NMS)
- Oracle Utilities Work and Asset Management (WAM)
- Oracle Utilities Meter Data Management (MDM)
- Oracle Utilities Mobile Workforce Management (MWM)

Oracle Utilities Analytics Dashboards provides the out of the box reports based on Oracle Business Intelligence Enterprise Edition.

> **Note**: Refer to *Oracle Utilities Analytics Metric Reference Guides* for comprehensive list of all the reports.

This guide helps you install, upgrade, configure Oracle Utilities Extractors and Schema version 2.5.0 and Oracle Utilities Analytics Dashboards version 2.5.0. Unless otherwise stated, this guide

would refer to these two products together as Oracle Utilities Analytics. If any topic is specific to only one of the products, then it would be specifically mentioned.

About Oracle Utilities Analytics Installation

Oracle Utilities Analytics (OUA) version 2.5.0 installation consists of the following components, each of which needs to be installed for a successful installation:

- Star schema definitions
- Extract, Load and Transform (ELT) process built on Oracle Data Integrator (ODI)

  Note 1: In this release of Oracle Utilities Analytics v2.5.0, Oracle Data Integrator based ELT component is only supported for Oracle Utilities Operational Device Management (ODM) and Oracle Utilities Customer Care and Billing (CC&B) source applications.

  Note 2: Oracle GoldenGate (OGG) is utilized to capture the data and this is required only for Oracle Data Integrator based ELT.
- Extract, Transform and Load (ETL) process built on Oracle Warehouse Builder (OWB)

  Note: In this release of Oracle Utilities Analytics v2.5.0, Oracle Warehouse Builder based ETL component is supported for Oracle Utilities Network Management System (NMS), Oracle Utilities Work and Asset Management (WAM), Oracle Utilities Meter Data Management (MDM) and Oracle Utilities Mobile Workforce Management (MWM) source applications.
- Pre-built analytics' dashboards based on Oracle Business Intelligence Enterprise Edition (OBIEE)
- Admin tool

What's New in Oracle Utilities Analytics v2.5.0?

Oracle Utilities Analytics is a set of star schemas, graphic templates, and data processing programs that allows you to build a Business Intelligence (BI) solution to meet your organization's analytic requirements.

With this new release of Oracle Utilities Analytics v2.5.0, the product has started the process of migrating from Oracle Warehouse Builder (OWB) based ETL to Oracle Data Integrator (ODI) based ELT. This migration is planned in a phased manner, spanning across several releases over a period of time. During this migration cycle, ETL for some of the source applications will continue to use Oracle Warehouse Builder, while others will use Oracle Data Integrator.

Note: For information about the new and enhanced products, see *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Release Notes.*

Visit My Oracle Support (http://support.oracle.com) for the most recent service packs and patches for this release to ensure you have the most current version of this product.

Chapter 2

Installation Overview

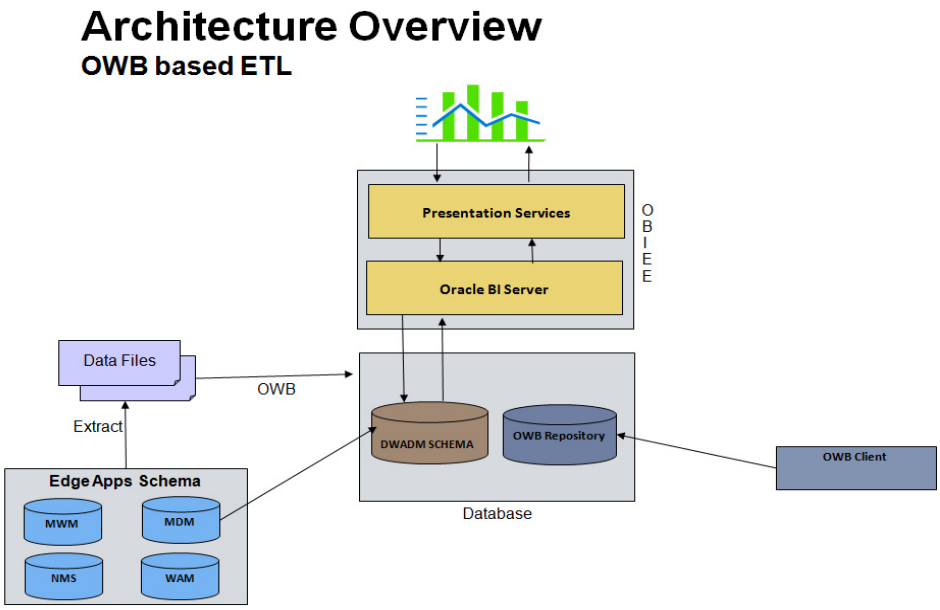
This chapter gives a detailed overview of Oracle Utilities Analytics installation. It includes the following sections:

- **Application Architecture**
- **Installation Types**
- **Installation Components**
- **Installation Scenarios**
- **Media Pack Components**
- **Supported Source Application Versions**

Application Architecture

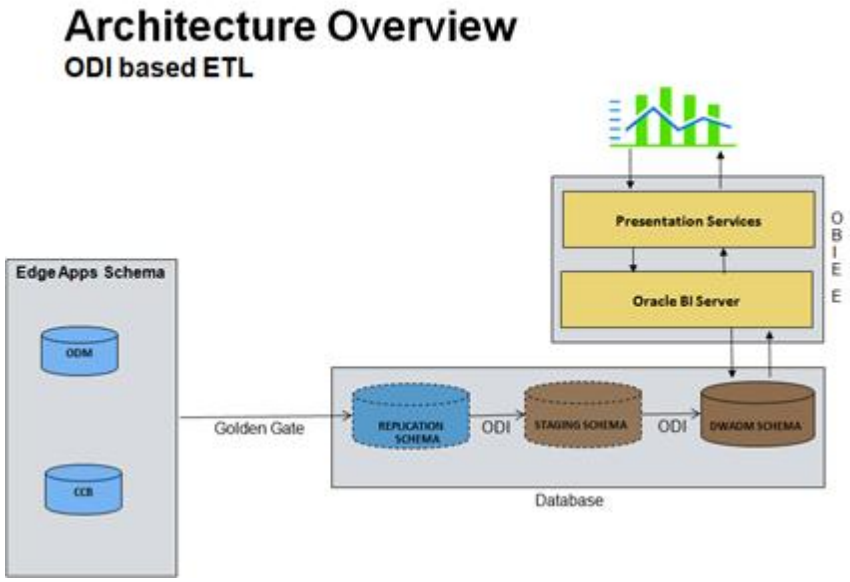
The following diagram shows the architecture of the Oracle Utilities Analytics product when using Extract, Transform and Load (ETL) based on Oracle Warehouse Builder.

Note: Applicable only if you have installed any one of the edge applications such as, Oracle Utilities Network Management System, Oracle Utilities Work and Asset Management, Oracle Utilities Mobile Workforce Management, or Oracle Utilities Meter Data Management).



The following diagram shows the architecture of the Oracle Utilities Analytics product when using Extract, Load and Transform (ELT) based on Oracle Data Integrator.

Note: Applicable only if you have installed Oracle Utilities Operational Device Management, or Oracle Utilities Customer Care and Billing).



Installation Types

The first step in the installation procedure is to determine the installation type based on the installation scenario. The following are the possible installation types:

- **Initial Installation**, an installation from scratch
- **Upgrade**, an upgrade from an earlier version to Oracle Utilities Analytics v2.5.0
- **Demo Installation**, an installation with pre-populated demo data

The following sections describe each of these installations in detail:

Initial Installation

This installation type is applicable when installing Oracle Utilities Analytics for the first time, or from scratch. Each of the following components should be installed during an initial installation:

- Oracle Utilities Analytics Database component.
- Oracle Utilities Analytics ELT component based on Oracle Data Integrator (applicable only if you have installed Oracle Utilities Operational Device Management, or Oracle Utilities Customer Care and Billing).
- Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder (applicable only if you have installed any one of the edge applications such as, Oracle Utilities Network Management System, Oracle Utilities Work and Asset Management, Oracle Utilities Mobile Workforce Management, or Oracle Utilities Meter Data Management).
- Oracle Utilities Analytics Dashboard component
- Oracle Utilities Analytics Admin tool component (applicable only if you use Oracle Data Integrator based ELT).

> **Note**: Refer to the chapter 5 "**Oracle Utilities Analytics Initial Installation**" for the steps involved in installing each of the above components.

Upgrade

This installation type is applicable when upgrading to Oracle Utilities Analytics v2.5.0 from an earlier version.

> **Note**: Refer to the section **Supported Upgrade Paths** of the **Chapter 6**: **Upgrading Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards** to find out how upgrade of your particular version is supported.

Each of the following components should be installed during an upgrade installation.

- Oracle Utilities Analytics Database component.
- Oracle Utilities Analytics ELT component based on Oracle Data Integrator (applicable only if you have installed Oracle Utilities Operational Device Management, or Oracle Utilities Customer Care and Billing).
- Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder (applicable only if you have installed any one of the edge applications such as, Oracle Utilities Network Management System, Oracle Utilities Work and Asset Management, Oracle Utilities Mobile Workforce Management, or Oracle Utilities Meter Data Management).
- Oracle Utilities Analytics Dashboard component
- Oracle Utilities Analytics Admin tool component (applicable only if you use Oracle Data Integrator based ELT).

Note: Refer to the **Chapter 6**: **Upgrading Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards** for the steps involved in upgrading each of the required components.

Demo Installation

This installation type is applicable when installing the demo database component of Oracle Utilities Analytics Dashboards for demonstration, or training purposes. The following components should be installed for a demo installation:

- Oracle Utilities Analytics Demo database component
- Oracle Utilities Analytics Dashboard components

Note: Refer to the **Chapter 7**: **Demo Installation Procedure** for the steps involved in installing each of the required components.

Installation Components

The Oracle Utilities Extractors and Schema v 2.5.0 product installation consists of the following components:

Note: Each of the components listed below has to be installed to complete the Oracle Utilities Analytics installation.

- Oracle Utilities Analytics Database component containing star schemas and product metadata
- Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI)

Note: Oracle Utilities Analytics ELT component based on Oracle Data Integrator should be installed on a database server. This installation is required only if you are installing Oracle Utilities Operational Device Extractor and Schema, or Oracle Utilities Customer Care and Billing Extractor and Schema.

- Oracle Utilities Analytics ETL components based on Oracle Warehouse Builder

Note: Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder should be installed on a database server. This is applicable if you have installed extractor and schema for edge application products other than Oracle Utilities Operational Device Management (ODM) and Oracle Utilities Customer Care and Billing (CC&B).

- Oracle Utilities Analytics Admin tool component installation

The Oracle Utilities Analytics Dashboards version 2.5.0 product installation consists of the following components:

Note: Each of the components listed below has to be installed to complete the Oracle Utilities Analytics installation.

- Oracle Utilities Analytics Dashboards components and answers based on Oracle Business Intelligence Enterprise Edition

Note: Oracle Utilities Analytics Dashboard components should be installed where Oracle Business Intelligence Enterprise Edition is installed on the server.

Oracle Utilities Analytics Dashboards also include the demo database with the pre-populated data that can be used for training or demonstration purposes. Refer to the **Chapter 7**: **Demo Installation Procedure** for the details.

Installation Scenarios

The following installation scenarios are discussed with the respective flow chart diagrams:

- **Installation Scenario 1: Oracle Warehouse Builder based on ETL**

  In this scenario, initial installation of ETL component is based on Oracle Warehouse Builder. This is supported for the following source applications:

  - Oracle Utilities Network Management System (NMS)
  - Oracle Utilities Work and Asset Management (WAM)
  - Oracle Utilities Meter Data Management (MDM)
  - Oracle Utilities Mobile Workforce Management (MWM)

- **Installation Scenario 2: Oracle Data Integrator based on ELT**

  In this scenario, initial installation of ELT component is based on Oracle Data Integrator and Oracle GoldenGate. This is supported for the following source applications:

  - Oracle Utilities Operational Device Management (ODM)
  - Oracle Utilities Customer Care and Billing (CC&B)

- **Installation Scenario 3: ETL based on Oracle Warehouse Builder and Oracle Data Integrator:**

  Both Oracle Warehouse Builder based ETL and Oracle Data Integrator based ELT are needed. This scenario is applicable when you have edge applications from both the scenarios mentioned above.

- **Installation Scenario 4: Upgrade**

  This scenario is applicable to the users who are upgrading to Oracle Utilities Analytics version 2.5.0 from an earlier released version.

  Note 1: See **Media Pack Components** for the list of components comprising the Oracle Utilities Analytics product. Certain prerequisite software may need to be installed before installing each of these components.

  Note 2: See **Supported Source Application Versions** for the supported source application versions.

  Note 3: See the section **Prerequisite Software** of the chapter 4 "**Installation Overview**" for the list of prerequisite software necessary for installing each component.

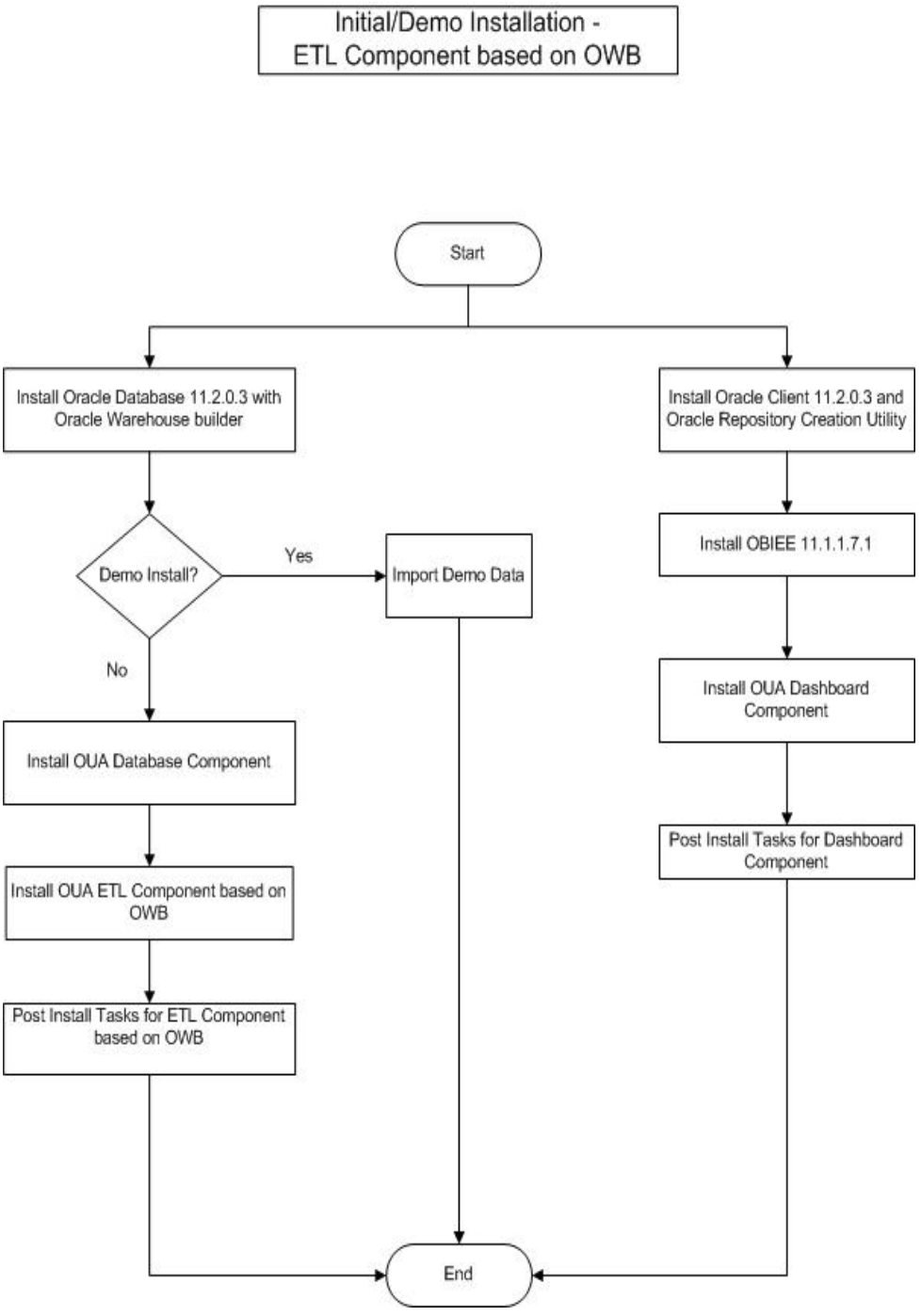
Installation Scenario 1: Oracle Warehouse Builder based on ETL

This scenario provides an overview of the installation steps required if you are installing products those use Oracle Warehouse Builder based ETL:

- Oracle Utilities Network Management System (NMS)
- Oracle Utilities Work and Asset Management (WAM)
- Oracle Utilities Meter Data Management (MDM)
- Oracle Utilities Mobile Workforce Management (MWM)

If you are using any other edge applications, refer to the installation scenario 2 or 3, as the case may be.

The following diagram shows the workflow for the initial installation for ETL components based on Oracle Warehouse Builder:



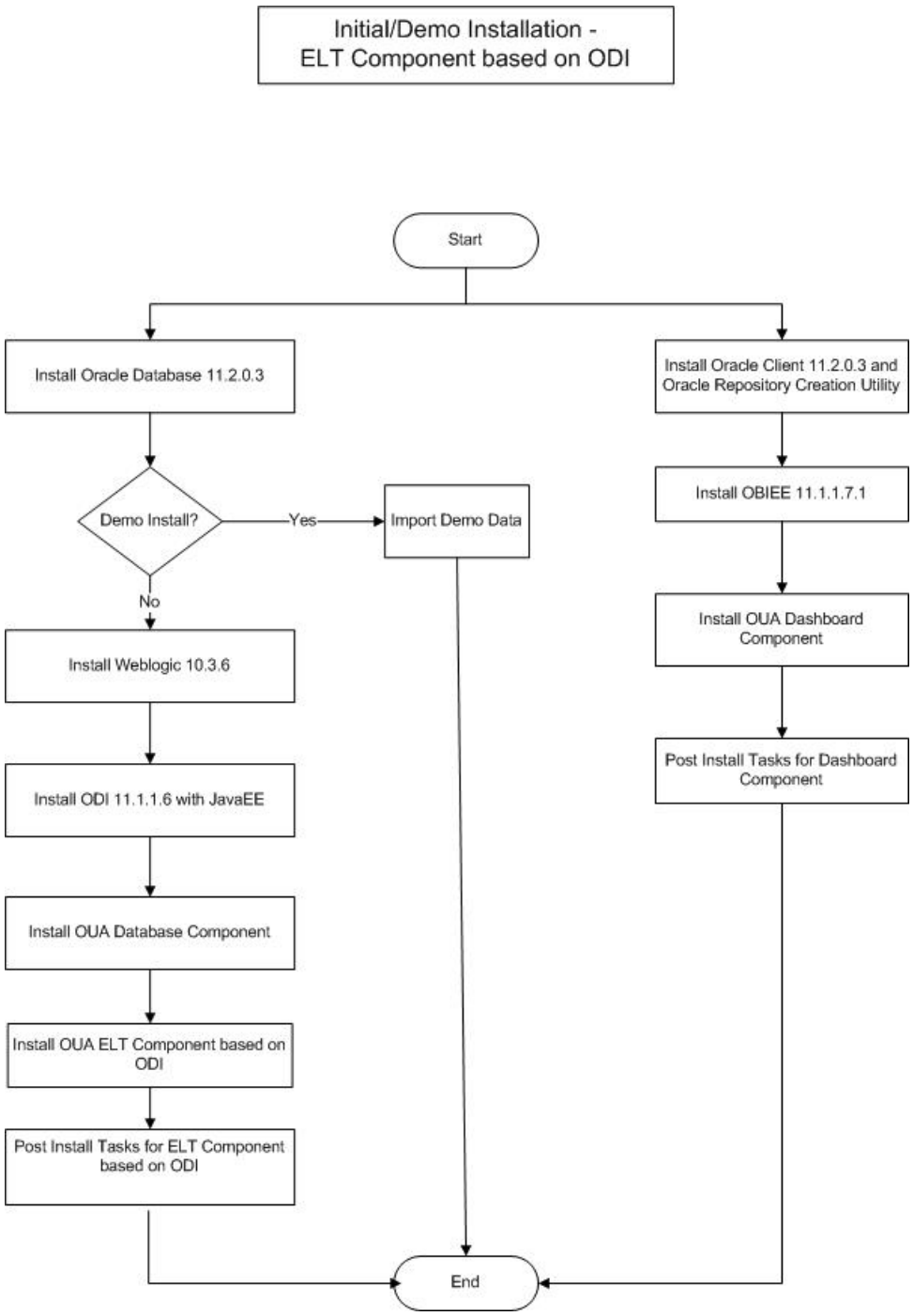
Installation Scenario 2: Oracle Data Integrator based on ELT

This scenario provides an overview of the installation steps required if you are installing products those use Oracle Data Integrator based ELT:

- Oracle Utilities Operational Device Management (ODM)
- Oracle Utilities Customer Care and Billing (CC&B)

If you are using any other edge applications, refer to installation scenario 1 or 3, as the case may be.

The following diagram shows the workflow for the initial installation process for the ELT component based on Oracle Data Integrator:



Installation Scenario 3: ETL based on Oracle Warehouse Builder and Oracle Data Integrator

This scenario provides an overview of the installation steps required if you are installing ETL for the combination of edge applications mentioned in installation scenario 1 and 2, i.e., one or more edge applications from:

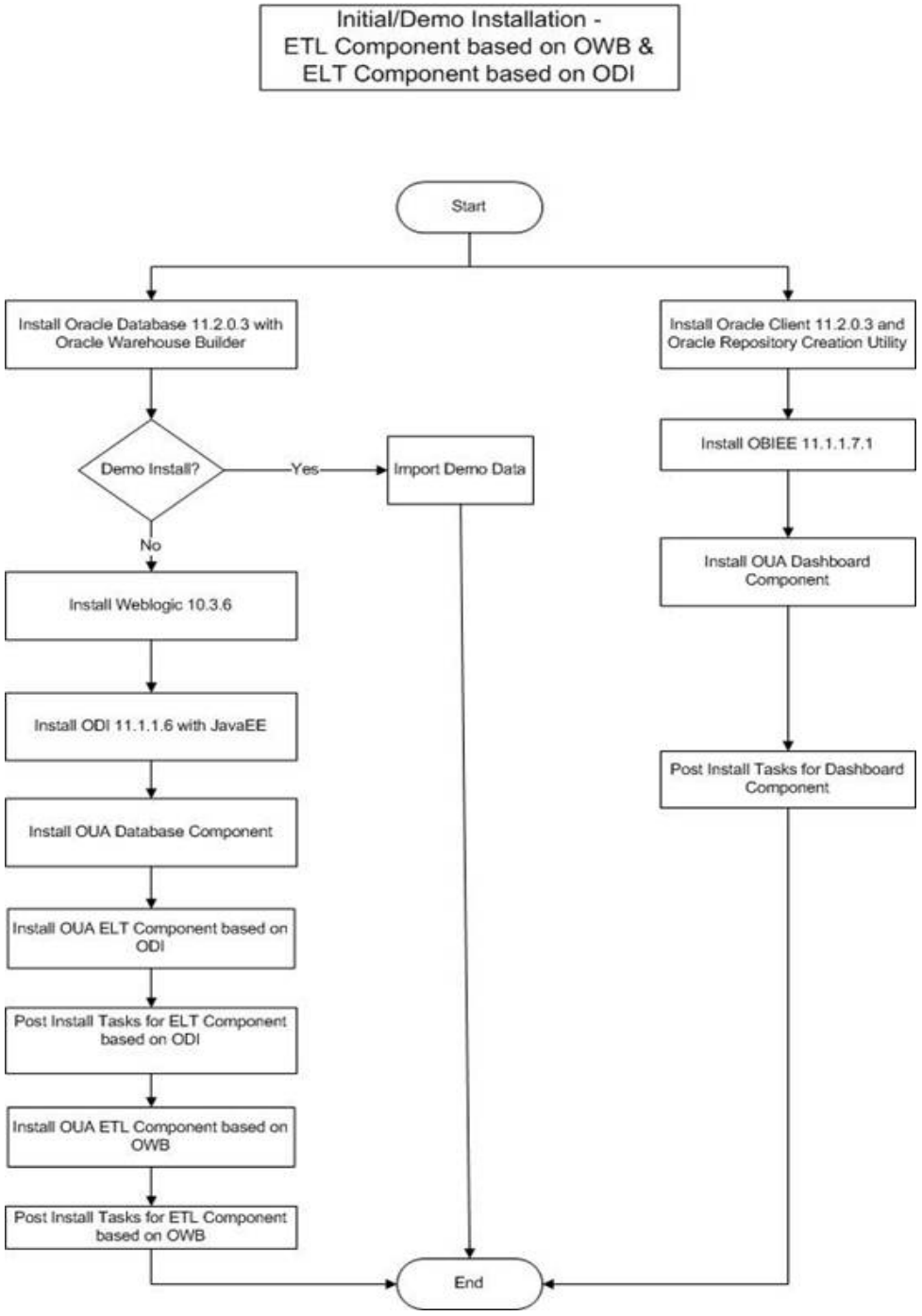
- Oracle Utilities Network Management System (NMS)
- Oracle Utilities Work and Asset Management (WAM)
- Oracle Utilities Meter Data Management (MDM)
- Oracle Utilities Mobile Workforce Management (MWM)

As well as one or more from:

- Oracle Utilities Operational Device Management (ODM)
- Oracle Utilities Customer Care and Billing (CC&B)

The following diagram shows workflow for the initial installation process for the ETL components based on Oracle Warehouse Builder as well as Oracle Data Integrator:

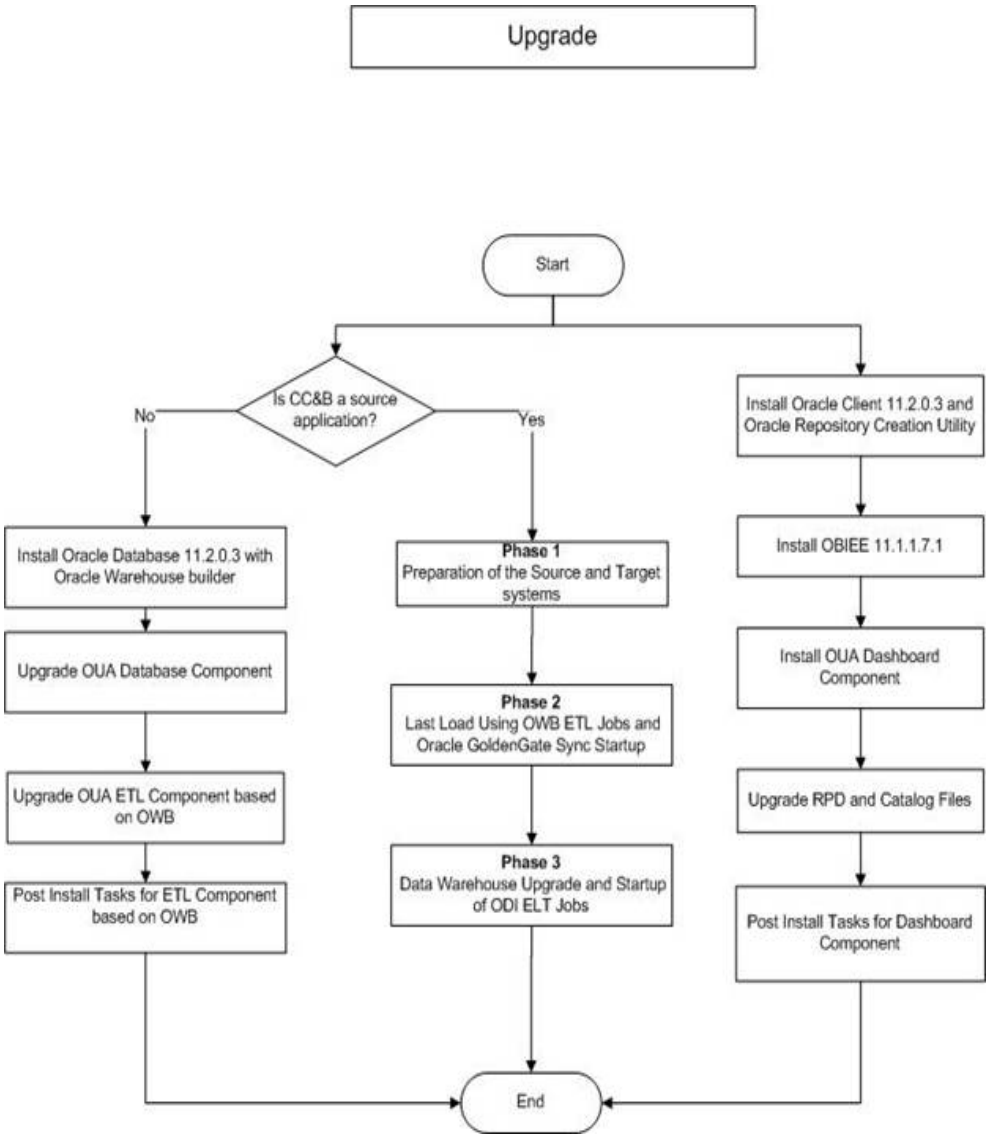
:



Installation Scenario 4: Upgrade

This installation type is for the users who are upgrading from an earlier version of Oracle Utilities Analytics to Oracle Utilities Analytics v2.5.0.

The following figure shows the workflow for the upgrade process:



Media Pack Components

Oracle Utilities Analytics version 2.5.0 media pack consists of the following documentation and installation packages:

Documentation Packages

- *Oracle Utilities Analytics v2.5.0 Release Notes*
- *Oracle Utilities Analytics v2.5.0 Quick Install Guide*
- *Oracle Utilities Analytics v2.5.0 Installation Guide and Configuration Guide*
- *Oracle Utilities Analytics v2.5.0 User's Guide*

Installation Packages

- *Oracle Utilities Analytics V2.5.0 Dashboard Component Multiplatform*
- *Oracle Utilities Analytics V2.5.0 ETL Component Based on OWB Multiplatform*
- *Oracle Utilities Analytics V2.5.0 ETL Component Based on ODI Multiplatform*
- *Oracle Utilities Analytics V2.5.0 Oracle Database Multiplatform*
- *Oracle Utilities Analytics V2.5.0 Demo Data*

Supported Source Application Versions

The following are the supported source application versions:

Source Application	Version
Oracle Utilities Customer Care and Billing	2.4.0.1
Oracle Utilities Network Management System	1.9.1 1.10.0.3.1 1.11.0.1 1.12
Oracle Utilities Work and Asset Management	1.9.1
Oracle Utilities Meter Data Management	2.0.1 SP8 + Single fix patches 14741869, 15983267 + Framework patch 14741833 2.0.1 SP9 2.1.0
Oracle Utilities Mobile Workforce Management	2.1.0 SP 4 +Single Fix patch 14791886 + Framework patch 14741833
Oracle Utilities Operational Device Management	2.0.1.1

Chapter 3

System Requirements and Supported Platforms

This section gives an overview of the tiers on which the product is implemented and shows each of the operating system/server combinations that the product is certified for. It includes:

- **Operating Systems and Application Servers**
- **Additional Notes on Supported Platforms**

Operating Systems and Application Servers

Oracle Utilities Analytics v2.5.0 installation is certified to operate on many operating system, application server, and database server combinations.

The following table details the minimum versions of the browser, operating system, and application server combinations on which Oracle Utilities Analytics version 2.5.0 has been tested and certified:

Browser	Operating System (Client)	Operating System (Server)	Chipset	Application Server	Oracle Business Intelligence Enterprise Edition (OBIEE)	Oracle Data Integrator (ODI)	Oracle GoldenGate	Database
IE 9.x Firefox 17+	Windows 7 (64 bit)	AIX 7.1 (64-bit)	Power 64-bit	WebLogic 10.3.6	11.1.1.7.1	11.1.1.6	11.2.1.0.5_2	Oracle 11.2.0.3
		Oracle Linux 6.3 (64-bit) / Red Hat Enterprise Linux 6.3 (64-bit)	x86_64	WebLogic 10.3.6	11.1.1.7.1	11.1.1.6	11.2.1.0.5_2	Oracle 11.2.0.3
		Oracle Linux 6.4 (64-bit) / Red Hat Enterprise Linux 6.4 (64-bit)	x86_64	WebLogic 10.3.6	11.1.1.7.1	11.1.1.6	11.2.1.0.5_2	Oracle 11.2.0.3
		Oracle Solaris 11 (64-bit)	SPARC	WebLogic 10.3.6	11.1.1.7.1	11.1.1.6	11.2.1.0.5_2	Oracle 11.2.0.3
		Windows 2008 Server R2 (64-bit)	x86_64	WebLogic 10.3.6	11.1.1.7.1	11.1.1.6	11.2.1.0.5_2	Oracle 11.2.0.3

Note: Every new release of Oracle Utilities Analytics is certified against the latest versions of the required software, such as Oracle Business Intelligence Enterprise Edition, Oracle Data Integrator, Oracle GoldenGate, etc. However, any fourth digit change in these software versions is generally backward compatible, and is supported by the product.

You must have the following software listed out below:

Note: Oracle Warehouse Builder is installed as a part of Oracle Database Enterprise Edition Server 11.2.0.3.

- Oracle Business Intelligence Enterprise Edition (OBIEE) is required for Oracle Utilities Analytics Dashboard.
- Oracle Data Integrator, Oracle GoldenGate, Oracle WebLogic and Oracle Application Express are required for Oracle Utilities Analytics ELT component based on Oracle Data Integrator.

Additional Notes on Supported Platforms

The following topics are discussed in this section:

- **Oracle Unbreakable Enterprise Kernel**
- **Oracle Database Server**
- **Oracle VM Support**
- **Oracle Support Policy on VMWare**

Oracle Unbreakable Enterprise Kernel

Oracle Utilities Analytics version 2.5.0 is supported on Oracle Unbreakable Enterprise Kernel.

Oracle Database Server

Oracle Utilities Analytics version 2.5.0 is supported on Oracle Database Enterprise Edition Server 11.2.0.3 on any of the operating systems listed above.

> **Note**: **Oracle Utilities Analytics version 2.5.0 is supported on Oracle Database Server Standard Edition 11.2.0.3 only when using ELT component based on Oracle Data Integrator**.

Oracle VM Support

Oracle Utilities Analytics version 2.5.0 is supported on Oracle VM 2.2.2 for supported releases of Oracle Linux and Microsoft Windows operating systems.

Oracle Support Policy on VMWare

Refer to the knowledge base article ID 249212.1 on My Oracle Support for Oracle's support policy on VMWare.

https://support.oracle.com

Chapter 4

Planning the Oracle Utilities Analytics Installation

This chapter provides information about planning Oracle Utilities Analytics (OUA) installation version 2.5.0, including:

- **Prerequisite Software**
- **Installation Checklist**

  Note: In order to perform successful installation of the product, you must have experience of working on, or installing the following products:

  - Oracle Database Server
  - Oracle Business Intelligence Enterprise Edition
  - Oracle Warehouse Builder
  - Oracle Data Integrator
  - Oracle GoldenGate
  - Oracle Application Express feature of Oracle database

  Note: Refer to the corresponding installation guide of these products before installing Oracle Utilities Analytics.

Prerequisite Software

For installing Oracle Utilities Analytics version 2.5.0, a few prerequisite software products need to be downloaded and installed. Download and install these software products as per the instructions provided in the respective installation documents.

> **Note**: Ensure that the same Operating System (OS) user is used to install all software prerequisites and Oracle Utilities Analytics components.

The following sections describe the prerequisite software requirement Oracle Utilities Analytics:

- **Prerequisite Software for Oracle Utilities Analytics Database Component**
- **Prerequisite Software for Oracle Utilities Analytics ELT Component based on Oracle Data Integrator**
- **Prerequisite Software for Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder**
- **Prerequisite Software for Oracle Utilities Analytics Dashboard Component**
- **Prerequisite Software for Oracle Utilities Analytics Admin Tool Component**

Prerequisite Software for Oracle Utilities Analytics Database Component

The prerequisite software for Oracle Utilities Analytics database component is as described below:

- **Oracle Database Server Enterprise Edition 11.2.0.3**: This is required for installing the database component of the Oracle Utilities Analytics product.

  Note: Oracle Utilities Analytics version 2.5.0 is supported on Oracle Database Server Standard Edition 11.2.0.3 only when using ELT component based on Oracle Data Integrator.

Prerequisite Software for Oracle Utilities Analytics ELT Component based on Oracle Data Integrator

Note: Applicable only if you have installed Oracle Utilities Operational Device Management or Oracle Utilities Customer Care and Billing.

The prerequisite software products for Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI) are listed below. These software products should be installed on the database server:

- JDK 1.6.0 (20 or above)
- Oracle Database Server Enterprise Edition 11.2.0.3, or Oracle Database Server Standard Edition 11.2.0.3
- Oracle WebLogic 10.3.6
- Oracle Data Integrator 11.1.1.6 with Java EE

  Note: While installing Oracle Data Integrator, do not create any repositories. Select **Skip Repository Configuration** option.

- Oracle GoldenGate 11.2.1.0.5_2 on the source application database server and the target database server
  This can be downloaded from My Oracle Support (https://support.oracle.com/).

Prerequisite Software for Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder

Note: Applicable only if you have installed any one of the edge applications such as, Oracle Utilities Network Management System, Oracle Utilities Work and Asset Management, Oracle Utilities Mobile Workforce Management, or Oracle Utilities Meter Data Management.

The prerequisite software products for Oracle Utilities Analytics ETL based on Oracle Warehouse Builder component are as follows:

- JDK 1.6.0 (20 or above) is required for running the File Processor daemon
- Oracle Database Server Enterprise Edition 11.2.0.3 with Oracle Warehouse Builder 11.2.0.3

Prerequisite Software for Oracle Utilities Analytics Dashboard Component

The prerequisite software for Oracle Utilities Analytics Dashboard component is as follows:

- Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 with **Enterprise Install** option

  Note: Install the Oracle 11.2.0.3 client if Oracle Business Intelligence Enterprise Edition software is not installed on database server. If Oracle Business Intelligence Enterprise Edition software is installed, then there is no need to install Oracle client.

Note: After Oracle Business Intelligence Enterprise Edition installation, save a snapshot of the last page of Oracle Business Intelligence Enterprise Edition installation having details of BI Oracle Home, Instance Home, etc. These values will be used during the Oracle Utilities Analytics installation.

Prerequisite Software for Oracle Utilities Analytics Admin Tool Component

Note: Applicable only if you use Oracle Data Integrator based ELT.

The prerequisite software products for the Oracle Utilities Analytics Admin tool component are as follows:

- Oracle Database Server Enterprise Edition 11.2.0.3, or Oracle Database Server Standard Edition 11.2.0.3
- Oracle Apex 4.2

Installation Checklist

The following checklist guides you through the installation process for Oracle Utilities Analytics version 2.5.0:

The details are provided in subsequent chapters for each of the below-listed step:

1. Determine the installation type and the installation scenario. See **Media Pack Components** to determine the installation type for your scenario. Perform the installation steps as applicable to your installation type.
2. Install the prerequisite software.
   See **Prerequisite Software** for more details.
3. Ensure that you have downloaded the Oracle Utilities Analytics components.

   Note: Refer to the chapter **Oracle Utilities Analytics Initial Installation** for instructions regarding initial installation.

   Note: For upgrading from an earlier version of Oracle Utilities Analytics to Oracle Utilities Analytics v2.5.0, refer to the chapter **Upgrading Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards**.

   Note: Refer to **Demo Installation Procedure** for instructions about demo installation.
4. Perform the post-installation tasks and configure the application.

   Note: The out-of-the-box Oracle GoldenGate scripts are utilized to do the initial sync for tables having more than 10 million records. For more information about this process, refer to the section **Appendix C: Install and Upgrade Process** of *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide.*

Chapter 5

Oracle Utilities Analytics Initial Installation

This chapter provides instructions for installing Oracle Utilities Analytics version 2.5.0. It includes the following topics:

- **Initial Installation Procedure**
- **Checklist After the Installation**

  Note: In order to perform successful installation of the product, you must have experience of working on, or installing the following products:

  - Oracle Database Server
  - Oracle Business Intelligence Enterprise Edition
  - Oracle Warehouse Builder
  - Oracle Data Integrator
  - Oracle GoldenGate
  - Application Express feature of Oracle database

  Note: Refer to the corresponding installation guide of these products before installing Oracle Utilities Analytics.

Initial Installation Procedure

The following topics are discussed in this section:

- **Oracle Utilities Analytics Database Component Installation**
- **Oracle Utilities Analytics ELT Component Installation based on Oracle Data Integrator Installation**
  (applicable only if you have installed Oracle Utilities Operational Device Management, or Oracle Utilities Customer Care and Billing).
- **Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Installation**
  (applicable only if you have installed any one of the edge applications such as, Oracle Utilities Network Management System, Oracle Utilities Work and Asset Management, Oracle Utilities Mobile Workforce Management, or Oracle Utilities Meter Data Management).
- **Oracle Utilities Analytics Dashboard Component Installation**
- **Oracle Utilities Analytics Admin Tool Component**
  (applicable only if you use Oracle Data Integrator based ELT).

Oracle Utilities Analytics Database Component Installation

This section describes how to install the database component of Oracle Utilities Analytics version 2.5.0. It includes the following topics:

- **Copying and Decompressing Install Media**
- **Database Creation**
- **RELADM Schema Installation**
- **MDADM Schema Installation**
- **DWADM Schema Installation**
- **Spatial Configuration**

Copying and Decompressing Install Media

To copy and decompress the install media, perform these steps:

1. Download Oracle Utilities Analytics version 2.5.0 Oracle Database part (**Oracle Utilities Analytics V2.5.0 Oracle Database Multiplatform.zip**) from the Oracle Software Delivery Cloud (https:// edelivery.oracle.com).
2. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred to below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation, can be deleted after completing a successful installation.
3. Unzip **Oracle Utilities Analytics V2.5.0 Oracle Database Multiplatform.zip** to <TEMPDIR> using any zip utility.
4. Unzip the zip file **<TEMPDIR>/OUA-V2.5.0-Database-Multiplatform.zip** using any zip utility.

Database Creation

Ensure that Oracle Database Server Enterprise Edition 11.2.0.3 is already installed on the machine in order to create the database. Use the **Database Configuration Assistant (DBCA)** utility to create the database.

Database Creation Using DBCA

> **Note**: Refer to Oracle database documentation to know more about the Database Configuration Assistant (DBCA).

For an initial installation database creation, it is recommended that you use the Database Configuration Assistant (DBCA) to create a data warehouse database with below-mentioned specifications:

1. Create a database with the **AL32UTF8** character set. Set the open cursor limit to 3000 and processes to 1000 at the time of database creation.
2. Ensure to create users in the database with the following names: DWADM, DWUSER, DWREAD, MDADM, RELADM, SPLADM, SPLUSER, SPLREAD, MASTER_REPO, WORK_REPO and DWSTAGE if these do not exist already, without giving specific roles.
3. Ensure to create roles with the following names: DW_USER, DW_READ, DW_REPLICATE, SPL_USER and SPL_READ roles if these do not exist already.
4. Connect to the **sys user**, execute the **Usersgrants.sql** in **BI250/Scripts/Usersgrants.sql**. This SQL will provide required grants to the users created above.

RELADM Schema Installation

The RELADM schema is a metadata schema that consists of the database objects used for storing product version and component installation information.

This section describes the initial installation of the RELADM schema. The process prompts you for the names of three database users:

- A user that owns the application schema. Provide the value: RELADM.
- A user that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A user with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.

The process also prompts you for the following:

- A database role that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A database role with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- Location for jar files (the Jar files are bundled with the database package).
- Java Home. For example: C:\Java\jdk1.6.0_18.

Review Storage.par

The **storage.par** file (that comes with the product and is in location ..\BI250\RELADM\Install-Upgrade) allocates all the base tables and indexes to the default tablespace CISTS_01. If you decide to allocate some tables or indexes outside of the default tablespace, then this has to be reflected in the **storage.par** file by changing the tablespace name from the default value to a custom value, according to the format shown below:

```
Object Type:Object Name:Tablespace name:Parallel:Comments
```

Where **Parallel** defines the number of threads that the Oracle database server uses to access a table, or to create an index. The default value is 1.

> **Note: If database does not have CISTS_01 tablespace, or RELADM user does not have quota on CISTS_01 tablespace, you must edit the tablespace name in Storage.par to tablespace name on which RELADM has quota**.

Installing the RELADM Schema

Perform the following steps to install the RELADM schema:

> **Note**: Ensure to run CDXDBI.exe (in step below) from a Window desktop that has the Oracle 11.2.0.3 32 bit client and Java Development Kit Version 6.0 Update 20 or later. Ensure that tnsnames.ora file of the Oracle client is updated with the entry for the target database to connect to the target database.

1. Run **CDXDBI.exe** from ..\BI250\RELADM\Install-Upgrade. Run the utility from command prompt. The utility prompts you to enter values for the following parameters:
   - Name of the target database: <DB NAME>
   - Password for the system user account in the database (in silent mode)
   - Name of the owner of the Database Schema: RELADM
   - Location of Java Home: <..\jdk1.6.0_20>
   - Location of TUGBU Jar files: <..\BI250\RELADM\Jarfiles>
   - Password for the user (in silent mode): <RELADM user password>

- Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
- Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
- Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
- Oracle database role with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.

2. The utility creates schema and system data definitions.

   If an error occurs while executing an SQL or another utility, it logs and displays the error message and allows you to re-execute the current step.

Generating Database Statistics

During the installation process, new database objects may be added to the target database. Before using the database, generate the statistics for these new objects:

Connect to the sys user, and execute the command:

```
execute DBMS_STATS.GATHER_SCHEMA_STATS('RELADM');
```

MDADM Schema Installation

The MDADM schema is a metadata schema that consists of database objects used for storing metadata of Oracle Utilities Analytics. For example, ETL job execution status, target tables for ETL, Oracle GoldenGate configuration details, etc.

This section describes the initial installation of MDADM schema. The process prompts you for the names of three database users:

- A user that owns the application schema. Provide value: MDADM.
- A user that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A user with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.

The process also prompts you for the following:

- A database role that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A database role with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- Location for jar files (the Jar files are bundled with the database package).
- Java Home. For example: C:\Java\jdk1.6.0_18.

Review Storage.par

The **storage.par** file (that comes with the product and is in location ..\BI250\MDADM\Install-Upgrade) allocates all base tables and indexes to the default tablespace CISTS_01. If you decide to allocate some tables or indexes outside of the default tablespace, then this has to be reflected in the **storage.par file** by changing the tablespace name from the default value to a custom value, according to the format shown below:

Object Type:Object Name:Tablespace name:Parallel:Comments

Where Parallel defines the number of threads that the Oracle database server uses to access a table, or to create an index. The default value is 1.

Note: If the database does not have CISTS_01 tablespace, or MDADM user does not have quota on CISTS_01 tablespace, you must edit the tablespace name in Storage.par to the tablespace name on which the MDADM has quota.

Installing the MDADM Schema

Perform the following steps to install the MDADM schema:

Note: Ensure to run the **CDXDBI.exe** (in step below) from a Window desktop that has the Oracle 11.2.0.3 32 bit client and Java Development Kit Version 6.0 Update 20 or later. Ensure that tnsnames.ora file of the Oracle client is updated with the entry for the target database to connect to the target database.

1. Run **CDXDBI.exe** from ..\BI250\MDADM\Install-Upgrade. Run the utility from the **Command Prompt**. The utility prompts you to enter values for the following parameters:
   - Name of the target database:<DB NAME>
   - Password for the system user account in the database (in silent mode)
   - Name of the owner of the Database Schema: MDADM
   - Location of Java Home: <..\jdk1.6.0_20>
   - Location of TUGBU Jar files: <..\BI250\MDADM\Jarfiles>
   - Password for the user (in silent mode)
   - Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
   - Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - Oracle database role with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
2. The utility creates schema and system data definitions.

   If an error occurs while executing an SQL or another utility, it logs and displays the error message and allows you to re-execute the current step.

Generating Database Statistics

During the installation process, new database objects may be added to the target database. Before using the database, generate the statistics for these new objects:

Connect to the sys user, and execute the command:

```
execute DBMS_STATS.GATHER_SCHEMA_STATS('MDADM');
```

DWADM Schema Installation

The DWADM schema contains the star schema objects, such as facts and dimensions that contain all the data of the data warehouse.

This section describes the initial installation of DWADM schema. The process prompts you for the names of three database users:

- A user that owns the application schema. For example, DWADM.
- A user that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. The application will access the database as this user. For example, DWUSER.

- A user with the read-only privileges to the objects in the application schema. For example, DWREAD.

The process also prompts you for the following:

- A database role that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. For example: DW_USER. The application will access the database as DW_USER.
- A database role with the read-only privileges to the objects in the application schema. For example, DW_READ.
- Location for jar files (the Jar files are bundled with the database package).
- Java Home. For example: C:\Java\jdk1.6.0_18.

Review Storage.par

The **storage.par** file (that comes with the product and is in location ..\BI250\DWADM\Install-Upgrade) allocates all base tables and indexes to the default tablespace CISTS_01. If you decide to allocate some tables, or indexes outside of the default tablespace, then this has to be reflected in the storage.par file by changing the tablespace name from the default value to a custom value, according to the format shown below:

Object Type:Object Name:Tablespace name:Parallel:Comments

Where Parallel defines the number of threads that the Oracle database server uses to access a table, or to create an index. The default value is 1.

Note: If database does not have CISTS_01 tablespace, or DWADM user does not have quota on CISTS_01 tablespace, you must edit the tablespace name in Storage.par to tablespace name on which the DWADM has quota.

Installing the DWADM Schema

Perform the following steps to install the DWADM schema:

Note: Ensure to run **CDXDBI.exe** (in step below) from a Window desktop that has the Oracle 11.2.0.3 32 bit client and Java Development Kit Version 6.0 Update 20 or later. Ensure that tnsnames.ora file of the Oracle client is updated with the entry for the target database to connect to the target database.

1. Run **CDXDBI.exe** from ..\BI250\DWADM\Install-Upgrade. Run the utility from the **Command Prompt**. The utility prompts you to enter values for the following parameters:
   - Name of the target database: <DB NAME>
   - Password for the system user account in the database (in silent mode)
   - Name of the owner of the Database Schema: DWADM
   - Location of Java Home: <..\jdk1.6.0_20>
   - Location of TUGBU Jar files: <..\BI250\DWADM\Jarfiles>
   - Password for the user (in silent mode)
   - Oracle user with read-write privileges to the database schema: DWUSER
   - Oracle user with read-only privileges to the database schema: DWREAD
   - Oracle database role with read-write privileges to the database schema: DW_USER
   - Oracle database role with read-only privileges to the database schema: DW_READ
2. If you choose to continue, CDXDBI first checks for the existence of each of the users specified and prompts for their password, default tablespace, and temporary tablespace if they do not exist.

3. After setting up roles and users, the utility continues upgrading schema and system data definitions.
   If an error occurs while executing an SQL or another utility, it logs and displays the error message and allows you to re-execute the current step.

Generating Database Statistics

During the installation process, new database objects may be added to the target database. Before using the database, generate the statistics for these new objects:

Connect to sys user and execute the command:

```
execute DBMS_STATS.GATHER_SCHEMA_STATS('DWADM');
```

Spatial Configuration

Refer to section **Spatial Configuration** for details regarding configuring spatial data.

Oracle Utilities Analytics ELT Component Installation based on Oracle Data Integrator Installation

Note 1: Ensure that the same Operating System (OS) user is used to install the Oracle Utilities Analytics ELT component that is used to install all the related software. Refer to the section **Prerequisite Software**.

Note2: You must install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI) only if you are using Oracle Utilities Operational Device Management or Oracle Utilities Customer Care and Billing as the source applications.

Note 3: Oracle Utilities Operational Device Management (ODM) or Oracle Utilities Customer Care and Billing (CC&B) application set up is a prerequisite in order to install Oracle Data Integrator based ELT component. The source applications should be setup with the required configurations before proceeding with the Oracle Data Integrator based ELT component installation in order to successfully extract data from them, to Oracle Utilities Analytics.

Refer to the chapter **Configuring Oracle Utilities Operational Device Management for Business Intelligence** in *Oracle Utilities Extractors and Schema for Oracle Utilities Operational Device Management Data Mapping Guide*.

Refer to the chapter **Configuring Oracle Utilities Customer Care and Billing for Business Intelligence** in *Oracle Utilities Extractors and Schema for Oracle Utilities Customer Care and Billing Data Mapping Guide*.

This section describes how to install the ELT component of Oracle Utilities Analytics. The section includes the following:

- **Oracle GoldenGate Setup**
- **Copying and Decompressing Install Media**
- **Setting Permissions for cistab File in UNIX**
- **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Package Installation Steps**
- **Post-installation Tasks**
- **Generating Security and Starting Oracle Data Integrator Scheduler**

Oracle GoldenGate Setup

Note 1: This section describes what setup is required in Oracle GoldenGate to work with Oracle Utilities Analytics. For installing Oracle GoldenGate, refer to its installation document.

Note 2: You should install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI) only if you are using Oracle Utilities Operational Device Management, or Oracle Utilities Customer Care and Billing as the source application.

Download Oracle GoldenGate 11.2.1.0.5_2 from the My Oracle Support (https://support.oracle.com).

Set up Oracle GoldenGate on the source and the target database servers.

This section describes the following:

- **Source Database Server Oracle GoldenGate Setup**
- **Target Database Server GoldenGate Setup**

Source Database Server Oracle GoldenGate Setup

Perform the following steps for each source instance:

1. Create a directory on the source database server. For example, ../Golden Gate Home. This will be **Oracle Golden Gate home** (**OGG_Home**) on the source database Server.

   Important Note: Make a note of this directory location; it will be used during the Oracle Utilities Analytics installation.

2. Copy the Oracle GoldenGate software in the above created directory.

3. Unzip it. It will extract into a tar file:

   tar -xvof <tar file>

4. Open a command terminal/window, and set the source ORACLE_SID and ORACLE_HOME variables.

   Set LD_LIBRARY_PATH using the following commands:

   For Unix:

   export LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH

   For Windows:

   set LD_LIBRARY_PATH=%ORACLE_HOME%\lib:%LD_LIBRARY_PATH%

5. In the **Command** window, change directory to the Oracle GoldenGate home directory, and execute the command shown below:

   For Unix:

   ./ggsci

   For Windows:

   ggsci

   This opens the GoldenGate prompt.

6. On the **GoldenGate** prompt, execute the **create SUBDIRS** command.

7. On the **GoldenGate** prompt, execute the **EDIT PARAMS mgr** command. This command opens an editor.

8. Copy the below contents:

   - PORT 7830
   - DYNAMICPORTLIST 7830-7880

     Note 1: Make sure the mentioned port range (7830-7880) is not in use. If they are in use, provide another available port range.

Note 2: Make a note of the range start and end ports numbers; it will be used during Oracle Utilities Analytics installation.

Note 3: Refer to Oracle GoldenGate documentation if you would like to configure other settings, such as **Purge**.

9. On the **GoldenGate** prompt, execute the **start mgr** command to start the Oracle GoldenGate manager process.
10. On the **GoldenGate** prompt, execute the **info all** command to view the manager process is running. Exit **GoldenGate** by executing the **Exit** command.
11. Ensure that the source database is in the **archivelog** mode.
12. Connect to the source database as the sys user and execute the **alter database add supplemental log data (primary key) columns** command.
13. Go to the **Oracle GoldenGate home** (**OGG_Home**) directory.
14. Connect to the database as the sys user using the **SQL*Plus** (**OGG_Home** should be the current directory while invoking **SQL*Plus**).
15. Create a new user, for example: ODM01SRC (this user is the Oracle GoldenGate owner) and make sure to assign a tablespace to this user that is not assigned to any other user.

    Important Note: Make a note of the GoldenGate Owner Username; it will be used during Oracle Utilities Analytics installation.

16. Execute **Grant connect,resource,dba** to <GoldenGate owner user created in above step>.
17. Connect to the source application ADM schema, such as, CISADM, and execute the below commands:

    For Oracle Utilities Customer Care and Billing source database, execute the following grants:

    Grant select on F1_MST_CONFIG to < GoldenGate owner user created in above step>

    Grant select on F1_EXT_LOOKUP_VAL to < GoldenGate owner user created in above step>

    Grant select on F1_BKT_CONFIG to < GoldenGate owner user created in above step>

    Grant select on F1_BKT_CONFIG_VAL to < GoldenGate owner user created in above step>

    For Oracle Utilities Operational Device Management source database, execute the following grants:

    Grant select on F1_MST_CONFIG to < GoldenGate owner user created in above step>

    Grant select on F1_EXT_LOOKUP_VAL to < GoldenGate owner user created in above step>

    Note: While executing the SQL commands in the steps 18, 19 and 20, provide the GoldenGate owner user if prompted for. All below scripts and located in **GoldenGate Home** directory and must be executed after connecting to the sys user.

18. Run the command:
    @marker_setup.sql
19. Run the command:
    @ddl_setup.sql

20. Run the command:
    @role_setup.sql
21. Exit the **SQL*Plus** login and create a directory named **diroby** inside **OGG_Home** directory.

Target Database Server GoldenGate Setup

Perform the following steps:

1. Create a directory on target database server. e.g ../GoldenGateHome.
   This will be Oracle GoldenGate home (OGG_Home) on the target Oracle Utilities Analytics database server.

   Important Note: Make a note of this directory location; it will be used during the Oracle Utilities Analytics installation.
2. Copy the Oracle GoldenGate (OGG) software in the directory created above.
3. Unzip it. It will extract into a tar file.

   ```
   tar -xvof <tar file>
   ```

4. Open a **Command** window and set the target ORACLE_SID and ORACLE_HOME variables.

   Set LD_LIBRARY_PATH using the following commands:

   For Unix:

   ```
   export LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH
   ```

   For Windows:

   ```
   set LD_LIBRARY_PATH=%ORACLE_HOME%/lib:%LD_LIBRARY_PATH%
   ```

5. In the **Command** window, change the directory to the **GoldenGate home directory** and execute the command shown below:

   For Unix:

   ./ggsci

   For Windows:

   ggsci

   This opens the GoldenGate prompt.
6. On the **GoldenGate** prompt, execute the **create SUBDIRS** command.
7. On the **GoldenGate** prompt, execute the **EDIT PARAMS mgr** command. This opens an editor.
8. Copy the below contents:
   - PORT 7830
   - DYNAMICPORTLIST 7830-7880

     Note 1: Make sure the mentioned port range (7830-7880) is not in use. If they are in use, provide another available port range.

     Note 2: Make a note of the range start and end ports numbers; it will be used during Oracle Utilities Analytics installation.

     Note 3: Refer to Oracle GoldenGate documentation if you would like to configure other settings, such as **Purge**.
9. On the **GoldenGate** prompt, execute the **start mgr** command to start the Oracle GoldenGate manager process.

10. On the **GoldenGate** prompt, execute the **info all** command to view the manager process is running.

11. Exit GoldenGate login by executing **exit** command and create a directory named **diroby** inside the **OGG_Home** directory.

Copying and Decompressing Install Media

The Oracle Utilities Analytics ETL component based on Oracle Utilities Analytics installation file is delivered in zip format for both UNIX and Windows platforms. If you plan to install multiple Oracle Utilities Analytics environments operated by different Oracle Utilities administrator user IDs, you must complete each of the following installation steps for each administrator user ID.

1. Download the Oracle Utilities Analytics version 2.5.0 ELT component based on Oracle Data Integrator part (**Oracle Utilities Analytics V2.5.0 ETL component based on ODI Multiplatform.zip**) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).

2. Log into the database server host as the Oracle Utilities Analytics administrator user ID.

3. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred to below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.

4. Unzip **Oracle Utilities Analytics V2.5.0 ETL component based on ODI Multiplatform.zip** to <TEMPDIR>.

5. Decompress the file **BI.ODI.V2.5.0-MultiPlatform.jar** as follows:

   - cd <TEMPDIR>

   - jar -xvf BI.ODI.V2.5.0-MultiPlatform.jar

     Note: You should have Java JDK installed on the machine used to (un)jar the Oracle Utilities Analytics ELT component based on Oracle Data Integrator installation package. Install the JDK that is supported for the install on your platform to be able to use the jar command.

The Java packages are located at: http://java.sun.com/products/archive/index.html. A sub-directory named "BI.ODI.V2.5.0" is created. It contains the installation software for the Oracle Utilities Analytics ELT component based on Oracle Data Integrator.

Setting Permissions for cistab File in UNIX

Every Oracle Utilities Analytics environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID, this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of necessary permissions, it generates a script in the <TEMPDIR>/BI.ODI.V2.5.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Analytics application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Analytics administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Analytics administrator user ID, you do not need to run the generated script with the root user ID. Instead, the install utility itself proceeds with the registration.

If you are re-installing an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you plan to upgrade an existing environment, you must ensure to take a backup prior to the installation process. The installation utility does not create a backup of the existing environment.

Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Package Installation Steps

Follow these steps to install the Oracle Utilities Analytics package applications after performing the steps to deploy the ELT component objects as described in the section above:

- **Prerequisite Software**
- **Installation Steps**

Prerequisite Software

Before installing the Oracle Data Integrator package, ensure that you have already installed the below-mentioned software products. These software products should be installed on the database server. Also, note the locations of these software products:

- JDK 1.6.0_20 (JAVA_HOME) on the database server
- Oracle Database Home (ORACLE _HOME)
- Oracle WebLogic 10.3.6 (WL_HOME)
- Oracle Data Integrator 11.1.1.6 with Java EE Installation (ODI_HOME)
- Oracle GoldenGate 11.2.1.0.5_2 software on the source database server and the target database server (OGG_HOME)

Installation Steps

Then follow the below instructions to install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator:

1. Change to the <TEMPDIR>/ BI.ODI.V2.5.0 directory.
2. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer (sample commands listed in the point 4 below).
3. Make sure that the user with which Oracle Database Enterprise Edition (or Standard Edition) 11.2.0.3 and all other prerequisite software products were installed, is used to install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator package.
4. Execute the following script for UNIX/Windows:
   For UNIX:

   Run the following commands:

   ```
   export ORACLE_CLIENT_HOME=<ORACLE_HOME>
   export PERL_HOME=$ORACLE_CLIENT_HOME/perl
   export PATH=$PATH:$PERL_HOME/bin
   ksh ./install.sh
   ```

   Note: On UNIX, ensure that you have the required the execute permission on install.sh.

   For Windows:

   Run the following commands:

   ```
   set ORACLE_CLIENT_HOME=<ORACLE_HOME>
   set  PERL_HOME=%ORACLE_CLIENT_HOME%\perl
   set  PATH=%PERL_HOME%\bin;%PATH%
   install.cmd
   ```

5. The Oracle Utilities Analytics specific menu appears.

6. Select each menu item to configure the values.
   For the detailed description of the values, refer to the **Configuration Worksheet for ELT Component based on Oracle Data Integrator Installation.**

   Note: For the parameter 'Target GoldenGate Shared Secret', follow the below instructions.

   a. Go to the GoldenGate prompt and run the command:

   ```
   encrypt password <password of MDADM user>, encryptkey DEFAULT
   ```

   b. Copy the encrypted password returned by the above command and provide it as the value for the Target GoldenGate Shared Secret.

Environment Installation Options:

1. Oracle Client Home Directory:
2. Environment Mount Point:
   Log Files Mount Point:
   Environment Name:
   Web Java Home Directory:
   Each item in the above list should be configured for a successful install.
   Choose the following options from the menu item (1, 2 <P> Process, <X> Exit).

Environment Configuration:

1. Environment Description
   Environment Description:
2. ODI Environment Configuration
   WEBLOGIC HOME:
   ODI HOME:
   ODI SUPERVISOR USER: SUPERVISOR
   ODI SUPERVISOR Password:
   Target Database Name:
   Target Database Host:
   Target Database Port:1521
   DWADM Schema Name: DWADM
   DWADM Schema Password: <DWADM Password>
   ODI Master Schema Name: MASTER REPO
   ODI Master Schema Password:
   ODI Work Schema Name:
   ODI Work Schema Password:
   ODI Master Repository ID: 601
   ODI Work Repository ID: 602
   MDADM Schema Name: MDADM
   MDADM Schema Password: <MDADM Password>
3. ODI Agent Configuration
   ODI Weblogic Agent Host:
   ODI Weblogic Agent Port:
4. Target GoldenGate Configuration
   Target GoldenGate Manager Port
   Target GoldenGate Dynamic Mininum Port:
   Target GoldenGate Dynamic Maximum Port:
   Target GoldenGate Algorithm:
   Target GoldenGate Encryptkey:
   Target GoldenGate Shared Secret:
   Target Database Home:
   Target GoldenGate Home:

Each item in the above list should be configured for a successful install.
Choose the option (1, 2, 3, 4<P> Process, <X> Exit).

Once the parameter setup is completed, proceed with the option **P**.

Once installation is finished successfully, execute the post-installation steps as described in **Post-installation Tasks**.

Post-installation Tasks

The following post-installation tasks are discussed in this section:

- **Deploying ELT Component based on Oracle Data Integrator**
- **RunviewGenerator (Global)**
- **Configure Source**
- **InitiateSetup**
- **RunviewGenerator (For Source Instance)**
- **WebLogic Domain Creation for Oracle Data Integrator Agent**

Deploying ELT Component based on Oracle Data Integrator

Follow the sequence for the steps shown below for successful deployment:

For the Oracle Data Integrator deployment, the script creates the master and work repositories, and imports the Oracle Data Integrator metadata.

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./deployodi.sh**.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **deployodi.cmd**.

Verify the log at the location: <SPLEBASE>/logs/system/deployodi.log file.

RunviewGenerator (Global)

This step creates global views based on the Oracle Data Integrator metadata.

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./runviewGenerator.sh**.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **runviewGenerator.cmd**.

Verify the log at the location: <SPLEBASE>/logs/system/deployodi.log file.

Configure Source

Important Note: **This step inserts each source instance and instance name into b1_prod_instance table. This step has to be repeated for each source instance that will be used.**

This step also creates the replication schema in the target database corresponding to each source application. $SPLEBASE/bin/obiu.properties file is read to assign the default tablespace to the replication user.

By default, this file has obiu.repository.default.tablespace = CISTS_01 entry where CISTS_01 is tablespace name. If you want to assign this tablespace as default tablespace to replication schema, make sure to create CISTS_01 tablespace in the target database if it does not exist.

Make sure to edit obiu.repository.default.tablespace parameter in $SPLEBASE/bin / obiu.properties file to another tablespace name, which exists in database and would be considered the default tablespace to the replication schema.

This entry should be changed as follows:

```
obiu.repository.default.tablespace = <Name of tablespace to use>
```

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run ksh ./configureSourceDB.sh -c <Source instance> -u <Source Golden gate owner schema name> -p < Source Golden gate owner schema password > -s <Source Application Schema> -r <Source Application Drill Back URL>.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run configureSourceDB.cmd -c <Source instance> -u <Source Golden gate owner schema name> -p <Source Golden gate owner schema password> -s <Source Application Schema> -r <Source Application Drill Back URL>.

   Where,

   - Source instance = Name for the source instance being added
   - For Oracle Utilities Operational Device Management source application, the valid values are ODM1,ODM2……..ODM9. Provide any of these values, which is already not configured. Make a note of these parameters it will be used in next deployment steps.

- For Oracle Utilities Customer Care and Billing application, the valid values are CCB1,CCB2…….CCB9. Provide any of these values, which are already not configured.
- Source _Schema User = <GoldenGate Owner created in Source database> For example: ODM01SRC
- Source _Schema User _Password = GoldenGate Owner password
- Source Application Schema = Source Application Schema (For example, CISADM)
- Source Application Drill Back URL = Source Application URL (http://<Host>:<Port>/ouaf/)

This opens a source configuration menu shown as below. Select each menu item to configure the values.

For detailed description of the values, refer to the **Configuration Worksheet for ELT Component based on Oracle Data Integrator Installation**.

Note: For the parameter 'Source GoldenGate Shared Secret', follow the below instructions.

a. Go to GoldenGate prompt and run the command:

```
encrypt password <password of source GoldenGate owner user>,
encryptkey DEFAULT.
```

b. Copy the encrypted password returned by the above command and provide it as the value for the Source GoldenGate Shared Secret.

Environment Configuration:

1. Source GoldenGate Configuration
   Source Instance Name:
   Source GoldenGate Manager Port:
   Source GoldenGate Dynamic Mininum Port:
   Source GoldenGate Dynamic Maximum Port:
   Source GoldenGate Algorithm:
   Source GoldenGate Encryptkey:
   Source GoldenGate Shared Secret:
   Source Database Name:
   Source Database Host:
   Source Database Port:
   Source Database Home:
   Source GoldenGate Home:
   Each item in the above list should be configured for a successful install.
   Choose the option (1, <P> Process, <X> Exit).

Once the parameter setup is completed, proceed with the option P.

Verify the log at the location: <SPLEBASE>/logs/system/deployodi.log file.

InitiateSetup

This step is run to reverse engineer source tables, Journalizing Setup, and to create the GoldenGate scripts. This step has to be repeated for each source instance that will be used.

For Unix:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.

4. Run the **ksh ./initiateSetup.sh -c <Source Instance>**.

   Where Source instance = Instance name given to the source in the step **Configure Source** above. For example: ODM1.

5. The initial load process can be started now to copy data from the source database into the replication schema in the data warehouse. There are two options for this.

   Proceed with the option 1, only if all of the tables being replicated are expected to have a volume of less than 10 million records. The list of the source tables being replicated can be found in the *Data Mapping Guide*.

   > **Note**: For the source tables list, refer to *Oracle Utilities Extractors and Schema Data Mapping Guide for Oracle Utilities Operational Device Management* or *Oracle Utilities Extractors and Schema Data Mapping Guide for Oracle Utilities Customer Care and Billing*.

   Option 1: Using GoldenGate

   In $SPLEBASE/GGScriptsGen directory, you will find a folder starting with the instance name.

   Go to the folder that has name starting with the instance name.

   For example: $SPLEBASE/GGScriptsGen/ODM1AA

   > Refer to the **ReadMe.txt** generated in the above-mentioned directory for detailed instructions on how to run the GoldenGate scripts.
   >
   > **Note 1**: Ensure that ORACLE_SID, ORACLE_HOME and LD_LIBRARY_PATH are set before running the GoldenGate scripts on both source and target database servers.
   >
   > **Note 2**: During GoldenGate script execution, you might get error message (ERROR: OCI Error ORA-00955: name is already used by an existing object (status = 955) related to the **B1_CHECKPOINT** table. It should be ignored.

   Option 2: Using Database Import/Export Process

   If any of the source tables to be replicated is expected to be in excess of 10 million records, the GoldenGate process may not scale up well when dealing with such higher volumes. The primary reason being the GoldenGate scripts will work on individual records on a single threaded basis.

   In such cases, it is recommended to perform the initial sync utilizing Oracle database's export and import process.

   > **Note**: Refer to the steps mentioned in the section "**Performing Initial Load**" in the **Appendix C** of *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide*.

   Once the initial load is completed via the export and import process, the GoldenGate incremental sync process can be started to capture incremental changes.

   In $SPLEBASE/GGScriptsGen directory, you will find a folder starting with the instance name.

   Go to the folder that has name starting with the instance name.

   For example: $SPLEBASE/GGScriptsGen/ODM1AA

   > **Note 1**: Refer to the **ReadMe.txt** generated in the above-mentioned directory for detailed instructions on how to run the GoldenGate scripts. Since the initial load has already been done by export/import process, skip the commands below the header "##### FOR INITIAL LOAD ONLY #####".

Note 2: Ensure that ORACLE_SID, ORACLE_HOME and LD_LIBRARY_PATH are set before running the GoldenGate scripts on both the source and the target database servers.

Note 3: During GoldenGate script execution, you might get error message (ERROR: OCI Error ORA-00955: name is already used by an existing object (status = 955) related to the **B1_CHECKPOINT** table. It should be ignored.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **initiateSetup.cmd -c <Source instance>**.

   Where Source instance = Instance name given to the source in the step **Configure Source** above. For example: ODM1
5. The initial load process can be started now to copy data from the source database into the replication schema in the data warehouse. There are two options for this.

   Proceed with the option 1, only if all of the tables being replicated are expected to have a volume of less than 10 million records. The list of the source tables being replicated can be found in the *Data Mapping Guide*.

   Note: For the source tables list, refer to *Oracle Utilities Extractors and Schema Data Mapping Guide for Oracle Utilities Operational Device Management* or *Oracle Utilities Extractors and Schema Data Mapping Guide for Oracle Utilities Customer Care and Billing.*

   Option 1: Using GoldenGate

   In %SPLEBASE%/GGScriptsGen directory, you will find a folder starting with the instance name.

   Go to the folder that has name starting with the instance name.

   For example: %SPLEBASE%/GGScriptsGen/ODM1AA

   Note: Refer to the **ReadMe.txt** generated in the above -mentioned directory for detailed instructions on how to run the GoldenGate scripts.

   Note: Ensure that ORACLE_SID, ORACLE_HOME and LD_LIBRARY_PATH are set before running the GoldenGate scripts on both source and target database servers.

   Option 2: Using Database Import/Export Process

   If any of the source table to be replicated is expected to be in excess of 10 million records, the GoldenGate process may not scale up well when dealing with such higher volumes. The primary reason being the GoldenGate scripts will work on the individual records on a single threaded basis.

   In such cases, it is recommended to perform the initial sync utilizing Oracle database's export and import process.

   Note: Refer to the steps mentioned in the section "**Performing Initial Load**" in the **Appendix C** of the *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide.*

   Once the initial load is completed via the export and import process, the GoldenGate incremental sync process can be started to capture incremental changes.

In %SPLEBASE%/GGScriptsGen directory, you will find a folder starting with the instance name.

Go to the folder that has name starting with the instance name.

For example: %SPLEBASE%/GGScriptsGen/ODM1AA

Note: Refer to the **ReadMe.txt** generated in the above mentioned directory for detailed instructions on how to run the Oracle GoldenGate scripts. Since the initial load has already been done by export/import process, skip the commands below the header "##### FOR INITIAL LOAD ONLY #####".

Note: Ensure that ORACLE_SID and, ORACLE_HOME and LD_LIBRARY_PATH are set before running the Oracle GoldenGate scripts on both the source and target database servers.

Note: During GoldenGate script execution, you might get error message (ERROR: OCI Error ORA-00955: name is already used by an existing object (status = 955) related to the **B1_CHECKPOINT** table. It should be ignored.

RunviewGenerator (For Source Instance)

This step creates the views for a given source instance. These views are used for replication. This step needs to be executed once for each source configured.

For Unix:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **runviewGenerator.sh -c <Source Instance>**.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **runviewGenerator.cmd -c <Source instance>**.

   Where Source instance = Instance name given to the source in configure Source step above. For example: ODM1

WebLogic Domain Creation for Oracle Data Integrator Agent

The WebLogic Domain should be created for bringing up the WebLogic Agent (ODI Agent) to complete the steps.

Perform the following steps to bring up WebLogic ODI Agent, which is created in the step **Deploying ELT Component based on Oracle Data Integrator**.

1. Navigate to the Oracle Data Integrator (ODI) installed location <MW_HOME>/Oracle_ODI1\common\bin, run the below command and follow the steps to provide the masterschema and workschema provided in the configuration.

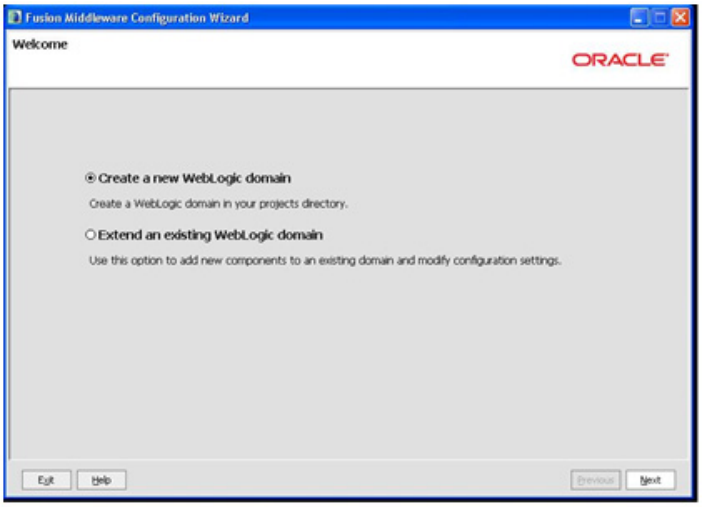
   For Unix:

   - Run ./Config.sh

   For Windows:

- Run Config.cmd

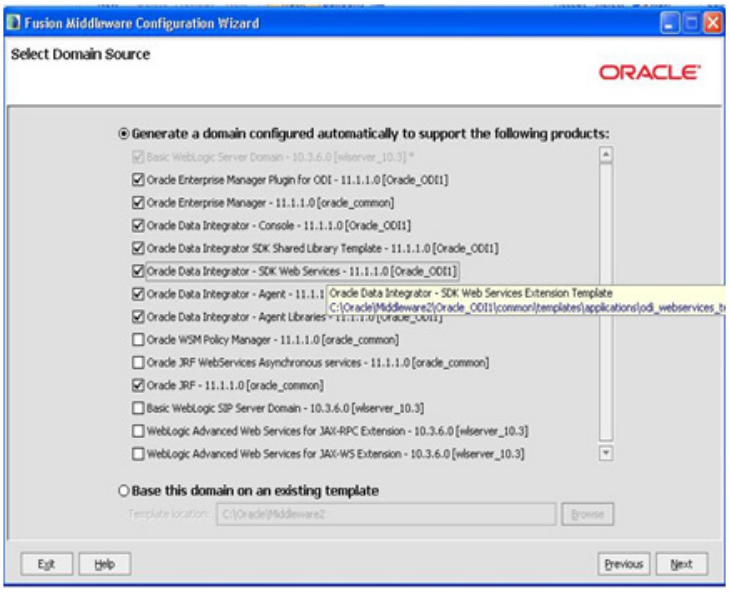
2. Create a new WebLogic domain.



Click **Next.**

3. Generate a domain configured automatically to support the following products. Select the checkboxes for the below mentioned plugins. When these plugins are selected, some automatic plugins also get selected.

   - Oracle Enterprise Manager Plugin for Oracle Data Integrator -11.1.1.0
   - Oracle Data Integrator - Console - 11.1.1.0
   - Oracle Data Integrator Agent - 11.1.1.0
   - Oracle Data Integrator - SDK Web Services - 11.1.1.0

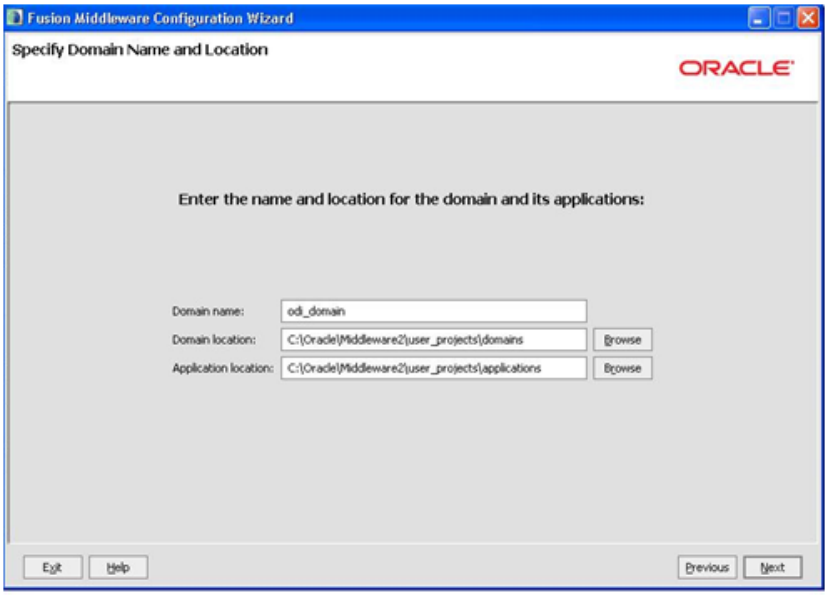


Then, click **Next** to proceed.

4. On the **Specify Domain Name and Location** page, complete the following:

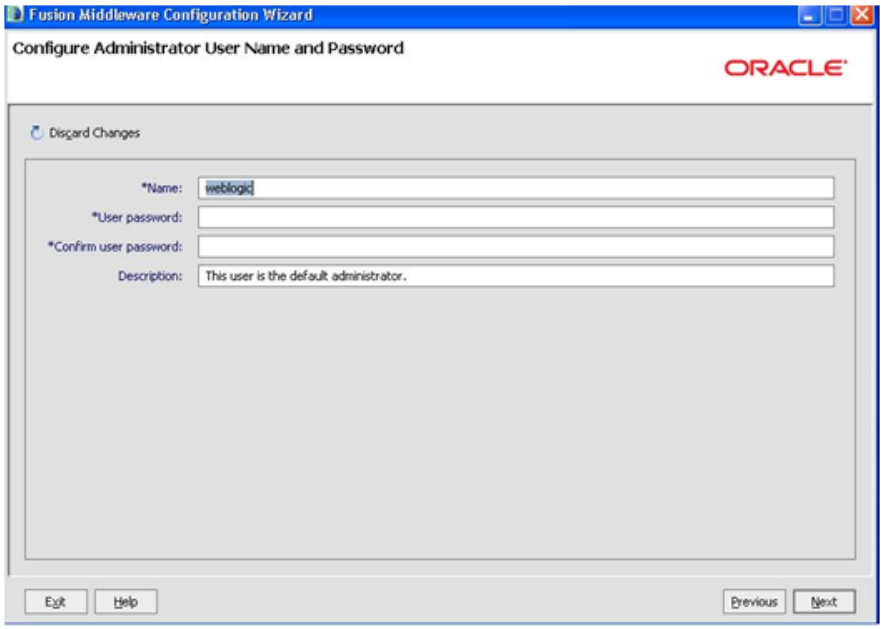
   - Provide the name: odi_domain

- Location will be default



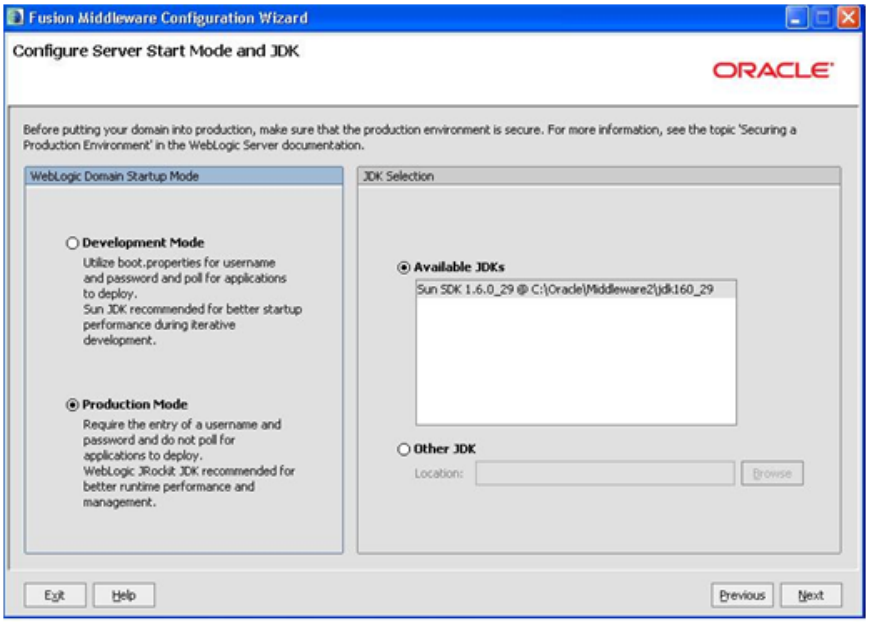
Click **Next** to proceed.

5. Configure the **Administrator User Name** and **Password** for WebLogic. Provide the WebLogic password.



Click **Next**.

6. Configure the **Server StartUp Mode** and **JDK**:
   - Select **Production Mode**
   - Provide the **JDK 1.6.0_20**

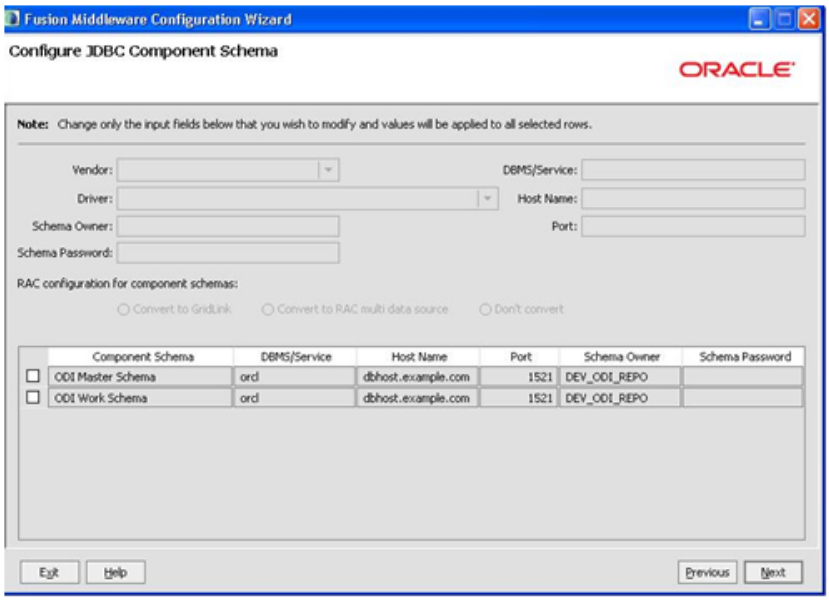


7. Configure the **JDBC Component Schema**.

   Select only the **ODI Master Schema** checkbox. Provide the below details:

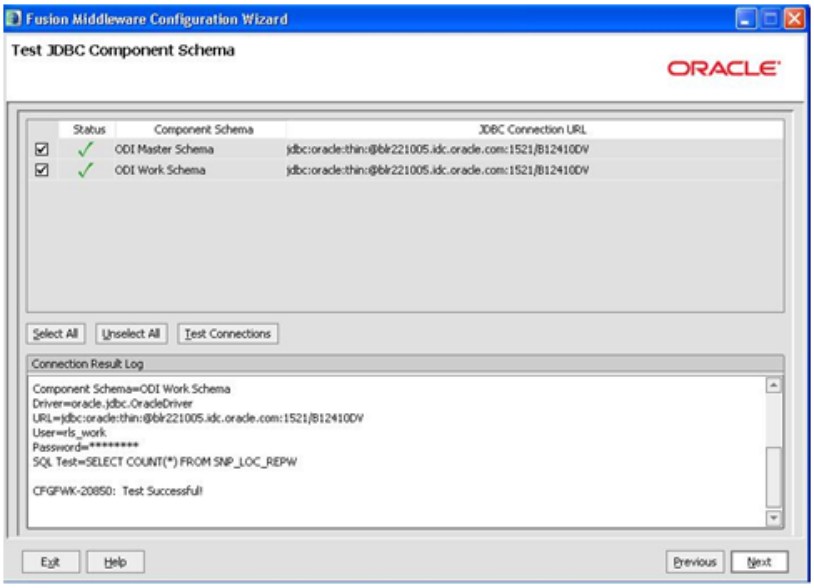
   - DBMS/Service: Target Database Name
   - Host Name: Database Serverhost
   - Port: Database Port
   - Schema Owner: MASTER_REPO
   - Schema Password: MASTER_REPO Password

8. Deselect the **ODI Master Schema** checkbox.
9. Select the **ODI Work Schema** checkbox. Provide the below details:
   - DBMS/Service: Target Database Name
   - Host Name: Database Serverhost
   - Port: Database Port
   - Schema Owner: WORK_REPO
   - Schema Password: WORK _REPO Password



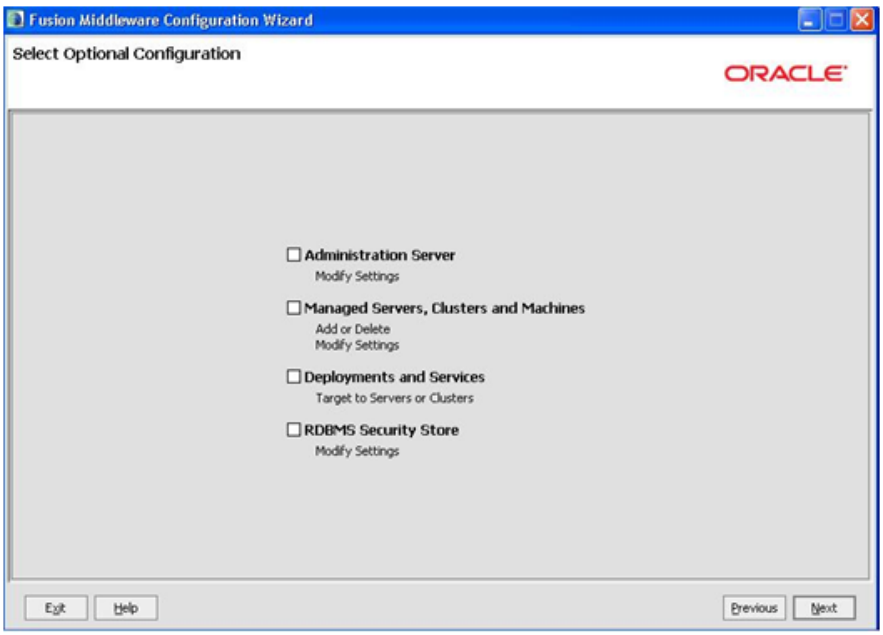
Click **Next** to proceed.

10. Test the **JDBC Component Schema** by selecting the **Select All** and the **Test Connections**.



Select **Next** to proceed.

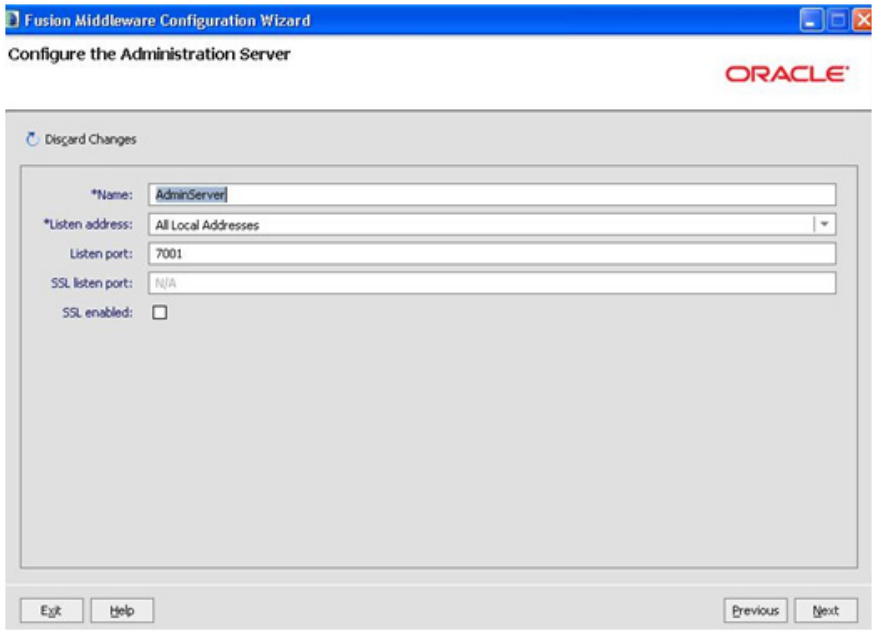
11. Select the **Optional Configuration**:
    - Select the checkboxes:
        - **Administration Server**
        - **Managed Server, Clusters and Machines**



Select **Next** to proceed.

12. Configure the **Administration Server**:

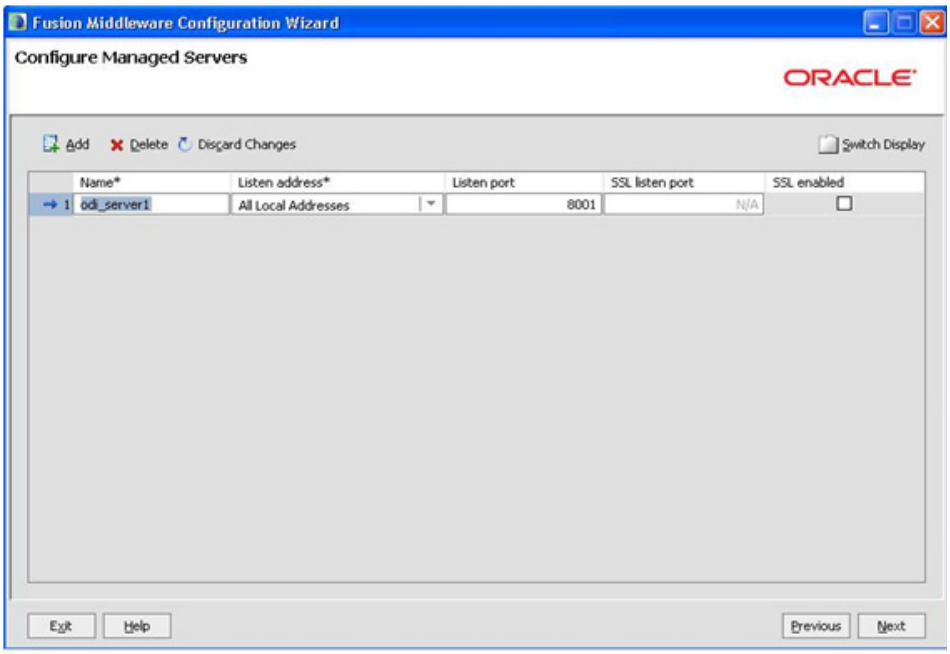
    - Provide the **Listening Port**, which is not in use.



Click **Next** to proceed.

13. Configure the **Managed Servers** by providing the following:

    - **Name**: odi_server1
    - **Listen Address**: All Local Addresses
    - **Port**: <Provide the port, which is configured in the menu configuration of installation step (**ODI Agent Configuration** > **ODI WebLogic Agent Port**>)



14. Configure the **Cluster.**
    Click **Next**.
15. Configure the **Machines**.
    Click **Next**.
16. Assign the **Servers** to **Machines**.
    Click **Next**.
17. On the **Configuration Summary** page, click **Create** to create the domain odi_domain.
18. After the domain is created, go to Domain Location, create boot.properties file for WebLogic login. Create the <MW_HOME>/user_projects/domains/odi_domain/servers/AdminServer/security folder if not present.
19. Go to <MW_HOME>/user_projects/domains/odi_domain/servers/AdminServer/security, then create boot.properties with the below values:
    - username=weblogic
    - password=Weblogic password
20. Create the <MW_HOME>/user_projects/domains/odi_domain/servers/odi_server1/security folder if not present.
21. Go to <MW_HOME>/user_projects/domains/odi_domain/servers/odi_server1/security, then create **boot.properties** with the below values:
    - username=weblogic
    - password=Weblogic password

Starting the WebLogic Admin Server

Perform the following steps:

1. In the command shell, change the directory to the directory of the WLS Home - <MW_HOME>/user_projects/domains/odi_domain/bin.
2. Execute the **startweblogic** command for UNIX and Windows:

For Unix:

```
nohup ./startWebLogic.sh > startWebLogic.log &
```

For Windows:

```
startWebLogic.cmd
```

Authenticating the Oracle Data Integrator Supervisor User in WebLogic and Starting Managed Server

Perform the following steps:

1. Go to <MW_HOME>/oracle_common/common/bin.
2. Execute the following command:

   For Unix:

   ```
   ./wlst.sh
   ```

   For Windows:

   ```
   wlst.cmd
   ```

3. To connect to the running Admin server, execute the following command:

   ```
   connect('<Weblogic User>','<Weblogic password>','t3://
   <WEBLOGICHOST>:<WEBLOGIC ADMIN PORT')
   ```

   For example: connect('weblogic','weblogic123','t3://localhost:7001')

4. Execute the following command to add the correct credential store for the ODI Supervisor:

   ```
   createCred (map="oracle.odi.credmap", key="SUPERVISOR",
   user="SUPERVISOR", password="<SUPERVISOR Password>", desc="ODI
   SUPERVISOR Credential")
   ```

5. To exit **WebLogic Scripting Tool (WLST)**, execute the exit () command.
6. To start managed server odi_server1, change the directory to WLS Home:

   ```
   <MW_HOME>/user_projects/domains/odi_domain/bin
   ```

   Execute the below commands:

   For Unix:

   ```
   nohup ./ startManagedWeblogic.sh  odi_server1 >
   StartManagedWeblogic.log &
   ```

   For Windows:

   ```
   StartManagedWeblogic.cmd odi_server1
   ```

7. From the **Oracle Warehouse Builder Designer**, click **Test** icon to test connectivity of the configured Oracle Warehouse Builder Java EE agent. Click **OK**.
8. Close the **OracleDIAgent** tab.

Generating Security and Starting Oracle Data Integrator Scheduler

Perform the following steps:

1. Edit the database name with the name of your database in **OraGenSec.bat** and run it from BI250/DWADM/Security folder.
2. Log into **Oracle Data Integrator Studio** and navigate to **Designer** > **Projects** > **Oracle Utilities BI** > **Configuration** > **Scheduler** > **Packages.**

3. Right-click the **BI_INITIAL_SETUP_PKG** and execute.
4. Select **global** as context and **WLS_AGENT** as logical agent and then click **OK**.
5. Go to the **Operator** and view the logs for successful execution of package.
6. In **Oracle Data Integrator Studio**, navigate to **Designer** > **Projects** >**Oracle Utilities BI** > **Configuration** > **Scheduler** > **Packages** > **B1_RUN_ALL** > **Scenarios** > **B1_RUN_ALL Version 001** > **Scheduling**.
7. Right-click scheduling and select **New Scheduling** option.
8. Select the source context as global, agent as WLS_AGENT and the log level as 1.
9. To specify how often the scheduler should run, navigate to the **Execution Cycle** tab of the Scheduler and select the '**Many Times**' radio button. Set the interval between repetitions.
10. Navigate to **Topology** > **Agents** > **OracleDIAgent**.
11. Right-click on **OracleDIAgent,** and click **Update Schedule**.

Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Installation

This section describes how to install the Oracle Warehouse Builder based ETL component of Oracle Utilities Analytics.

Note 1: Ensure that the same Operating System (OS) user is used to install the Oracle Utilities Analytics ETL component that is used to install all the related software. Refer to the section **Prerequisite Software for Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder**.

Note 2: You should install the Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder (OWB) only if you are using Oracle Utilities Network Management System, Oracle Utilities Work and Asset Management, Oracle Utilities Meter Data Management, or Oracle Utilities Mobile Workforce Management as the source application.

This section includes the following:

- **Copying and Decompressing Install Media**
- **Setting Permissions for cistab File in UNIX**
- **Creating and Configuring Oracle Warehouse Builder Workspace**
- **Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Package Installation Steps**
- **Post-Installation Tasks**

Copying and Decompressing Install Media

The Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder installation file is delivered in a zip format for both UNIX and Windows platforms. If you plan to install multiple Oracle Utilities Analytics environments operated by different Oracle Utilities Administrator User IDs, you must complete each of the following installation steps for each Administrator User ID.

1. Download the Oracle Utilities Analytics V2.5.0 ETL Component based on Oracle Warehouse Builder part (Oracle Utilities Analytics V2.5.0 ETL Component Based on OWB Multiplatform.zip) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Log into the database server host as the Oracle Utilities Analytics Administrator User ID (default cases).

3. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred to below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
4. Unzip the zip file **Oracle Utilities Analytics V2.5.0 ETL Component Based on OWB Multiplatform.zip** to <TEMPDIR>.
5. Decompress the file BI.OWB.V2.5.0-MultiPlatform.jar as follows:
   - cd <TEMPDIR>
   - jar -xvf BI.OWB.V2.5.0-MultiPlatform.jar

     Note: You should have Java JDK installed on the machine used to (un)jar the Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder installation package. Install the JDK that is supported for the install on your platform to be able to use the jar command.

The Java packages are located at: http://java.sun.com/products/archive/index.html. A sub-directory named **"BI.OWB.V2.5.0"** is created. It contains the installation software for the Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder.

Setting Permissions for cistab File in UNIX

Every Oracle Utilities Analytics environment installed on a server must be registered in the /etc/ cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle Administrator User ID, this user ID may not be able to write to /etc/ cistab file.

The install utility checks permissions and if it identifies a lack of necessary permissions, it generates a script in the <TEMPDIR>/BI.OWB.V2.5.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Analytics application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Analytics Administrator User ID, so that the next time a new environment is created by the same Oracle Utilities Analytics Administrator User ID, you do not need to run the generated script with the root user ID. Instead, the install utility itself proceeds with the registration.

If you are re-installing an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you plan to upgrade an existing environment, you must ensure to take a backup prior to the installation process. The installation utility does not create a backup of the existing environment.

Creating and Configuring Oracle Warehouse Builder Workspace

This section describes how to create and configure the Oracle Warehouse Builder workspace. It also includes details about the following:

- **Pre-deployment Steps for Initial Installation**
- **Creating and Configuring Oracle Warehouse Builder Workspace for an Initial Installation**

Pre-deployment Steps for Initial Installation

Before creating/configuring workspace, perform the following steps:

1. Execute the following command to configure the workflow in the database.

   For Unix:

   ```
   $ORACLE_HOME/owb/wf/install/wfinstall.csh
   ```

For Windows:

```
%ORACLE_HOME%/owb/wf/install/wfinstall.bat
```

2. This launches a configuration dialog in which you are asked to enter the user name and password. Enter **OWFMGR** as a user and a password for **OWFMGR** user.
3. Specify the TNS connect string of the database, in the following format.

```
hostname:port:sid
```

Creating and Configuring Oracle Warehouse Builder Workspace for an Initial Installation

To configure Oracle Warehouse Builder (OWB), perform the following steps:

1. Run the $ORACLE_HOME/owb/bin/unix/reposinst.sh command for UNIX from the database server.

   OR

   Invoke the repository assistant from **Warehouse Builder** > **Administrator for Windows** from the database server or client.
2. Provide the following information:
   - Database connection details and click **Next**.
   - Select **Manage Warehouse Builder Workspaces** and click **Next**.
   - Select **Create a new Warehouse Builder Workspace** and click **Next**.
   - Select **Workspace with a new user** as the workspace owner.
   - Provide the system user password.
3. Check only **Data Integrator Enterprise Edition on Enable Optional** features, and then specify the following details:
   - Workspace Owner's User Name: BIREPOWN
   - Workspace Owner's Password: BIREPOWN
   - Workspace Name: SPLBIREP
   - Provide OWBSYS Password:

     Note: Workspace name should be SPLBIREP. Do not change the workspace name.
4. Execute cat_owb.sql as sysdba from <OWBHOME>/owb/UnifiedRepos directory if prompted.
5. Unlock the OWBSYS and OWBSYS _AUDIT accounts, if this has not already been done.

   Connect to the Sys User and execute the following commands:

```
ALTER USER OWBSYS IDENTIFIED BY
OWBSYS ACCOUNT UNLOCK; ALTER USER
OWBSYS_AUDIT IDENTIFIED BY OWBSYS_AUDIT ACCOUNT UNLOCK;
```

6. Execute <OWBHOME>/owb/UnifiedRepos /remote_owb_install.sql after logging in to sys user. When prompted for Oracle Home for Remote Oracle Warehouse Builder software, provide the location of Oracle Warehouse Builder Oracle Home.
7. Provide the tablespace info for the Oracle Warehouse Builder workspace schema.
8. Select the **Language** (American Language).

9. Select the **Target Schema (DWADM)** and the **Workflow Schema (OWFMGR)** from the available Repository Users List and move them to **Selected**. This will register the DWADM and OWFMGR schemas with the workspace.

10. On the same page, click **Create New User** to create a new workspace user. Specify the following details:

    - User Name: BIREPO
    - Password: BIREPO

11. Review the information, and then click **Finish** to complete the workspace configuration.

12. Modify the contents of <owb-home>/owb/bin/admin/Runtime.properties file from the following to the contents mentioned later.

```
    property.RuntimePlatform.0.NativeExecution.FTP.security_constraint
= DISABLED
property.RuntimePlatform.0.NativeExecution.Shell.security_constraint =
DISABLED
property.RuntimePlatform.0.NativeExecution.SQLPlus.security_constraint
=DISABLED
```

    To

```
    property.RuntimePlatform.0.NativeExecution.FTP.security_constraint
= NATIVE_JAVA
    property.RuntimePlatform.0.NativeExecution.Shell.security_constrai
nt = NATIVE_JAVA
    property.RuntimePlatform.0.NativeExecution.SQLPlus.security_constr
aint = NATIVE_JAVA
```

13. Connect to the OWBSYS user, and execute <owb-home>/owb/rtp/sql/stop_service.sql.

14. Connect to the OWBSYS user, and execute <owb-home>/owb/rtp/sql/start_service.sql.

15. Connect to the database with the sys user, and execute the following procedures:

    Note: Before executing these procedures, modify <SMTP SERVER> and <SMTP PORT> to appropriate values.

```
       EXECUTE
DBMS_NETWORK_ACL_ADMIN.CREATE_ACL('acl_for_owb_cc.xml','ACL for
Control Center','OWBSYS', TRUE, 'connect');

       EXECUTE
DBMS_NETWORK_ACL_ADMIN.ASSIGN_ACL('acl_for_owb_cc.xml',<SMPT SERVER>,
<SMPT PORT>);
COMMIT;
```

16. Execute the following:

```
    SELECT
    acl,host,
DECODE(DBMS_NETWORK_ACL_ADMIN.check_privilege_aclid(aclid,'OWBSYS',
'connect'),1, 'GRANTED', 0, 'DENIED', NULL) privilege
    FROM dba_network_acls ;
```

    You will see the following:

```
    /sys/acls/acl_for_owb_cc.xml
    <SMPT SERVER> GRANTED
```

17. Connect to the BIREPOWN user, and run the **spl_exec_wf_prc.sql** located in..**/BI250/Scripts**.

18. Connect to the DWADM schema, and execute the **spl_oms_snapshot_pkg.sql**.located in..**/BI250/Scripts**.

19. Connect to the database with the sys user, and execute **owb_grants_synonyms.sql** located in..**/BI250/Scripts**.

    Note: Ignore errors that are caused when trying to drop synonyms that these do not exist.

Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Package Installation Steps

After performing the above outlined steps, follow these steps to install the Oracle Utilities Analytics ETL Component based on the Oracle Warehouse Builder package:

1. Change to the <TEMPDIR>/BI.OWB.V2.5.0 directory.
2. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer (steps mentioned in point 4 below).
3. Make sure the user with which Oracle Database Enterprise Edition 11.2.0.3 was installed, is used to install the Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder package.
4. Execute the following script:

   For Unix:

   Perform the following steps:

   - export ORACLE_CLIENT_HOME=<ORACLE_HOME>
   - export PERL_HOME=$ORACLE_CLIENT_HOME/perl
   - export PATH=$PATH:$PERL_HOME/bin
   - Run the **ksh ./install.sh**

     Note: Ensure that you have the required execute permission on install.sh.

   For Windows:

   Perform the following steps:

   - set ORACLE_CLIENT_HOME=<ORACLE_HOME>
   - set PERL_HOMEb=%ORACLE_CLIENT_HOME%\perl
   - set PATH=%PERL_HOME%\bin;%PATH%
   - Run **install.cmd**

5. The Oracle Utilities Analytics specific menu appears.
6. Select each menu item to configure the values. For detailed description of the values, see **Configuration Worksheet for ETL Component based on Oracle Warehouse Builder Installation**.

Environment Installation Options:

1. Oracle Client Home Directory:
2. Environment Mount Point:
   Log Files Mount Point:
   Environment Name:
   Web Java Home Directory:

For successful installation, each item in the above list should be configured. Choose the following menu options (1, 2 <P> Process, <X> Exit).

Environment Configurations:

1. Environment Description
   Environment Description:

2. Database Configuration
   OWB WorkSpace Owner:
   OWB WorkSpace Owner Password: Database Name:
   Database Server: Database Port:

3. Design Repository Configuration
   OWB WorkSpace User:
   OWB Workspace user Password:
   OWB WorkSpace Name:
   DWADM SCHEMA NAME:
   DWADM SCHEMA Password:
   WORKFLOW MANAGER SCHEMA NAME:
   WORKFLOW MANAGER SCHEMA Password:

4. Database character set configuration
   Database Character set: AL32UTF8

5. Editing process flow configuration
   Repository Operating System:
   Perl Compiler location:
   Data and control files location:
   Separator to be used:
   File Manager location:

6. Email Configuration
   Email ID of Sender:
   Email ID for Reply-To address:
   Email ID of Receiver:
   SMTP server:
   SMTP server port:

7. Control Centre Configuration
   Repository Control Center Name:

8. External Data Source Configuration
   Path of the External Datasource:
   Path of the External Datasource LOG:
   File Processor Daemon Execution Switch: 1
   File Processor Extract Max Load: 5
   File Processor Scheduler Poll Duration: 60

   For successful installation, each item in the above list should be configured. Choose the following menu options (1, 2, 3, 4, 5, 6, 7, 8 <P> Process, <X> Exit).

After completing the parameter setup, proceed with the option **P**. Write to the configure file.

Once installation is successful, execute the post-installation steps as described in **Post-Installation Tasks**.

Post-Installation Tasks

The following post-installation tasks are discussed in this section:

- **Deploying ETL Workflows on Oracle Warehouse Builder**
- **Deploying Materialized Views**
- **Start File Processor**
- **Generating Security**
- **Generating Database Statistics**

Deploying ETL Workflows on Oracle Warehouse Builder

Deploy the ETL workflows to the target BI database configured in Oracle Utilities Analytics package installation. In UNIX, you may get a Java heap space error while importing the MDL file.

To resolve this error, you are required to make changes in OMBPlus.sh file, located at: $ORACLE_HOME/owb/bin/ unix/OMBPlus.sh.

In the following code, change the value -Xmx768M to -Xmx1024M, and then the -Dlimit value 768M to 1024M.

```
   $JAVAPATH/bin/java $JAVA64FLAG -Xms64M -Xmx768M $OPTS -Dlimit=768M
- DORACLE_HOME=$ORACLE_HOME -DOWBCC_HOME=$ORACLE_HOME -
DTCLLIBPATH="$TCLLIBPATH" -
DMARATHON_RETRY_COUNT="$MARATHON_RETRY_COUNT" -
DMARATHON_RETRY_INTERVAL="$MARATHON_RETRY_INTERVAL"
   $CLASSPATH_LAUNCHER oracle.owb.scripting.OMBShell $*
```

You may need to make this value larger than 1024MB (1GB) depending on the size of the import.

Perform the following task:

Review the parallel-* .txt files located under the $SPLEBASE/etc folder to set the degree of parallelism. The files are in the parallel*.txt format to change the <Degree> of parallelism.

```
   parallel-tables.txt file format: <Object_name>:<Degree>
parallel-mvs.txt file format: : <MV_Name>:<Fact_Table>:<Degree>
parallel-maps.txt file format:<Object_name>:<Table_Name>:<Degree>
```

For UNIX:

Perform the following:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./Owbdeploy.sh**.

For Windows:

Perform the following:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **Owbdeploy.cmd.**

Deploying Materialized Views

Perform the following:

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE\bin.
4. Run the **ksh ./installViews.sh**.
5. Once the deployment is complete, remove the content inside this directory $SPLEBASE/tmp to ensure that all files are removed.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **installViews.cmd**.
5. Once the deployment is complete, remove the content inside this directory %SPLEBASE%\tmp to ensure that all files are removed.

Start File Processor

Perform the following:

For UNIX:

```
cd $SPLEBASE/bin
nohup ksh ./startFileprocessordaemon.sh >&1 &
```

For Windows:

```
startFileprocessordaemon.cmd
```

Note: Go to <SPLEBASE>/logs/system to view the file processor log.

Generating Security

Edit the database name with the name of your database in **OraGenSec.bat** after completing the Oracle Warehouse Builder deployment and run it from BI250/DWADM/Security folder.

Generating Database Statistics

During the installation process, new database objects may be added to the target database. Before starting to use the database, generate the statistics for these new objects.

Oracle Utilities Analytics Dashboard Component Installation

This section describes how to install the database component of Oracle Utilities Analytics. The section includes the following:

- **Copying and Decompressing Install Media**
- **Setting Permissions for cistab File in UNIX**
- **Oracle Utilities Analytics Dashboard Package Installation Steps**
- **Post-installation Tasks**

Copying and Decompressing Install Media

The Oracle Utilities Analytics Dashboard Component installation file is delivered in zip format for both UNIX and Windows platforms. If you plan to install multiple Oracle Utilities Analytics environments operated by different Oracle Utilities Administrator User IDs, you must complete each of the following installation steps for each Administrator User ID.

1. Download the Oracle Utilities Analytics V2.5.0 Dashboard Component part (**Oracle Utilities Analytics V2.5.0 Dashboard Component Multiplatform.zip**) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Log into the application server host (where Oracle Business Intelligence Enterprise Edition11.1.1.7.1 software is installed) as the Oracle Utilities Analytics Administrator User ID (default cases).
3. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred in step 3 below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities application environment. All files placed in this directory as a part of the installation procedure can be deleted after completing a successful installation.
4. Copy the file **BI.OBIEE.V2.5.0-MultiPlatform.jar** from the delivered package to the <TEMPDIR>. If you are using FTP to transfer this file, remember to use the BINARY option for the FTP transfer.
5. Decompress the file:

   cd <TEMPDIR>

   jar -xvf BI.OBIEE.V2.5.0-MultiPlatform.jar

   Note: You should have Java JDK installed on the machine used to (un)jar the application server installation package. Install the JDK that is supported for the install on your platform to be able to use the jar command.

   The Java packages are located at: http://java.sun.com/products/archive/index.html

   A sub-directory named "BI.OBIEE.V2.5.0" is created. It contains the installation software for the Oracle Utilities Analytics Dashboard component.

Setting Permissions for cistab File in UNIX

Every Oracle Utilities Analytics environment installed on a server must be registered in the /etc/cistab file located on that server. On the UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID, this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/BI.OBIEE.V2.5.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Analytics application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Analytics Administrator User ID, so that the next time a new environment is created by the same Oracle Utilities Analytics Administrator User ID, you do not need to run the generated script with the root user ID. Instead, the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you plan to upgrade an existing environment, it is recommended that you take a backup prior to the installation process. The installation utility does not create a backup of existing environment.

Oracle Utilities Analytics Dashboard Package Installation Steps

Note: Before installing verify that the steps in **Prerequisite Software for Oracle Utilities Analytics Dashboard Component** are followed.

To install the Oracle Utilities Analytics Dashboard package, follow these steps.

1. Change to the <TEMPDIR>/BI.OBIEE.V2.5.0 directory.

2. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.

   For UNIX:

   Perform the following steps:

   - export ORACLE_CLIENT_HOME=<ORACLE_HOME>
   - export PERL_HOME=$ORACLE_CLIENT_HOME/perl
   - export PATH=$PATH:$PERL_HOME/bin
   - Run the **ksh ./install.sh**

     Note: Ensure that you have the proper execute permission on install.sh.|

   For Windows:

   Perform the following:

   - set ORACLE_CLIENT_HOME=<oracle_client_home>
   - set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
   - set PATH=%PERL_HOME%\bin;%PATH%
   - Run the **Install.cmd**

3. The Oracle Utilities Analytics specific menu appears.
4. Select each menu item to configure the values. For detailed description of the values, see **Configuration Worksheet for Dashboard Component Installation**.

Environment Installation Options

1. Oracle Client Home Directory:
2. Environment Mount Point:
   Log Files Mount Point:
   Environment Name:
   Web Java Home Directory:

For successful installation, each item in the above list should be configured. Choose the following menu options (1, 2, <P> Process, <X> Exit).

For detailed description of the values, see **Configuration Worksheet for Dashboard Component Installation**.

Environment Configuration

1. Environment Description
   Environment Description:
2. OBIEE Environment Configuration
   Oracle BI Instance Home
   Oracle BI Home
   Oracle BI Domain Home
   Weblogic Domain Console User Name
   Weblogic Domain Console Host:
   Weblogic Domain Console Port Number:
3. Target Database Details
   Target Database Name:
   Target Database Host:
   Target Database Port: 1521
   DWADM Schema Name: DWADM
   DWADM Schema Password:

For a successful installation, each item in the above list should be configured. Choose the following menu options (1, 2, 3 <P> Process, <X> Exit).

After completing the parameter setup, proceed with option **P**.

Once installation is completed successfully, execute the post-installation steps outlined in **Post-installation Tasks**.

Post-installation Tasks

The following post-installation tasks are discussed in this section:

- **Deploying Repository (RPD) File**
- **Deploying Web Catalog**
- **Configuring and Deploying MapViewer**
- **Deploying Write Back**
- **Enabling Analytics Help**
- **Enabling Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1**

Deploying Repository (RPD) File

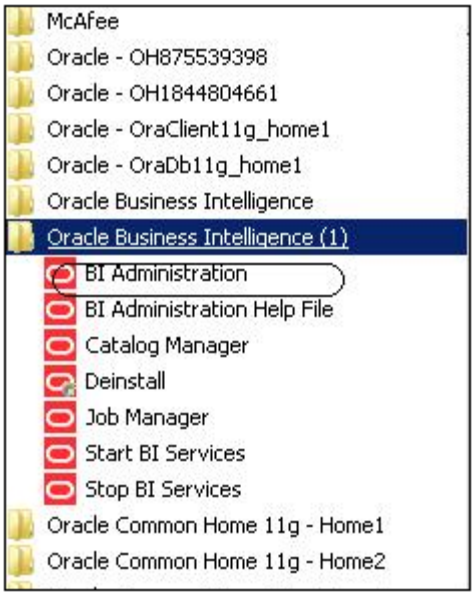
The RPD file is located at: <install_dir>/Reports/rpd/UtilitiesBusinessAnalytics.rpd, where <install_dir> is the Oracle Utilities Analytics Dashboard Package installation directory. This RPD file should be copied to the Windows machine on which Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 is installed.

Deploying the RPD file

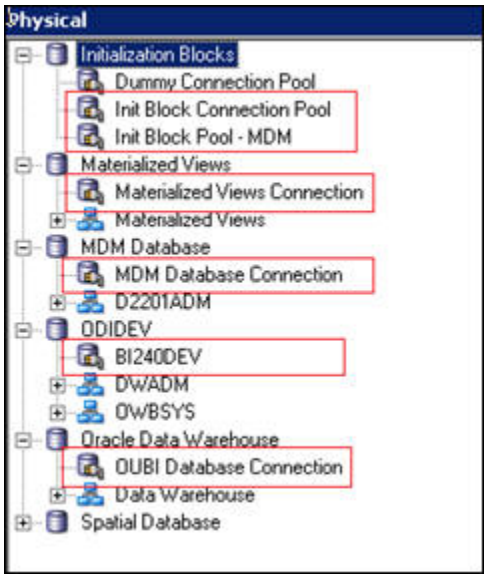
To deploy the repository (RPD) file, follow these steps:

1. Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 should have been installed on the Windows machine before proceeding with the steps below.
2. Launch the **Administration Tool** from the **Start** menu from the **Windows** machine. This is only available in **Windows**.

   Start > Programs > Oracle Business Intelligence > BI Administration
3. Open the RPD in offline mode by selecting **File > Open > Offline...**
4. Provide the RPD password. The default password is "oracle123".



5. Edit the connection pools as shown below by double-clicking on them.



6. In the **Init Block Connection Pool** group, enter the following:

   Datasource name = BI Database name

   User name = DWREAD

   Password = DWREAD User password

7. In the **Init Block Pool - MDM** group, provide the following, only for MDM:

   Datasource name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

8. In the **Materialized Views Connection** group, enter the following:

   Datasource name = BI Database name

User name =DWREAD

Password = DWREAD User password

9. In the **MDM Database Connection** group, provide the following, only for MDM:

   Data source name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

10. In the **ODIDEV Connection Pool** group, provide the following:

    Data source name = BI database name

    User name = DWUSER

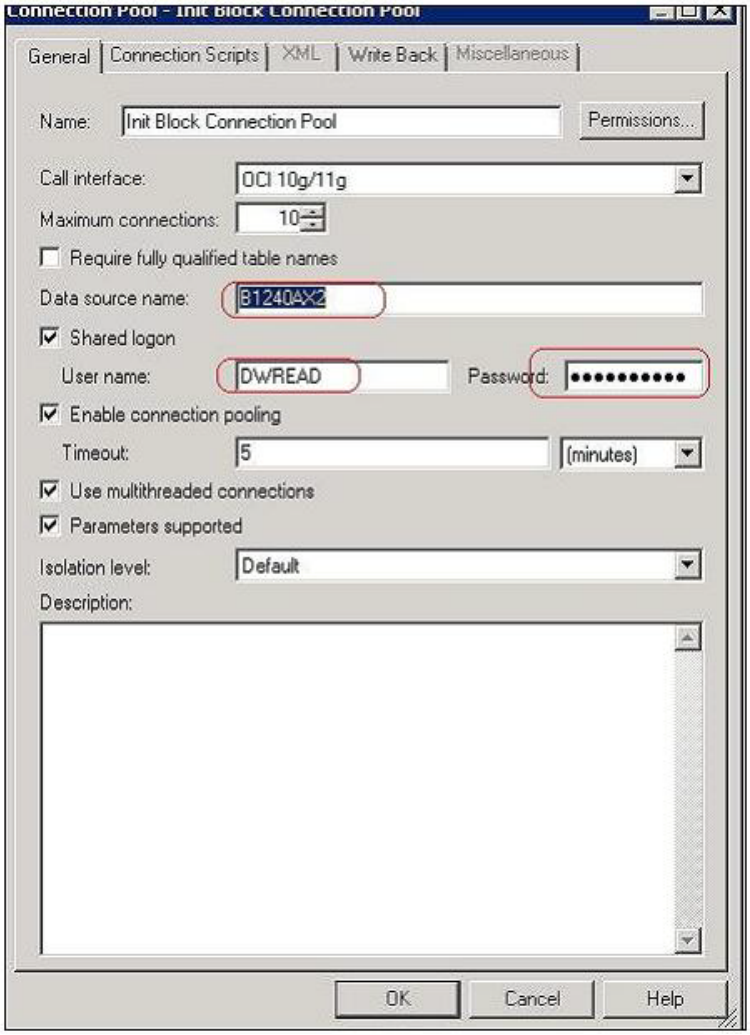
    Password = DWUSER User password

11. In the **OUBI Database Connection** group, provide the following:

    Data source name = BI database name

    User name = DWREAD

    Password = DWREAD User password



12. Click **Save.**

Note: Click **Yes** when you see the prompt '*Do you wish to check global consistency*?' and ignore any warnings that appear after consistency check is complete.

13. Log into the **OBIEE Enterprise Manager**.
14. Navigate to **BI Instance > Coreapplication > Deployment.**
15. Lock and edit.

    The repository text box is enabled.

16. Browse to the modified rpd file and submit.
17. Provide the RPD password as "oracle123". Click **Apply**.
18. Activate the changes and then restart the Oracle Utilities Analytics services.

    Note: All the above databases set in the connection pool should be updated in **tnsnames.ora** file in <OBIEE_INSTALL_DIR>/Oracle_BI1/network/admin.

Deploying Web Catalog

To deploy the web catalog, follow these steps:

1. Go to <Catalog location>/root/shared and delete all contents except any customized catalog files.
2. Go to <Catalog location>/root/system, and remove spatial metadata and spatialmetadata.atr contents.

   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the command:

   ```
   ./splenviron.sh -e <envname>
   ```

3. cd $SPLEBASE/bin.
4. Run ksh ./deploycatalog.sh.
5. Enter the location of the physical catalogs configured in Enterprise Manager.

   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the deploycatalog.cmd.
5. Enter the location of the physical catalogs configured in Enterprise Manager.

   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

Configuring and Deploying MapViewer

To configure and deploy the MapViewer, follow these steps:

- **Configuring MapViewer**
- **Modifying instanceconfig.xml**
- **Deploying Custom MapViewer**

Configuring MapViewer

To configure the MapViewer, follow these steps:

1. Login to **WebLogic** console.
2. In the **WebLogic** console, create the '**MAP_DS**' datasource.
3. Lock and edit.
4. Navigate to **Services > Data Sources**.
5. Select **New > Generic Data Source,** and provide the following details:

   Name = MAP_DS

   JNDI Name = MAP_DS

   Database Type = oracle
6. Click **Next**.
7. Enter the following:

   Database Driver = XA thin database driver
8. Click **Next**.
9. Enter the following connection properties:
   - Database Name: BI Database Name
   - Host Name: Database host
   - Port: Database port
   - Database User Name: dwadm
   - Password: dwadm password
10. Click **Next**, and then click **Finish**.
11. Click **Activate Changes**.
12. Update the **mapViewerConfig** file with below mentioned tags:

    File location: < OBIEE_INSTALL_DIR >/Oracle_BI1/bifoundation/jee/mapviewer.ear/

    web.war/WEB-INF/conf/

    File: mapViewerConfig.xml
13. If there is proxy used, insert the list of host names for all the third-party service providers in the security_config node.

    ```
    <proxy_enabled_hosts>
    ```

    elocation.oracle.com,maps.weatherbug.com,direct.weatherbug.com,api.wxbug.net,de.tiles.weatherbug.com

    ```
    </proxy_enabled_hosts>
    ```
14. Add the following ns_data_provider node:

    ```
    <ns_data_providerid="obieeNsdp"
    ```

```
class="com.oracle.utilities.birdseye.BirdseyeNSDP" />
```

15. Add the **current map_tile_server** with the following map_tile_server node.

```
<map_tile_server>
<tile_storage default_root_path="/mytilecache/"/>
</map_tile_server>
```

Modifying instanceconfig.xml

Update the instanceconfig.xml file after taking a backup.

The following are the examples of location of instanceconfig.xml file.

For UNIX:

```
<OBIEE_INSTALL_DIR>/instances/instance1/config/
OracleBIPresentationServicesComponent/coreapplication_obips1
```

For Windows:

```
<OBIEE_INSTALL_DIR>\instances\instance1\config\OracleBIPresentatio
nServicesCo mponent\coreapplication_obips1
```

Perform the following changes to instanceconfig.xml file:

1. Update the security node with the following values. If the security node is not present, add the following code before </Serverinstance>:

```
<Security>
<ClientSessionExpireMinutes>210</ClientSessionExpireMinutes>
<HttpOnlyCookies>false</HttpOnlyCookies>
<CookieDomain />
<CookiePath>/</CookiePath>
</Security>
```

2. Update the following <ServerInstance> element:

```
<LightWriteback>true</LightWriteback>
```

3. Add the following before the end tag </ServerInstance>:

```
<UI>
<DefaultStyle>oubi</DefaultStyle>
<DefaultSkin>oubi</DefaultSkin>
</UI>
```

4. Add the following lines in between the <ServerInstance> </ServerInstance> tags:

```
<Prompts>
<MaxDropDownValues>256</MaxDropDownValues>
<AutoApplyDashboardPromptValues>true</
AutoApplyDashboardPromptValues>
<AutoSearchPromptDialogBox>true</AutoSearchPromptDialogBox>
<AutoCompletePromptDropDowns>
<SupportAutoComplete>true</SupportAutoComplete>
<CaseInsensitive>true</CaseInsensitive>
<MatchingLevel>MatchAll</MatchingLevel>
<ResultsLimit>50</ResultsLimit>
</AutoCompletePromptDropDowns>
</Prompts>
```

Deploying Custom MapViewer

To deploy the custom MapViewer, follow these steps:

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run ksh ./deploymapviewer.sh.
5. Enter the **WebLogic Domain Console Password**. For example, weblogic123.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **deploymapviewer.cmd**.
5. Enter the WebLogic Domain Console password. For example, weblogic123.

After Deploying Custom MapViewer

Perform the following steps after deploying the custom MapViewer:

1. Update MapViewer configuration by navigating to **MapViewer > Administration > Configuration**.
2. Add the below content in the **mapViewerConfig.xml** with appropriate parameters.

```
<DB_HOST>,<DBNAME>,<DB_PORT>,<USER>,<PASSWORD>
<map_data_source name="MAPCONN"
jdbc_host="<DB_HOST>"
jdbc_sid="<BI Database Name>"
jdbc_port="<DB_PORT>"
jdbc_user="DWADM"
jdbc_password="<DWADM>"
jdbc_mode="thin"
number_of_mappers="32"
allow_jdbc_theme_based_foi="true"
/>
```

3. Click **Save,** and then restart.

> **Note**: The above step has to be performed each time after running the deploymapviewer command.

Deploying Write Back

The purpose of the write back templates is to allow the user to configure Administrative dashboards. This is mandatory for the Admin Dashboard functionality to work.

To deploy the write back feature, follow these steps:

For UNIX:
Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.

3. cd $SPLEBASE/bin.
4. Run the **ksh ./deploywriteback.sh**.

For Windows:
Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%/bin.
4. Run the **deploywriteback.cmd**.

Enabling Analytics Help

To enable the Analytics' Help, follow these steps:

1. Download *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards User's Guide* from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. After downloading *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards User's Guide*, change the name of the **Help** file to **OUA Help.pdf**. Now, place the **Help** file in the $SPLEBASE/Skin/res directory.
3. Run the following commands:

   For UNIX:
   Perform the following steps:

   1. Navigate to <Install_Dir>/bin directory.
   2. Initialize the environment with the ./splenviron.sh -e <envname> command.
   3. cd $SPLEBASE/bin.
   4. Run the **ksh ./deployanalyticsear.sh**.
   5. Enter the **WebLogic Domain Console** password. For example, weblogic123.

   For Windows:
   Perform the following steps:

   1. Navigate to <Install_Dir>/bin directory.
   2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
   3. cd %SPLEBASE%/bin.
   4. Run the **deployanalyticsear.cmd**.
   5. Enter the **WebLogic Domain Console Password**. For example, weblogic123
   6. Restart the Analytics core services.
   7. Restart the WebLogic and all Analytics services after the Oracle Business Intelligence Enterprise Edition deployment is completed.
   8. Log into Analytics and navigate to **Administration > Manage Privileges > Write Back > Write Back to Database**.
   9. Click **Denied:Authenticated User** and select **Granted**.

Enabling Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1

Perform the following steps:

1. Restart the Oracle Business Intelligence Enterprise Edition admin server, managed server and opmn services.

Note: Refer to Oracle Business Intelligence Enterprise Edition documentation for detailed instructions on how to start and stop the admin server, managed server and opmn services.

2. Log into the **Analytics** (http://<Server>:<port>/analytics).
3. Click on the **Weblogic User** (top-right of the page).
4. From the drop-down menu, select **My Account**.
5. Set **Prompt Auto Complete** to **ON** and click **OK**.

Oracle Utilities Analytics Admin Tool Component

This is only applicable for users installing the Oracle Data Integrator based ELT. Oracle Utilities Analytics Admin tool is based on Oracle Application Express.

Note: For detailed instructions on how to set up the Admin tool, refer to the chapter **Installing the Oracle Utilities Analytics Admin Tool**. Also, refer to *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide* for the details.

Checklist After the Installation

Ensure that the following tasks are performed after installing Oracle Utilities Analytics version 2.5.0:

1. For Oracle Utilities Analytics ETL related post-installation tasks, see **Oracle Utilities Analytics ELT Component Installation based on Oracle Data Integrator Installation**. Schedule the B1_run_ALL SCENARIO.
2. For Oracle Utilities Analytics Dashboard related post-installation tasks, see **Oracle Utilities Analytics Dashboard Component Installation**.
3. For configuring the mapping and other parameters, refer to *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide*.
4. Start the **File Processor daemon**.
5. Verify install and deploy logs:
   - MDL Import Logs:
     <INSTALL_DIR>/OWB/MetadataFiles/SPL-BI-Project_imp.log
     <INSTALL_DIR>/OWB/MetadataFiles/SPL-BI-Location_imp.log
   - OWB deploy logs:
     <INSTALL_DIR>/logs/system/log_OWBDeployment_YYYYMMDD_####.txt
   - Custom Mapviewer deploy logs:
     <INSTALL_DIR>/logs/system/mapviewerdeploy.sh.log
   - WriteBack logs:
     <INSTALL_DIR>/logs/system/Writeback.log
   - FileProcessorDaemon logs:
     <INSTALL_DIR>/bin/FileProcessorDaemon.log
6. Log into the Oracle Business Intelligence Enterprise Edition Analytics link pointing to the demo database. The dashboard should display data with no errors.

Chapter 6

Upgrading Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards

This chapter provides instructions for upgrading to Oracle Utilities Analytics (OUA) installation version 2.5.0.

- **Supported Upgrade Paths**
- **Upgrading Oracle Utilities Analytics for Oracle Utilities Customer Care and Billing**
- **Upgrade Procedure**
- **Checklist After the Installation**

Supported Upgrade Paths

Direct upgrade to Oracle Utilities Analytics version 2.5.0 is supported from the following versions:

- Oracle Utilities Analytics version 2.4.0.4

> **Important Note:** For upgrading from a version not supported by direct upgrade path, the product must be first upgraded to Oracle Utilities Analytics v2.4.0.4, and then upgraded to Oracle Utilities Analytics v2.5.0.

Upgrading Oracle Utilities Analytics for Oracle Utilities Customer Care and Billing

This section provides detailed steps to upgrade Oracle Utilities Analytics where Oracle Utilities Customer Care and Billing (CC&B) is one of the source systems. Users who do not have Oracle Utilities Customer Care and Billing as one of the source systems can skip this section completely and follow instructions in the next section for upgrading to Oracle Utilities Analytics 2.5.0.

As of the current 2.5.0 release, the ETL methodology for Oracle Utilities Customer Care and Billing is being moved from Oracle Warehouse Builder to Oracle Data Integrator. Following these steps will ensure minimal downtime for the source application and no data loss while moving from Oracle Warehouse Builder based Extract, Transform, and Load (ETL) to Oracle Data Integrator based Extract, Load and Transform (ELT).

The following are the various phases of the upgrade process:

- **Prerequisites for Upgrade**
- **Phase 1: Preparing the Source and the Target systems**
- **Phase 2: Last Load Using Oracle Warehouse Builder ETL Jobs and Oracle GoldenGate Sync Startup**
- **Phase 3: Data Warehouse Upgrade and Startup of Oracle Data Integrator ELT Jobs**
- **Phase 4: Upgrade the Oracle Business Intelligence Enterprise Edition Components**

Prerequisites for Upgrade

The prerequisite are as follows:

1. Oracle Utilities Customer Care and Billing source application must be at version 2.4.0.1
2. Oracle Utilities Analytics must be at version 2.4.0.4.
3. Oracle Utilities Analytics database including Oracle Warehouse Builder must be upgraded to 11.2.0.3 version of database, if not on 11.2.0.3. Do not delete the old Oracle home until and unless all upgrade steps have been executed. After upgrading Oracle Warehouse Builder to 11.2.0.3, login to Oracle Warehouse Builder client and deploy all the workflows.

   Note 1: Refer to the Oracle database documentation to upgrade the database and Oracle Warehouse Builder to 11.2.0.3 version.

   Note 2: To deploy workflow, login to Oracle Warehouse Builder client with BIREPOWN/<BIREPOWN password> credentials. Expand the SPL_BI project and select the database.

   To deploy workflow, perform the following steps:

   1. Go to the tool, and click on **Control Center Manager**.
   2. Provide <BIREO user password>, and click **OK**.
   3. Expand the **SPL_BI_WF_LOC**.
   4. Expand the **SPL_BI_WF**.
   5. Select each component, such as DIM. Right-click, and select **Set Action >Replace**.
   6. Select component, such as DIM again. Right- click, and select **Deploy**.
   7. Repeat the steps 5 and 6 for all remaining components, such as DIM2, etc.

Phase 1: Preparing the Source and the Target systems

This phase consists of tasks that can be carried out without requiring downtime of source Oracle Utilities Customer Care and Billing application. The following are the tasks:

1. Install JDK 1.6.0 (20 or above), Oracle WebLogic 10.3.6, Oracle Data Integrator 11.1.1.6 with Java EE software products on Oracle Utilities Analytics database server.
2. Ensure to create users in the database with the following names: DWADM, DWUSER, DWREAD, MDADM, RELADM, SPLADM, SPLUSER, SPLREAD, MASTER_REPO, WORK_REPO and DWSTAGE if these do not exist already, without giving specific roles.
3. Ensure to create roles with the following names: DW_USER, DW_READ, DW_REPLICATE, SPL_USER and SPL_READ roles if these do not exist already.
4. Connect to the sys user, execute the **Usersgrants.sql** in **BI250/Scripts/Usersgrants.sql**. This SQL will provide required grants to the users created above.

5. All the steps outlined in the **RELADM Schema Installation** and **MDADM Schema Installation** topics of the **Oracle Utilities Analytics Database Component Upgrade** section below in this chapter.
6. All the steps outlined in the **Oracle GoldenGate Setup** topic of the **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation** section below in this chapter.
7. Refer to the **Oracle Utilities Analytics Admin Tool Component** section below to install the Oracle Utilities Analytics Administrator tool.
8. All the steps outlined in the **Setting Permissions for Cistab File in UNIX** topic of the **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation** section below in this chapter.
9. All the steps outlined in the **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Package Installation Steps** topic of the **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation** section below in this chapter.
10. Execute the step till the **InitiateSetup** of the **Post-installation Tasks** topic of the **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation** below in this chapter.

    Important Note: The **InitiateSetup** step generates the GoldenGate scripts. Do not execute the GoldenGate scripts at this point of time.

Phase 2: Last Load Using Oracle Warehouse Builder ETL Jobs and Oracle GoldenGate Sync Startup

This phase involves production down time on Oracle Utilities Customer Care and Billing source application. The production down time is required to stop any new transactions from being made on the source database. Once this is ensured, data will have to be extracted using the batch jobs and loaded into the data warehouse.

After this the Oracle Data Integrator based ELT will be setup to start loading the Oracle Utilities Customer Care and Billing data going forward.

Important Note: **The production downtime in the source system is enforced to stop any data modifications on the database. Failure to do so, will result in data loss in the data warehouse.**

This phase involves the following steps:

1. Run all batch jobs on the source system to extract the last set of data changes.

   The list of the batch jobs for the various Oracle Utilities Customer Care and Billing facts and dimensions is provided below for reference.

Star Schema Fact/Dimension Name	CCB Batch Control Name
CD_ACCT	EXTACCT
CD_ADDR	EXTADDR
CD_ADJ_TYPE	EXTADJT
CD_CAMPAIGN	C1-CMPGN
CD_CASETYPE_STATUS	EXTCTS
CD_CASE_COND	EXTLKUP
CD_CC_TYPE	C1-CCTTY

Star Schema Fact/Dimension Name	CCB Batch Control Name
CD_COLLEVT_TYPE	C1-CUTET
	C1-ODET
	EXTSET
	C1-EXTCET
CD_COLLPROC_STATUS	EXTLKUP
CD_COLLPROC_TMPL	EXTCPT
	C1-ODPT
CD_FISCAL_CAL	EXTFIPD
CD_FT_TYPE	EXTLKUP
CD_GL_ACCT	C1-FTGL
CD_MSG	C1-MSG
CD_ORDER_CAN_RSN	C1-OCNRS
CD_ORDER_STATUS	EXTLKUP
CD_PAY_CAN_RSN	C1-PCNRS
CD_PER	EXTPER
CD_PKG	C1-PCKGE
CD_PREM	EXTPREM
CD_RATE	EXTRATE
CD_SA	EXTSA
CD_SA_STATUS	EXTLKUP
CD_SQI	EXTSQI
CD_TD	C1-TD
CD_TD_PRIORITY	EXTLKUP
CD_TD_ROLE	C1-TDROL
CD_TD_SKILL	C1-TDSKL
CD_TD_STATUS	EXTLKUP
CD_TD_TYPE	C1-TDTYP
CD_TNDR_SRCE	C1-TNDCT
CD_TNDR_STATUS	EXTLKUP
CD_TNDR_TYPE	C1-TNDTY
CD_TOU	EXTTOU
CD_UCOLEVT_TYPE	EXTUET

Star Schema Fact/Dimension Name	CCB Batch Control Name
CD_UCOLPROC_STATUS	EXTLKUP
CD_UCOLPROC_TMPL	EXTUCPT
CD_UOM	EXTUOM
CD_USER	EXTUSER
CF_ARREARS	EXTSAARS
CF_BILLED_USAGE	EXTBLUSG
CF_CASE	EXTCASE
CF_CASE_LOG	EXTCLOG
CF_CC	C1-CSCNT
CF_COLL_EVT	C1-CUTEV
	C1-ODEV
	EXTCOLEV
	EXTSEVEV
CF_COLL_PROC	C1-ODPR
	EXTCOLPR
CF_FT	EXTFIN
CF_FT_GL	C1-FTGL
CF_ORDER	C1-ORDER
CF_PAY_TNDR	C1-PYTND
CF_RECENT_TD_ENTRY	C1-RECTD
CF_SA	EXTSAACC
CF_TD_ENTRY	C1-TDENT
CF_UCOL_EVT	EXTUNCEV
CF_UCOL_PROC	EXTUNCPR

2. Once the batch jobs have completed and the flat files are ready, move them to the Analytics load directory as earlier. The File Processor daemon should schedule the Oracle Warehouse Builder workflows to load the data in flat files into the data warehouse. **It is recommended to wait till all the extracts have been loaded to warehouse database successfully**.

   Note: Make sure that the file processor is running during extracts upload.

3. The triggers on the source application will have to be disabled. These triggers formed the CDC (Changed Data Capture) mechanism based on which incremental changes were identified as a part of the older Oracle Warehouse Builder based ETL methodology.

   The script to disable Oracle Utilities Customer Care and Billing triggers on the source system is available in the below path. Navigate to the root folder where the database package was unzipped.

```
BI250/DWADM/Post-Upgrade/disable_ccb_bi_triggers.sql
```

> **Note**: Login to the ADM schema of Oracle Utilities Customer Care and Billing application, and execute this script.

4. For the Oracle Data Integrator ELT jobs to successfully extract and load data, certain parameters are required to be configured by you on the source Oracle Utilities Customer Care and Billing system. You will have to perform this step first before proceeding to upgrade the target schema.

   The **Analytics Configuration** portal in the source Oracle Utilities Customer Care and Billing system allows users to do this. Navigate to **Menu** > **Admin Menu** > **B** > **BI Configuration**.

   The details of the various entities in this portal and their purposes have been described in the detail in the **Chapter 3** of *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide.*

5. Once parameters have been configured in Oracle Utilities Customer Care and Billing source application, the initial load process can be started to copy data from the source database into the replication schema in the data warehouse. There are two options for this.

   Proceed with the option 1, only if all of the tables being replicated are expected to have a volume of less than 10 million records. The list of the source tables being replicated can be found in the *Data Mapping Guide*.

   > **Note**: For the source tables list, refer to *Oracle Utilities Extractors and Schema Data Mapping Guide for Oracle Utilities Customer Care and Billing.*

   Option 1: Using GoldenGate

   Execute the steps mentioned in **Readme.txt** generated as a part of the **InitiateSetup** execution as described in the phase 1.

   > **Note**: Refer to the **InitiateSetup** step of the **Post-installation Tasks** section to run the GoldenGate scripts.

   Option 2: Using Database Import/Export Process

   If any of the source table to be replicated is expected to be in excess of 10 million records, the GoldenGate process may not scale up well when dealing with such higher volumes. The primary reason being the GoldenGate scripts will work on individual records on a single threaded basis.

   In such cases, it is recommended to perform the initial sync utilizing the Oracle database's export and import process.

   Note: Refer to the steps mentioned in the section "**Performing Initial Load"** in the **Appendix C** of *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide.*

   Once the initial load is completed via the export and import process, the GoldenGate incremental sync process can be started to capture incremental changes.

   Execute the steps mentioned in **ReadMe.txt** generated as a part of **InitiateSetup** execution as described in the phase 1. Since the initial load has already been done by export/import process, skip the commands below the header "##### FOR INITIAL LOAD ONLY #####".

   Note: Refer to the **InitiateSetup** step of **Post-installation Tasks** section to run the GoldenGate scripts.

6. After the GoldenGate initial sync is completed, the downtime enforced on Oracle Utilities Customer Care and Billing can be lifted to allow users to perform transactions.

Note: Before executing all the steps mentioned in **ReadMe.txt** as stated below, read the below statement carefully.

There is step in **ReadMe.txt** to start the initial load on the source database after executing them you should wait till those steps get completed. To know initial load gets completed on the source database, execute the below query in the source database after connecting to the source application ADM schema such as, CISADM.

select * from CDC_SYNC_LOG;

If the COMPLETED_ON column is not null for the current model, then the initial data sync is complete.

The model name is the directory name, inside which **ReadMe.txt** is placed.

Refer to the **ReadMe.txt** generated in the above-mentioned directory for the detailed instructions on how to run the Oracle GoldenGate scripts.

7. Execute the remaining steps of the **Post-installation Tasks** topic of **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation** section below in this chapter.

   Note: Execute the steps after **InitiateSetup**.

Phase 3: Data Warehouse Upgrade and Startup of Oracle Data Integrator ELT Jobs

This phase involves actual schema upgrade of the target database and starting up of Oracle Data Integrator ELT jobs.

Before the starting the Oracle Data Integrator ELT jobs, you will also have to complete the necessary configurations required on the source and the target systems.

This phase involves the following tasks:

1. Perform all steps outlined in **DWADM Schema Upgrade** section of **Oracle Utilities Analytics Database Component Upgrade** section in this chapter.
2. Data correction script should be executed. The script to be run is **OWBtoODIUpgrade.sql** and it is located in BI250/DWADM/Post-Upgrade Connect to the target database as the DWADM user and run this SQL script.
3. Perform all steps outlined in **Upgrading the Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Package** section of this chapter.
4. Start the **Target GoldenGate** processes.

   Note: To start GoldenGate processes, navigate to **GoldenGate Home** and login using ggsci command and start the relpcat processes. Do not run the GoldenGate process ending with 'I'.

5. If any customizations have been done previously on the Oracle Utilities Customer Care and Billing extractors to populate the UDx columns for any of the facts or dimensions, the same will have to be copied in the new Oracle Data Integrator based ELT methodology.

   For details, refer to **Chapter 5**: **Extending Oracle Utilities Analytics** in *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide*.

6. Any change to the Oracle Data Integrator ELT metadata configuration must be done before starting the ELT jobs. These metadata configurations can be maintained using the Oracle Utilities Analytics Administration tool installed earlier as part of the step 5 in the phase 1.

   Specifically refer to the following pages in the Oracle Utilities Analytics Administration tool:

   - Target Entity (for scheduling related configuration).

- Global Configuration (for global settings of the Oracle Utilities Analytics product).

  Details about these screens can be found in **Appendix B** of the *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide*. The chapter 3 in the same guide has detailed information on how to configure the Oracle Utilities Analytics product completely.

7. Note the last sync timestamp when the data was synced up from the source Oracle Utilities Customer Care and Billing system using the below query on the target database:

   ```
   select max(COMPLETED_ON) from ccb1rep.CDC_SYNC_LOG;
   ```

8. The ELT jobs for the existing Oracle Utilities Customer Care and Billing facts and dimension should be updated to start the data load after the timestamp of the last set of data loaded via the Oracle Warehouse Builder based ETL in the phase 2.

   Use the below query on the target database to update the timestamp on the ETL jobs. Use the timestamp from the previous step.

   ```
   update MDADM.B1_JOB_CONFIG
   set SLICE_START_DTTM = <timestamp from Step 7>
   where PROD_FLG = 'CCB'
   and TARGET_ENTITY_ID in (
   select TARGET_ENTITY_ID from MDADM.B1_TARGET_ENTITY
   where ENTITY_NAME not in
('CF_SA_BILLING','CF_PA','CF_PA_SNAP','CF_PAY_PLAN','CF_PAY_PLAN_SNAP'
,
   'CD_BILL_CAN_RSN','CD_BILL_CYC_SCH','CD_BILL_DAY_IN_WIN',
   'CD_BSEG_STATUS','CD_DAYS_LAST_FRZ_BS',
   'CD_DAYS_TO_WIN_CLS','CD_INSTALLMENT_CNT','CD_MSRMT_TYPE',
   'CD_PAY_METHOD','CD_PAY_PLAN_STATUS',
   'CD_PAY_PLAN_TYPE','CD_PA_STATUS','CD_REC_CHARGE_AMOUNT'));
   ```

   For the Arrears fact, ETL job alone, which is a snapshot fact, the timestamp should be updated to be on the first /or second date of the next month. For example, if the last sync timestamp in the step 7 is "12-NOV-2013 04:02:30", then the Arrears ETL job should have the timestamp as "01-DEC-2013 00:00:00".

   Use the below query on the target database to update the timestamp on the ETL jobs. Derive the timestamp to be used based on the timestamp from the step 7.

   ```
   update MDADM.B1_JOB_CONFIG
   set SLICE_START_DTTM = <First second of the next month after the
timestamp>
   where PROD_FLG = 'CCB'
   and TARGET_ENTITY_ID = (
   select TARGET_ENTITY_ID from MDADM.B1_TARGET_ENTITY
   where ENTITY_NAME = 'CF_ARREARS');
   ```

   Note: The above queries will not update the timestamp for the ELT jobs of the new Oracle Utilities Customer Care and Billing facts and dimensions. This is because these tables will have to be loaded from the start. So the default slice timestamp populated on these jobs will be left as is.

9. Follow the steps outlined in the **Generating Security and Starting Oracle Data Integrator Schedule** topic of the **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation** section below in this chapter.

10. Start jobs the Oracle Data Integrator ELT jobs using the Oracle Utilities Analytics Administration tool.

    Note: Refer to the **Job Configuration** section in the **Appendix B** of *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities*

Analytics Dashboards Administration Guide. The **Enable Jobs** page will help to mass enable the ELT jobs for a specific source product instance.

Phase 4: Upgrade the Oracle Business Intelligence Enterprise Edition Components

Perform all steps outlined in the section **Oracle Utilities Analytics Dashboard Component Upgrade** of this chapter.

Upgrade Procedure

To upgrade to Oracle Utilities Analytics 2.5.0 users must upgrade to Oracle Utilities Advanced Spatial and Operational Analytics 2.4.0.4 if it is on different version of product.

This section describes the procedure to upgrade Oracle Utilities Analytics version 2.5.0:

- **Oracle Utilities Analytics Database Component Upgrade**
- **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation**
  (applicable only if you have installed Oracle Utilities Operational Device Management, or Oracle Utilities Customer Care and Billing).
- **Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Upgrade**
  (applicable only if you have installed any one of the edge applications such as, Oracle Utilities Network Management System, Oracle Utilities Work and Asset Management, Oracle Utilities Mobile Workforce Management, or Oracle Utilities Meter Data Management).
- **Oracle Utilities Analytics Dashboard Component Upgrade**
- **Oracle Utilities Analytics Admin Tool Component**
  (applicable only if you use Oracle Data Integrator based ELT).

  Important Note: If you are upgrading from previous release of Oracle Utilities Customer Care and Billing, you may have to follow the steps in a certain sequence. Refer to the section **Upgrading Oracle Utilities Analytics for Oracle Utilities Customer Care and Billing** for the exact steps for the upgrade.

Oracle Utilities Analytics Database Component Upgrade

This section describes the upgrade installation of the database. Upgrade the database to AL32UTF8 character set if database is not in AL32UTF8 character set. The following topics are discussed in this section:

- **Upgrading Database Software Version**
- **Copying and Decompressing Install Media**
- **Creating Users and Tablespaces**
- **RELADM Schema Installation**
- **MDADM Schema Installation**
- **DWADM Schema Upgrade**
- **Upgrading the Oracle Database**
- **Spatial Configuration**
- **Generating Database Statistics**

Upgrading Database Software Version

It is recommended to upgrade database software and Oracle Warehouse Builder version to 11.2.0.3, and not to delete the old Oracle home until all the upgrade steps are executed.

Copying and Decompressing Install Media

To copy and then decompress the install media, follow these steps:

1. Download the Oracle Utilities Analytics version 2.5.0 Oracle Database part (**Oracle Utilities Analytics V2.5.0 Oracle Database Multiplatform.zip**) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred to below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
3. Unzip Oracle Utilities Analytics V2.5.0 Oracle Database Multiplatform.zip to <TEMPDIR> using any zip utility.
4. Unzip the zip file <TEMPDIR>/OUA-V2.5.0-Database-Multiplatform.zip using any zip utility.

Creating Users and Tablespaces

The following are the steps to be followed for creating users and tablespaces required:

1. Ensure to create users in the database with the following names: DWADM, DWUSER, DWREAD, MDADM, RELADM, SPLADM, SPLUSER, SPLREAD, MASTER_REPO, WORK_REPO and DWSTAGE if these do not exist already, without giving specific roles.
2. Ensure to create roles with the following names: DW_USER, DW_READ, DW_REPLICATE, SPL_USER and SPL_READ roles if these do not exist already.
3. Connect to the sys user, execute the **Usersgrants.sql** in BI250/Scripts/Usersgrants.sql. This SQL will provide required grants to the users created above.

RELADM Schema Installation

The RELADM schema is a metadata schema that consists of database objects used for storing product version and component installation information.

This section describes the initial installation of RELADM schema. The process prompts you for the names of three database users:

- A user that owns the application schema. Provide value: RELADM.
- A user that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A user with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.

The process also prompts you for the following:

- A database role that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A database role with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- Location for jar files (the Jar files are bundled with the database package).

  ```
  Java Home. For example: C:\Java\jdk1.6.0_18.
  ```

Review Storage.par

The **storage.par** file (that comes with the product and is in location ..\BI250\RELADM\Install-Upgrade) allocates all base tables and indexes to the default tablespace CISTS_01. If you decide to allocate some tables or indexes outside of the default tablespace, then this has to be reflected in the **storage.par** file by changing the tablespace name from the default value to a custom value, according to the format shown below:

```
Object Type:Object Name:Tablespace name:Parallel:Comments
```

Where Parallel defines the number of threads that the Oracle database server uses to access a table or to create an index. The default value is 1.

Note: If database does not have CISTS_01 tablespace, or RELADM user do not have quota on CISTS_01 tablespace, you must edit the tablespace name in Storage.par to tablespace name on which RELADM has quota.

Installing the RELADM Schema

Perform the following steps to install the RELADM schema:

Note: Ensure CDXDBI.exe (in step below) is run from a Window desktop that has the Oracle 11.2.0.3 32 bit client and Java Development Kit Version 6.0 Update 20 or later. Ensure that tnsnames.ora file of the Oracle client is updated with the entry for target database to connect to the target database.

1. Run CDXDBI.exe from ..\BI250\RELADM\Install-Upgrade. Run the utility from command prompt. The utility prompts you to enter values for the following parameters:
   - Name of the target database:<DB NAME>
   - Password for the system user account in the database (in silent mode)
   - Name of the owner of the Database Schema: RELADM
   - Location of Java Home: <..\jdk1.6.0_20>
   - Location of TUGBU Jar files: <..\BI250\RELADM\Jarfiles>
   - Password for the user (in silent mode): <RELADM user password>
   - Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
   - Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - Oracle database role with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
2. The utility creates schema and system data definitions.

   If an error occurs while executing an SQL or another utility, it logs and displays the error message and allows you to re-execute the current step.

Generating Database Statistics

During the installation process, new database objects may be added to the target database. Before using the database, generate the statistics for these new objects:

Connect to the sys user and execute the command:

```
execute DBMS_STATS.GATHER_SCHEMA_STATS('RELADM');
```

MDADM Schema Installation

The MDADM schema is a metadata schema that consists of database objects used for storing metadata of Oracle Utilities Analytics. For example ETL job execution status, target tables for ETL, Oracle GoldenGate configuration details, etc.

This section describes the initial installation of MDADM schema. The process prompts you for the names of three database users:

- A user that owns the application schema. Provide value: MDADM.
- A user that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A user with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.

The process also prompts you for the following:

- A database role that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- A database role with the read-only privileges to the objects in the application schema. There is no need to provide any value here, just press **Enter** to proceed.
- Location for jar files (the Jar files are bundled with the database package).

```
Java Home. For example: C:\Java\jdk1.6.0_18.
```

Review Storage.par

The **storage.par** file (that comes with the product and is in location ..\BI250\MDADM\Install-Upgrade) allocates all base tables and indexes to the default tablespace CISTS_01. If you decide to allocate some tables or indexes outside of the default tablespace, then this has to be reflected in the **storage.par** file by changing the tablespace name from the default value to a custom value, according to the format shown below:

```
Object Type:Object Name:Tablespace name:Parallel:Comments
```

Where Parallel defines the number of threads that the Oracle database server uses to access a table, or to create an index. The default value is 1.

> **Note: If database does not have CISTS_01 tablespace, or MDADM user do not have quota on CISTS_01 tablespace, you must edit the tablespace name in Storage.par to tablespace name on which MDADM has quota.**

Installing the MDADM Schema

Perform the following steps to install the MDADM schema:

> **Note**: Ensure **CDXDBI.exe** (in step below) is run from a Window desktop that has the Oracle 11.2.0.3 32 bit client and Java Development Kit Version 6.0 Update 20 or later. Ensure that tnsnames.ora file of the Oracle client is updated with the entry for the target database to connect to the target database.

1. Run **CDXDBI.exe** from ..\BI250\ MDADM\Install-Upgrade. Run the utility from command prompt. The utility prompts you to enter values for the following parameters:
   - Name of the target database:<DB NAME>
   - Password for the system user account in the database (in silent mode)
   - Name of the owner of the Database Schema: MDADM
   - Location of Java Home: <..\jdk1.6.0_20>
   - Location of TUGBU Jar files: <..\BI250\MDADM\Jarfiles>
   - Password for the user (in silent mode): <MDADM user password>

- Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
- Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
- Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
- Oracle database role with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.

2. The utility creates schema and system data definitions.

   If an error occurs while executing an SQL or another utility, it logs and displays the error message and allows you to re-execute the current step.

Generating Database Statistics

During the installation process, new database objects may be added to the target database. Before using the database, generate the statistics for these new objects:

Connect to the sys user and execute the command:

```
execute DBMS_STATS.GATHER_SCHEMA_STATS('MDADM');
```

DWADM Schema Upgrade

The DWADM schema contains the star schema objects, such as facts and dimensions that contain all the data of the data warehouse.

This section describes how to upgrade an existing Oracle Utilities Analytics target schema to Oracle Utilities Analytics v2.5.0. The upgrade process prompts you for the names of three database users:

- A user who owns the application schema. For example, DWADM.
- A user with the read-write (select/update/insert/delete) privileges to the objects in the application schema. The application will access the database as this user. For example, DWUSER.
- A user with the read-only privileges to the objects in the application schema. For example, DWREAD.

The upgrade process also prompts you for the following:

- A database role that has the read-write (select/update/insert/delete) privileges to the objects in the application schema. The application will access the database as. For example, the DW_USER.
- A database role with the read-only privileges to the objects in the application schema. For example, DW_READ.
- Location for jar files. (The Jar files are bundled with the database package.).

  ```
  Java Home. For example, C:\Java\jdk1.6.0_18
  ```

Review Storage.par

The **storage.par** file (that comes with the product and is in location ..\BI250\DWADM\Install-Upgrade) allocates all base tables and indexes to the default tablespace CISTS_01. If you decide to allocate some tables or indexes outside of the default tablespace, then this has to be reflected in the **storage.par** file by changing the tablespace name from the default value to a custom value, according to the format shown below:

```
Object Type:Object Name:Tablespace name:Parallel:Comments
```

Where Parallel defines the number of threads that the Oracle database server uses to access a table, or to create an index. The default value is 1.

Note: If database does not have CISTS_01 tablespace, or DWADM user does not have quota on CISTS_01 tablespace, you must edit the tablespace name in Storage.par to tablespace name on which DWADM has quota.

Upgrading the Oracle Database

To upgrade the Oracle database, perform the following steps:

Note: Ensure CDXDBI.exe (in step below) is run from a Window desktop that has the Oracle 11.2.0.3 32 bit client and Java Development Kit Version 6.0 Update 20 or later. Ensure that the **tnsnames.ora** file of the Oracle client is updated with the entry for target.

1. Run **CDXDBI.exe** from..\BI250\DWADM\Install-Upgrade. Run this utility from the **Command Prompt.** The utility prompts you to enter values for the following parameters:
   - Name of the target database:<DB NAME>
   - Password for the SYSTEM user account in the database (in silent mode)
   - Name of the owner of the Database Schema: DWADM
   - Location of Java Home: <..\jdk1.6.0_20>
   - Location of TUGBU Jar files: <..\BI250\DWADM\Jarfiles>
   - Password for the user (in silent mode): <DWADM user password>
   - Oracle user with read-write privileges to the Database Schema: DWUSER
   - Oracle user with read-only privileges to the Database Schema: DWREAD
   - Oracle database role with read-write privileges to the Database Schema: DW_USER
   - Oracle database role with read-only privileges to the Database Schema: DW_READ
2. If you chose to continue, CDXDBI first checks for the existence of each of the users specified and prompts for their password, default tablespace, and temporary tablespace if they do not exist.
3. After setting up roles and users, the utility continues upgrading schema and system data definitions. If an error occurs while executing an SQL or another utility, it logs and displays the error message and allows you to re-execute the current step.

Spatial Configuration

Note: See **Spatial Configuration** to configure spatial data if application is not already configured.

This section describes how to load spatial metadata in the **USER_SDO*** tables for Oracle Utilities Analytics. If spatial data is already configured in application, follow the steps below.

Use the following procedure to load spatial metadata in the target database:

Loading Spatial Metadata in the Target Database

1. Create the **dump_dir** directory in the database and copy **user_sdo.dmp** file from ../B1250/Spatial-Metadata folder to that location.
2. Import released spatial tables to the target database using the following command:

```
impdp directory=dump_dir dumpfile=user_sdo.dmp logfile=

    impdp_user_sdo.log schemas=DWADM
remap_tablespace=cists_01:<tablespace_name>
```

Note: Run this command from the database server.

Note: Make sure to change the tablespace_name to the tablespace name on which DWADM has the quota. If the DWADM tablespace has quota on cists_01 tablespace, then exclude whole remap_tablespace clause from the command.

3. Review the **impdp_user_sdo.log** file to ensure the tables were imported successfully.
4. After importing the tables, run the following SQL scripts in the command prompt from ../B1250/Spatial-Metadata folder:
   - sqlplus dwadm/<dwadm user password>@database-name @copy_spatial_metadata.sql
   - sqlplus dwadm/<dwadm user password>@database-name @clean_sdo_release_tbls.sql
5. Review the log files.

Generating Database Statistics

During an install process, new database objects may be added to the target database. Before starting to use the database, generate the statistics for these new objects.

Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Installation

Note 1: Ensure that the same Operating System (OS) user is used to install the Oracle Utilities Analytics ETL component that is used to install all the related software. Refer to section **Prerequisite Software**.

Note2: You must install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI) only if you are using Oracle Utilities Operational Device Management or Oracle Utilities Customer Care and Billing as the source applications.

Note 3: Oracle Utilities Operational Device Management (ODM), or Oracle Utilities Customer Care and Billing (CC&B) application set up is a prerequisite in order to install Oracle Data Integrator based ELT component. The source applications should be setup with the required configurations before proceeding with the Oracle Data Integrator based ELT component installation in order to successfully extract data from them to Oracle Utilities Analytics.

Refer to the chapter **Configuring Oracle Utilities Operational Device Management for Business Intelligence** in *Oracle Utilities Extractors and Schema for Oracle Utilities Operational Device Management Data Mapping Guide*.

Refer to the chapter **Configuring Oracle Utilities Customer Care and Billing for Business Intelligence** in *Oracle Utilities Extractors and Schema for Oracle Utilities Customer Care and Billing Data Mapping Guide*.

This section describes how to install the ELT component of Oracle Utilities Analytics. The section includes the following:

- **Oracle GoldenGate Setup**
- **Copying and Decompressing Install Media**
- **Setting Permissions for Cistab File in UNIX**
- **Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Package Installation Steps**
- **Post-installation Tasks**
- **Generating Security and Starting Oracle Data Integrator Schedule**

Oracle GoldenGate Setup

Note 1: This section describes what setups are required in Oracle GoldenGate to work with Oracle Utilities Analytics. For installing Oracle GoldenGate, refer to its installation document.

Note 2: You should install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI) only if you are using Oracle Utilities Operational Device Management, or Oracle Utilities Customer Care and Billing as the source application.

Download Oracle GoldenGate 11.2.1.0.5_2 from My Oracle Support (https://support.oracle.com/).

Set up Oracle GoldenGate on the source and the target database servers. This section describes the following:

- **Source Database Server GoldenGate Setup**
- **Target Database Server GoldenGate Setup**

Source Database Server GoldenGate Setup

Perform the below steps for setting up the source database server:

Setting up the Source Database GoldenGate Server

1. Create a directory on source database server.
   For example: ../GoldenGateHome. This will be the **Oracle GoldenGate home** (**OGG_Home**) on the source database server.

   Important Note: Make a note of this directory location; it will be used during Oracle Utilities Analytics installation.

2. Copy the GoldenGate software in the above created directory.
3. Unzip the GoldenGate software. It extracts into a tar file:
   tar -xvof <tar file>
4. Open a **Command** window and set the source ORACLE_SID and ORACLE_HOME variables.

   Set LD_LIBRARY_PATH using the following commands:

   For Unix:

   ```
   export LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH
   ```

   For Windows:

   ```
   set LD_LIBRARY_PATH=%ORACLE_HOME%/lib:%LD_LIBRARY_PATH%
   ```

5. In the **Command** window, change directory to **GoldenGate home** directory and execute the command shown below:

   For Unix:

   ./ggsci

   For Windows:

   ggsci

   This opens the **GoldenGate** prompt.

6. On the **GoldenGate** prompt, execute the **create SUBDIRS** command.
7. On the **GoldenGate** prompt, execute the **EDIT PARAMS mgr** command. This command opens the editor.
8. Copy the below contents:

- PORT 7830
- DYNAMICPORTLIST 7830-7880

  Note 1: Make sure the mentioned port range (7830-7880) is not in use. If they are in use, provide another available port range.

  Note 2: Make a note of the range start and end ports numbers; it will be used during Oracle Utilities Analytics installation.

  Note 3: Refer to Oracle GoldenGate documentation if you would like to configure other settings, such as **Purge**.

9. On the GoldenGate prompt, execute the **start mgr** command to start the GoldenGate manager process.
10. On the GoldenGate prompt, execute the **info all** - command to view the manager process is running. Exit GoldenGate by executing the **exit** command.
11. Ensure that source database is in the **archivelog** mode.
12. Connect to the source database as sys user and execute **alter database add supplemental log data (primary key) columns** command.
13. Go to the **Oracle GoldenGate home** (**OGG_Home**) directory.
14. Connect to the database as sys user using **SQL*Plus** (**OGG_Home** should be the current directory while invoking **SQL*Plus**).
15. Create a new user, for example: ODM01SRC (this user is the Oracle GoldenGate owner) and make sure to assign a tablespace to this user, that is not assigned to any other user.

    Important Note: Make a note of the GoldenGate Owner Username; it will be used during Oracle Utilities Analytics installation.
16. Execute Grant connect,resource,dba to <GoldenGate owner user created in above step>.
17. Connect to the database as sys user and create a user ODM01SRC (It is the GoldenGate owner) and make sure to assign tablespace that is not assigned to any other user.

    For Oracle Utilities Customer Care and Billing source database, execute following grants:

    Grant select on CISADM.F1_MST_CONFIG to < GoldenGate owner user created in above step>

    Grant select on CISADM. F1_EXT_LOOKUP_VAL to < GoldenGate owner user created in above step>

    Grant select on CISADM. F1_BKT_CONFIG to < GoldenGate owner user created in above step>

    Grant select on CISADM. F1_BKT_CONFIG_VAL to < GoldenGate owner user created in above step>

    For Oracle Utilities Operational Device Management source database, execute following grants:

    Grant select on CISADM.F1_MST_CONFIG to < GoldenGate owner user created in above step>

    Grant select on CISADM. F1_EXT_LOOKUP_VAL to < GoldenGate owner user created in above step>

    Note: While executing the SQL commands in steps 17, 18 and 19, provide the GoldenGate owner user if prompted for.
18. Run the command:

    ```
    @marker_setup.sql
    ```

19. Run the command:

    ```
    @ddl_setup.sql
    ```

20. Run the command:

    ```
    @role_setup.sql
    ```

21. Exit the **SQL*Plus** login and create a directory named **diroby** inside **OGG_Home** directory.

Target Database Server GoldenGate Setup

Perform the following steps to setup the target database server for GoldenGate:

Setting Up the Target Database Server for GoldenGate

1. Create a directory on the target database server.
   For example: ../GoldenGateHome. This will be the **Oracle GoldenGate home (OGG_Home)** on the target Oracle Utilities Analytics database server.

   Important Note: Make a note of this directory location; it will be used during Oracle Utilities Analytics installation.

2. Copy the GoldenGate software in the above created directory.

3. Unzip the GoldenGate Software. It will extract into a tar file:
   tar -xvof <tar file>

4. Open a **Command** window and set the target **ORACLE_SID** and **ORACLE_HOME** variables.

   Set LD_LIBRARY_PATH using the following commands:

   For Unix:

   ```
   export LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH
   ```

   For Windows:

   ```
   set LD_LIBRARY_PATH=%ORACLE_HOME%/lib:%LD_LIBRARY_PATH%
   ```

5. In the **Command** window, change directory to **GoldenGate home** directory and execute the command shown below:

   For Unix:

   ./ggsci

   For Windows:

   ggsci

   This opens the **GoldenGate** prompt.

6. On the **GoldenGate** prompt, execute the **create SUBDIRS** command.

7. On the **GoldenGate** prompt, execute the **EDIT PARAMS mgr**. It opens an editor.

8. Copy the below contents:

   - PORT 7830
   - DYNAMICPORTLIST 7830-7880

     Note 1: Make sure the mentioned port range (7830-7880) is not in use. If they are in use, provide another available port range.

     Note 2: Make a note of the range start and end ports numbers; it will be used during Oracle Utilities Analytics installation.

     Note 3: Refer to Oracle GoldenGate documentation if you would like to configure other settings, such as **Purge**.

9. On the **GoldenGate** prompt, execute **the start mgr** command to start the **GoldenGate Manager** process.
10. On the **GoldenGate** prompt, execute the **info all** -command to view the manager process is running.
11. Exit the **GoldenGate** login by executing the **exit** command and create a directory named **diroby** inside the **OGG_Home** directory.

Copying and Decompressing Install Media

The Oracle Utilities Analytics ETL component based on Oracle Utilities Analytics installation file is delivered in zip format for both UNIX and Windows platforms. If you plan to install multiple Oracle Utilities Analytics environments operated by different Oracle Utilities administrator user IDs, you must complete each of the following installation steps for each administrator user ID.

1. Download the Oracle Utilities Analytics version 2.5.0 ELT component based on Oracle Data Integrator part (**Oracle Utilities Analytics V2.5.0 ETL component based on ODI Multiplatform.zip**) the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Log into the database server host as the Oracle Utilities Analytics administrator user ID.
3. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred to below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation can be deleted after completing a successful installation.
4. Unzip **Oracle Utilities Analytics V2.5.0 ETL component based on ODI Multiplatform.zip** to <TEMPDIR>.
5. Decompress the file **BI.ODI.V2.5.0-MultiPlatform.jar** as follows:
   - cd <TEMPDIR>
   - jar -xvf BI.ODI.V2.5.0-MultiPlatform.jar

     Note: You should have Java JDK installed on the machine used to (un)jar the Oracle Utilities Analytics ELT component based on Oracle Data Integrator installation package. Install the JDK that is supported for the install on your platform to be able to use the jar command.

The Java packages are located at: http://java.sun.com/products/archive/index.html. A sub-directory named "**BI.ODI.V2.5.0**" is created. It contains the installation software for the Oracle Utilities Analytics ELT component based on Oracle Data Integrator.

Setting Permissions for Cistab File in UNIX

Every Oracle Utilities Analytics environment installed on a server must be registered in the /etc/ cistab file located on that server. On the UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle Administrator User ID, this user ID may not be able to write to /etc/ cistab table.

The install utility checks permissions, and if it identifies a lack of necessary permissions, it generates a script in the <TEMPDIR>/ BI.ODI.V2.5.0 directory named **cistab_<SPLENVIRON>.sh**. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Analytics application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Analytics Administrator User ID, so that the next time a new environment is created by the same Oracle Utilities Analytics Administrator User ID, you do not need to run the generated script with the root user ID. Instead, the install utility itself proceeds with the registration.

If you are re-installing an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case. If you plan to upgrade an existing environment, you must ensure to take a backup prior to the installation process. The installation utility does not create a backup of existing environment.

Oracle Utilities Analytics ELT Component based on Oracle Data Integrator Package Installation Steps

This section includes:

- **Prerequisites**
- **Installing Oracle Utilities Analytics ELT Component on the Oracle Data Integrator**
- **Environment Installation Options**
- **Environment Configurations**

Prerequisites

Before installing the Oracle Data Integrator package, ensure that you have already installed the below-mentioned software products. These software products should be installed on the database server:

Also, note the locations of these software products:

- JDK 1.6.0_20 (JAVA_HOME) on the database server
- Oracle Database Home (ORACLE_HOME)
- WebLogic 10.3.6 (WL_HOME)
- Oracle Data Integrator 11.1.1.6 with Java EE Installation (ODI_HOME)
- Oracle GoldenGate 11.2.1.0.5_2 Software on the Source Database Server and the Target Database Server (OGG_HOME)
  Download the GoldenGate 11.2.10.5_2 software from My Oracle Support (https://support.oracle.com/).

Now, follow the below instructions to install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator.

Installing Oracle Utilities Analytics ELT Component on Oracle Data Integrator

Follow these steps to install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator after performing the steps to deploy the ELT Component Objects as described in the section above:

1. Change to the <TEMPDIR>/ BI.ODI.V2.5.0 directory.
2. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.
3. Make sure the user with which Oracle Database Enterprise Edition 11.2.0.3 was installed and all other prerequisite software products were installed, is used to install the Oracle Utilities Analytics ELT component based on Oracle Data Integrator package.
4. Execute the following script for UNIX/Windows:

   For UNIX:

   Run the following commands:

   - export ORACLE_CLIENT_HOME=<ORACLE_HOME>
   - export PERL_HOME=$ORACLE_CLIENT_HOME/perl
   - export PATH=$PATH:$PERL_HOME/bin

- Run ksh ./install.sh

  Note: Ensure that you have the required execute permission on install.sh.

For Windows:

Run the following commands:

- set ORACLE_CLIENT_HOME=<ORACLE_HOME>
- set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
- set PATH=%PERL_HOME%\bin;%PATH%
- Install.cmd

5. The Oracle Utilities Analytics specific menu is displayed.
6. Select each menu item to configure the values.
   For detailed description of the values, see **Configuration Worksheet for ELT Component based on Oracle Data Integrator Installation**.

   Note: For parameter 'Target GoldenGate Shared Secret', follow the below instructions.

   a. Go to GoldenGate prompt and run the command:

   ```
   encrypt password <password of MDADM user>, encryptkey DEFAULT
   ```

   b. Copy the encrypted password returned by the above command and provide it as the value for Target GoldenGate Shared Secret.

Environment Installation Options

1. Oracle Client Home Directory:
2. Environment Mount Point:
   Log Files Mount Point:
   Environment Name:
   Web Java Home Directory:

Configure all the following items to guarantee a successful installation.
Choose the following options from the menu (1, 2 <P> Process, <X> Exit).

Environment Configurations

1. Environment Description
   Environment Description:
2. ODI Environment Configuration:
   WEBLOGIC HOME:
   ODI HOME:
   ODI SUPERVISOR USER: SUPERVISOR
   ODI SUPERVISOR Password: sunopsis123
   Target Database Name:
   Target Database Host:
   Target Database Port: 1521
   DWADM Schema Name: DWADM
   DWADM Schema Password: <DWADM Password>
   ODI Master Schema Name: MASTER_REPO
   ODI Master Schema Password: < MASTER_REPO Password>
   ODI Work Schema Name:
   ODI Work Schema Password:
   ODI Master Repository ID: 601
   ODI Work Repository ID: 602
   MDADM Schema Name: MDADM
   MDADM Schema Password: <MDADM Password>

3. ODI Agent Configuration
   ODI Weblogic Agent Host:
   ODI Weblogic Agent Port:

4. Target GoldenGate Configuration
   Target GoldenGate Manager Port:
   Target GoldenGate Dynamic Minimum Port:
   Target GoldenGate Dynamic Maximum Port:
   Target GoldenGate Algorithm:
   Target GoldenGate Encryptkey:
   Target GoldenGate Shared Secret:
   Target Database Home:
   Target GoldenGate Home:

   Configure the items in the above list to guarantee a successful installation. Choose the following options from the menu item: (1, 2, 3, 4 <P> Process, <X> Exit).

After finishing the parameter setup, proceed with the option **P**.

Once the installation is completed successfully, execute the post-installation steps outlined in **Post-installation Tasks**, and then the steps outlined in the **Starting ODI jobs**.

Post-installation Tasks

The following are the sequential deployment steps to setup the successful deployment.

- **Oracle Data Integrator Deployment**
- **RunviewGenerator (Global)**
- **Configure Source**
- **InitiateSetup**
- **RunviewGenerator (For Source Context)**
- **WebLogic Domain Creation for Oracle Data Integrator Agent**
- **Starting the WebLogic Admin Server**
- **Authenticating Oracle Data Integrator Supervisor User in WebLogic and Starting Managed Server**

Oracle Data Integrator Deployment

In the Oracle Data Integrator (ODI) Deployment step, the script creates the master and work repositories, and imports Oracle Data Integrator metadata:

Run the following script

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./deployodi.sh**.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.

4. Run the **deployodi.cmd**.

Verify the log at the location: <SPLEBASE>/logs/system/deployodi.log.

RunviewGenerator (Global)

This step creates global views based on Oracle Data Integrator metadata.

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run **ksh ./ runviewGenerator.sh**.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run runviewGenerator.cmd.

Verify the log at the location: <SPLEBASE>/logs/system/deployodi.log.

Configure Source

Note: **This step inserts each source instance and instance name into b1_prod_instance table. This step has to be repeated for each source instance that will be used.**

This step also creates replication schema in the target database corresponding to each source application. $SPLEBASE/bin/obiu.properties file is read to assign the default tablespace to replication user.

By default this file has obiu.repository.default.tablespace = CISTS_01 entry where CISTS_01 is tablespace name. If you want to assign this tablespace as default tablespace to replication schema, make sure to create CISTS_01 tablespace in the target database if it does not exist.

Make sure to edit obiu.repository.default.tablespace parameter in $SPLEBASE/bin / obiu.properties file to another tablespace name, which exists in the database and would be considered default tablespace to the replication schema.

This entry should be changed as follows:

```
obiu.repository.default.tablespace = <Name of tablespace to use>
```

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin
4. Run configureSourceDB.cmd -c <Source instance> -u < Source Golden gate owner schema name> -p <Source Golden gate owner Schema password> -s <Source Application Schema> -r <Source Application Drill Back URL>.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin
4. Run configureSourceDB.cmd -c <Source instance> -u <Source Golden gate owner schema name> -p <Source Golden gate owner Schema password> -s <Source Application Schema> -r <Source Application Drill Back URL>

where,

- Source instance = Name for the source instance being added

  For Oracle Utilities Operational Device Management source application, the valid values are ODM1,ODM2……..ODM9. Provide any of these values which is already not configured. Make a note of these parameters; it will be used in next deployment steps.

  For Oracle Utilities Customer Care & Billing application, the valid values are CCB1,CCB2…….CCB9. Provide any of these values which are already not configured.

- Source Schema User = <GoldenGate Owner created in Source database> For example: ODM01SRC
- Source Schema User Password = GoldenGate Owner password
- Source Application Schema = Source Application Schema (For example, CISADM)
- Source Application Drill Back URL = Source Application URL (http://<Host>:<Port>/ouaf/)

This opens a source configuration menu shown as below. Select each menu item to configure the values.

For detailed description of the values, refer to the **Configuration Worksheet for ELT Component based on Oracle Data Integrator Installation**.

Note: For parameter 'Source GoldenGate Shared Secret', follow the below instructions.

a. Go to GoldenGate prompt and run the command:

```
encrypt password <password of source GoldenGate owner user>,
encryptkey DEFAULT
```

b. Copy the encrypted password returned by the above command and provide it as the value for Source GoldenGate Shared Secret.

Source GoldenGate Configuration
Source Instance Name:
Source GoldenGate Manager Port:
Source GoldenGate Dynamic Minimum Port:
Source GoldenGate Dynamic Maximum Port:
Source GoldenGate Algorithm:
Source GoldenGate Encryptkey:
Source GoldenGate Shared Secret: Source Database Name:
Source Database Host:
Source Database Port:
Source Database Home:
Source GoldenGate Home:

Each item in the above list should be configured for a successful install. Choose option (1, <P> Process, <X> Exit).

Once the parameter setup is completed, proceed with option **P**.

InitiateSetup

This step is run to reverse engineered source tables, set up the Journalizing Setup, and create the GoldenGate scripts. This step has to be repeated for each source instance configured in previous step.

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./initiateSetup.sh -c <Source instance>.**

   Where Source instance = Instance name given to the source in configure source step above. For example: ODM1
5. In $SPLEBASE/GGScriptsGen, you will find a folder created starting with instance name.

   For example: ODM1AA.
6. Go to the folder that has name starting with the instance name.

   For example: $SPLEBASE/GGScriptsGen/ODM1AA

   Note: Before executing all the steps mentioned in **ReadMe.txt** as stated below, read the below statement carefully.

   There is step in **ReadMe.txt** to start the initial load on the source database after executing them you should wait till those steps get completed. To know initial load gets completed on the source database, execute the below query in the source database after connecting to the source application ADM schema e.g., CISADM.

   select * from CDC_SYNC_LOG;

   If the COMPLETED_ON column is not null for the current model, then the initial data sync is complete.

   The model name is the directory name, inside which ReadMe.txt is placed.

   Refer to the **ReadMe.txt** generated in the above-mentioned directory for the detailed instructions on how to run the Oracle GoldenGate scripts.

Note: Ensure that ORACLE_SID and, ORACLE_HOME and LD_LIBRARY_PATH are set before running the Oracle GoldenGate scripts on both the source and the target database servers.

Note: During GoldenGate script execution, there may be error related to the B1_CHECKPOINT table. It can be ignored.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **initiateSetup.cmd**.

   Where Source instance = Instance name given to the source in configure Source step above. For example: ODM1
5. In %SPLEBASE%/GGScriptsGen directory, you will find the folder created starting with instance name.

For example, ODM1AA.

6. Go to the folder that has name starting with the instance name.

   For example, go to %SPLEBASE%/GGScriptsGen/ODM1AA

   Refer to the **ReadMe.txt** generated in the above mentioned directory for detailed instructions on how to run the Oracle GoldenGate scripts.

   Note: Ensure that ORACLE_SID, ORACLE_HOME and LD_LIBRARY_PATH are set before running the Oracle GoldenGate scripts on both the source and target database servers.

   Note: During GoldenGate script execution, there may be error related to the B1_CHECKPOINT table. It can be ignored.

RunviewGenerator (For Source Context)

This step creates the views for a given source instance. These views are used for replication. This step needs to be executed once for each source configured.

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run **runviewGenerator.sh -c <Source Instance>**.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run ruvviewGenerator.cmd -c <Source Instance>.

   Where Source instance = Instance name given to the source in configure source step above. For example: ODM1

WebLogic Domain Creation for Oracle Data Integrator Agent

WebLogic Domain should be created for the WebLogic Agent (ODI Agent).

Follow the below steps to bring up WebLogic ODI Agent which is created in step 1 **Oracle Data Integrator Deployment**.

1. Go to the installed location for ODI: <MW_HOME>/Oracle_ODI1\common\bin and then, run the below commands for Unix and Windows. Provide the masterschema and workschema provided in the configuration.

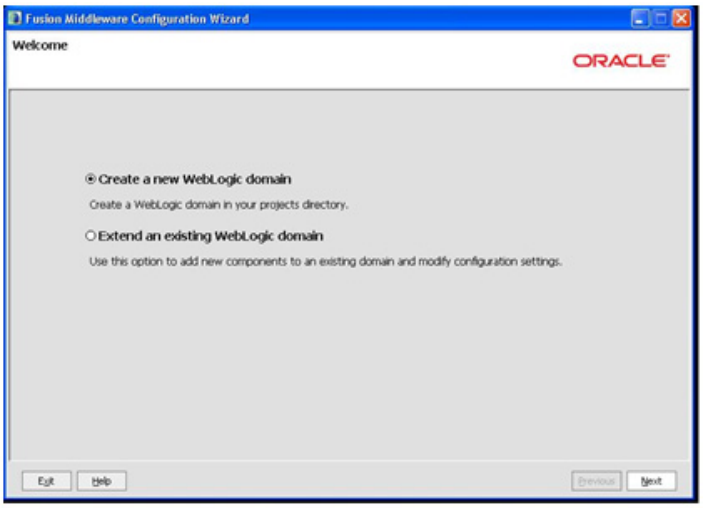
   For UNIX:

   - Run /Config.sh

   For Windows:

   - Run config.cmd

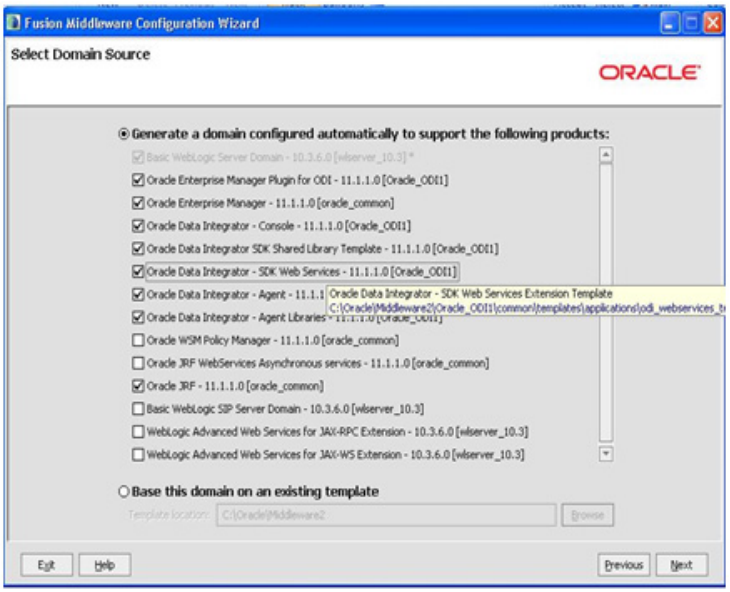
2. Create a new WebLogic domain.



Select **Next.**

3. Generate a domain configured automatically to support the following products, select checkboxes the below plugins mentioned. When you select these plugins, there are some automatic plugins that get selected.

   - Oracle Enterprise Manager Plugin for Oracle Data Integrator -11.1.1.0
   - Oracle Data Integrator - Console - 11.1.1.0
   - Oracle Data Integrator Agent - 11.1.1.0
   - Oracle Data Integrator - SDK Web Services - 11.1.1.0

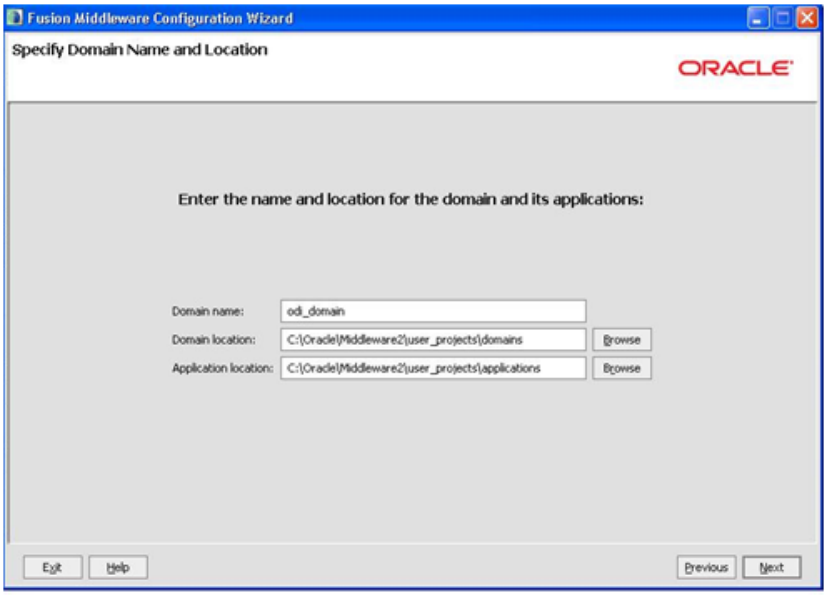


Then, click **Next** to proceed.

4. Specify the Domain Name and Location.

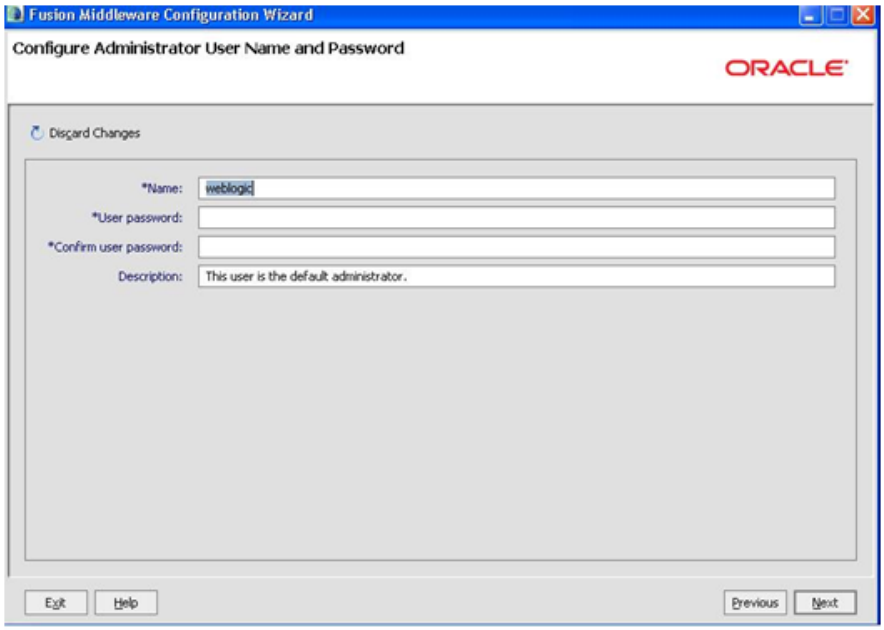
   Provide the name: odi_domain

   Location will be default.



Click **Next** to proceed.

5. Configure Admin UserName and password for WebLogic.
   Provide the WebLogic password.

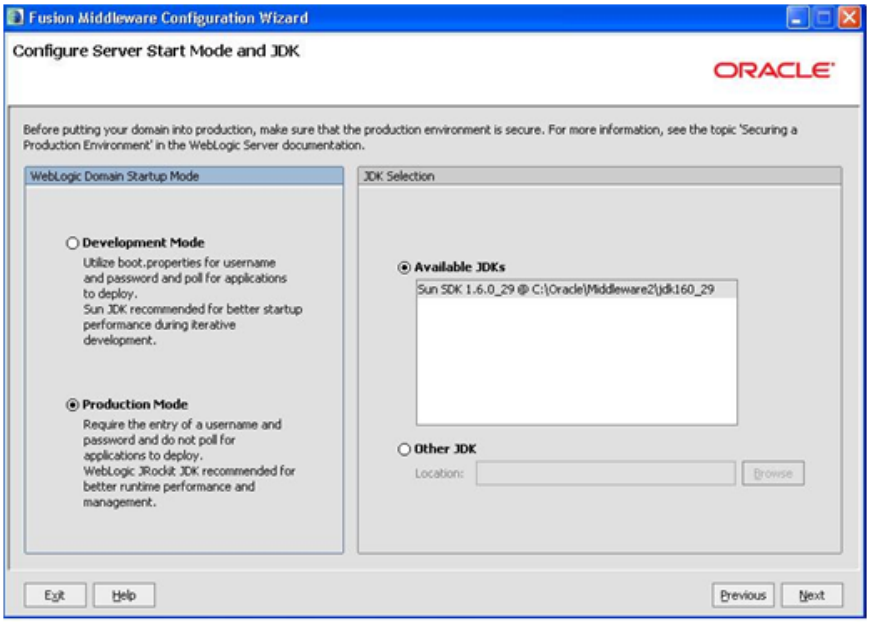


Click **Next**.

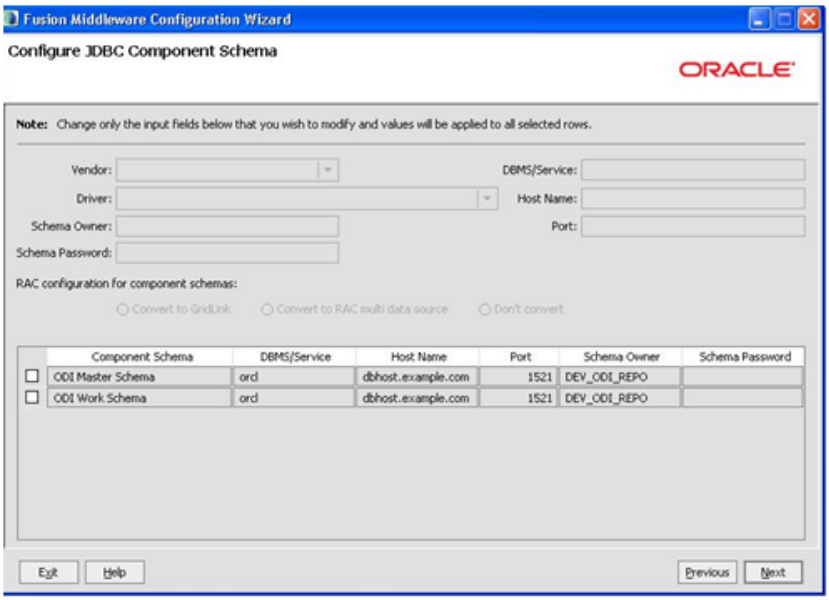
6. Configure **Server StartUp Mode** and **JDK**.

   Select **Production Mode**.

   Provide the JDK 1.6.0_20.

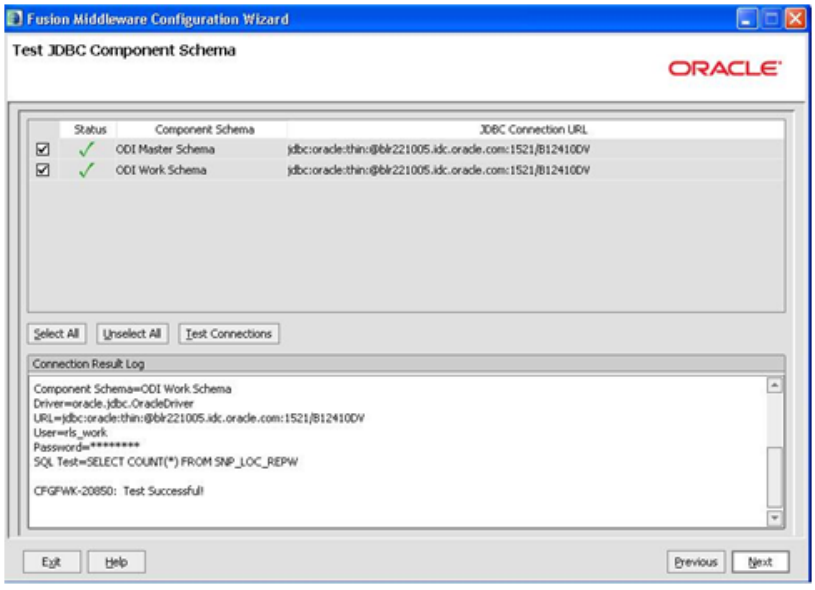


7. Configure **JDBC Component Schema**.
   Select the checkbox **ODI Master Schema** and provide the below details:
   - DBMS/Service: Target Database Name
   - Host Name: Database Serverhost
   - Port: Database Port
   - Schema Owner: MASTER_REPO
   - Schema Password: MASTER_REPO Password
8. Deselect the checkbox **ODI Master Schema**.
9. Select checkbox **ODI Work Schema**. Provide the below details:
   - DBMS/Service: Target Database Name
   - Host Name: Database Serverhost
   - Port: Database Port
   - Schema Owner: WORK_REPO
   - Schema Password: WORK _REPO Password



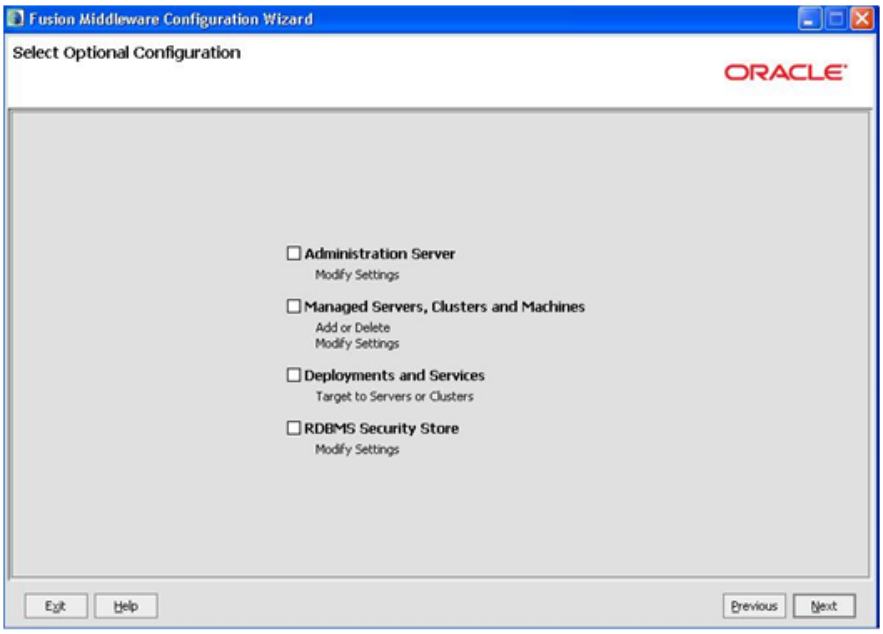
Then, click **Next** to proceed.

10. Test JDBC Component Schema by selecting **Select All** and **Test Connections**.



Then, select **Next** to proceed.

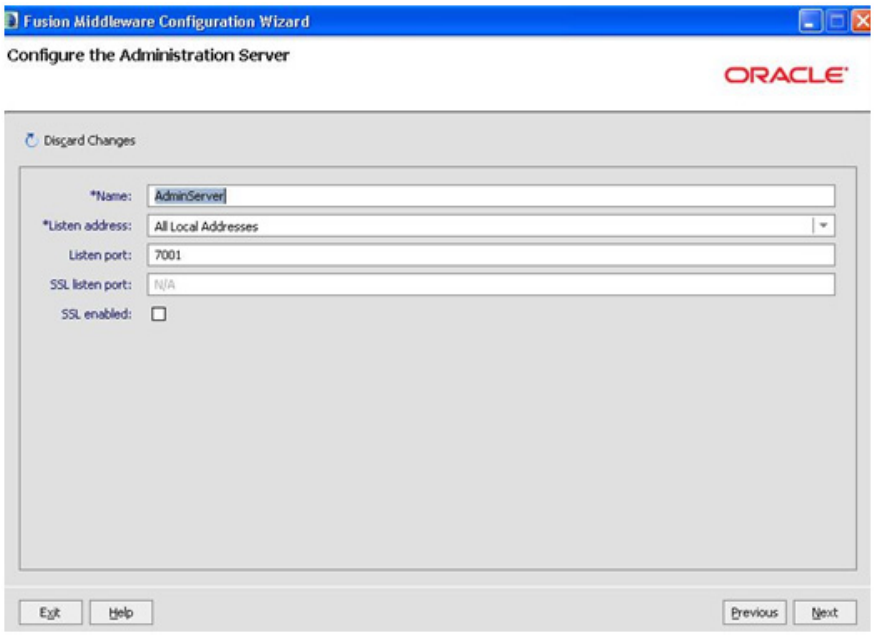
11. On the **Select Optional Configuration** page, select the following checkboxes:
    - Administration Server
    - Managed Server, Clusters and Machines



Select **Next** to proceed.

12. Configure the Administration server:

    Provide the listening port, which is not in use.



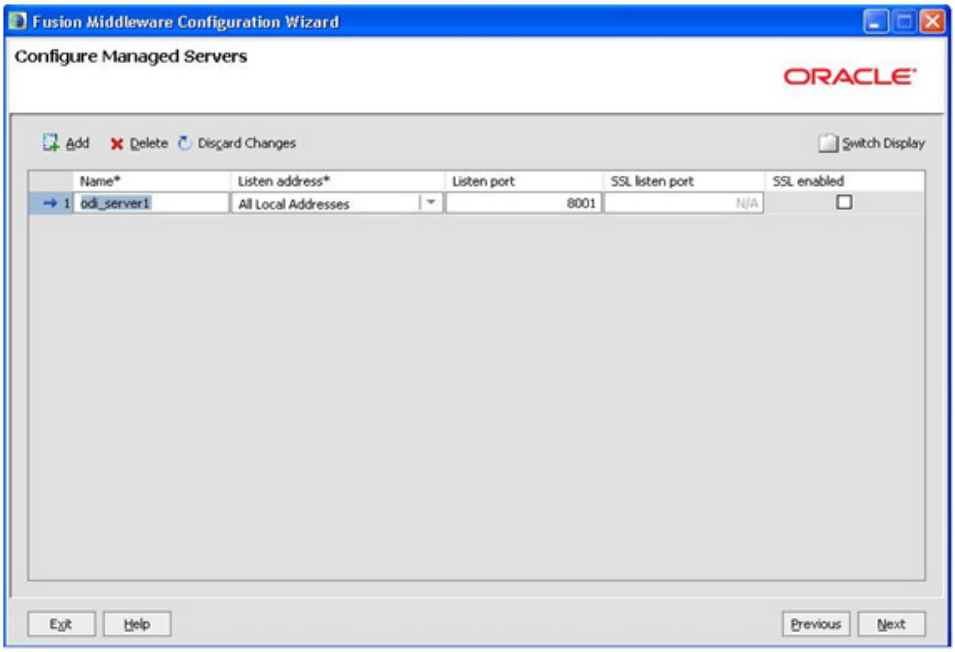
Select **Next** to proceed.

13. Configure the Managed Servers by providing the following details:

    Name: odi_server1

    Listen Address: All Local Addresses

    Port: <Provide the port>, which is configured in Menu configuration of installation> **ODI Agent Configuration >ODI WebLogic Agent Port**>.



Configure **Cluster**.
Click **Next** to proceed.

14. Configure Machines.
    Click **Next** to proceed

15. Assign Servers to Machines.
    Click **Next** to proceed.

16. Configuration Summary.
    Click **Create** to create the Domain ODI_DOMAIN.

17. After the domain is created, go to **Domain Location**, create **boot.properties** file for WebLogic login.

18. Create the <MW_HOME>/user_projects/domains/odi_domain/servers/AdminServer/security folder if it was not created earlier.

19. Go to <MW_HOME>/user_projects/domains/odi_domain/servers/AdminServer/security, then create boot.properties with below values:

    username=weblogic

    password=Weblogic password

20. Create the <MW_HOME>/user_projects/domains/odi_domain/servers/odi_server1/security folder if it is not present.

21. Go to <MW_HOME>/user_projects/domains/odi_domain/servers/odi_server1/security, then create boot.properties with below values:

    username=weblogic

    password=Weblogic password

Starting the WebLogic Admin Server

Perform the following steps:

1. In the command shell, change directory to the directory of the WLS Home - <MW_HOME>/user_projects/domains/odi_domain/bin
2. Execute the **startweblogic** command.

For Unix:

- nohup ./ startWebLogic.sh > startWebLogic.log &

For Windows:

- Run **startWebLogic.cmd**.

Authenticating Oracle Data Integrator Supervisor User in WebLogic and Starting Managed Server

Perform the following steps:

1. Go to <MW_HOME>/oracle_common/common/bin
2. Execute the following command:

   For Unix:

   ```
   ./wlst.sh
   ```

   For Windows:

   ```
   wlst.cmd
   ```

3. To connect to the running Admin server, execute the following command:

   ```
   connect('<Weblogic User>','<Weblogic password>','t3://
   <WEBLOGICHOST>:<WEBLOGIC ADMIN PORT')
   ```

   For example: connect('weblogic','weblogic123','t3://localhost:7001')

4. Execute the following command to add the correct credential store for Oracle Data Integrator Supervisor:

   ```
   createCred (map="oracle.odi.credmap", key="SUPERVISOR",
   user="SUPERVISOR", password="<SUPERVISOR Password>", desc="ODI
   SUPERVISOR Credential")
   ```

5. To exit **WebLogic Scripting Tool** (**WLST)**, execute the **exit()** command.

To start managed server odi_server1

Perform the following steps:

1. Change directory to WLS Home -<MW_HOME>/user_projects/domains/odi_domain/bin and execute the below commands:

For Unix:

nohup ./ startManagedWeblogic.sh odi_server1 > StartManagedWeblogic.log &

For Windows:

Run StartManagedWeblogic.cmd odi_server1

2. From the Oracle Data Integrator (ODI) Designer, click **Test** icon to test connectivity of your configured Oracle Data Integrator Java EE agent. Click **OK**.
3. Close the **OracleDIAgent** tab.

Generating Security and Starting Oracle Data Integrator Schedule

Perform the following steps:

1. Edit the database name with the name of your database in OraGenSec.bat and run it from BI250/DWADM/Security folder.
2. Log into the Oracle Data Integrator studio and navigate to **Designer > Projects > Oracle Utilities BI > Configuration > Scheduler'Packages**.
3. Right-click **B1_INITIAL_SETUP_PKG** and execute.
4. Select context global and **WLS_AGENT** as logical agent, and then click **OK**.
5. Go to **Operator** and view the logs for successful execution of package.
6. In **Oracle Data Integrator Studio**, navigate to **Designer** > **Projects** >**Oracle Utilities BI** > **Configuration** > **Scheduler** > **Packages** > **B1_RUN_ALL** > **Scenarios** > **B1_RUN_ALL Version 001** > **Scheduling**.
7. Right-click on **Scheduling** and select **New Scheduling** option.
8. Select context global, agent as **WLS_AGENT** and log level as 1.
9. To specify how often the scheduler should run, navigate to the **Execution Cycle** tab of the Scheduler and select the '**Many Times**' radio button. Set the interval between repetitions.
10. Navigate to **Topology** > **Agents** > **OracleDIAgent**.
11. Right-click on **OracleDIAgent** and click on **Update Schedule**.

Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Upgrade

This section describes the Oracle Warehouse Builder based ETL component installation:

- **Copying and Decompressing Install Media**
- **Setting Permissions for cistab File in UNIX**
- **Configuring and Upgrading the Oracle Warehouse Builder Workspace**
- **Upgrading the Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Package**
- **Post Installation Tasks**

Copying and Decompressing Install Media

The Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder installation file is delivered in zip format for both UNIX and Windows platforms. If you plan to install multiple Oracle Utilities Analytics environments operated by different Oracle Utilities Administrator user IDs, you must complete each of the following installation steps for each Administrator user ID.

Perform the following Steps:

1. Download the Oracle Utilities Analytics V2.5.0 ETL Component Based on Oracle Warehouse Builder part (**Oracle Utilities Analytics V2.5.0 ETL Component Based on OWB Multiplatform.zip**) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Log into the database server host as the Oracle Utilities Analytics administrator user ID (default cases).
3. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred to below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities

application environment. All files that are placed in this directory can be deleted after successful installation.

4. Unzip **Oracle Utilities Analytics V2.5.0 ETL Component Based on OWB Multiplatform.zip** to <TEMPDIR>.

5. Decompress the file BI.OWB.V2.5.0-MultiPlatform.jar as follows:

   - cd <TEMPDIR>
   - jar -xvf BI.OWB.V2.5.0-MultiPlatform.jar

     Note: You should have Java JDK installed on the machine used to (un)jar the Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder installation package. Install the JDK that is supported for the install on your platform to be able to use the jar command.
     The Java packages are located at: http://java.sun.com/products/archive/index.html. A sub-directory named "**BI.OWB.V2.5.0**" is created. It contains the installation software for the Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder.

Setting Permissions for cistab File in UNIX

Every Oracle Utilities Analytics environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle Administrator User ID, this user ID may not be able to write to /etc/ cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/BI.OWB.V2.5.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Analytics application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Analytics Administrator User ID, so that the next time a new environment is created by the same Oracle Utilities Analytics Administrator User ID, there is no need to run the generated script with the root user ID. Instead, the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility. No new registration occurs. The install utility interactively gives instructions about every step in each specific case.

If you are planning to upgrade an existing environment, ensure that you have taken a backup prior to the initiating the installation process. The installation utility by itself does not create a backup of the existing environment.

Configuring and Upgrading the Oracle Warehouse Builder Workspace

This section describes how to configure the Oracle Warehouse Builder workspace. To upgrade to Oracle Utilities Analytics version v2.5.0, follow these steps:

Upgrading to Oracle Utilities Analytics v2.5.0

1. Back up the database using the backup strategy employed at your site.

2. Modify the contents of <owb_home>/owb/bin/admin/Runtime.properties file from the following to the contents mentioned later.

```
   property.RuntimePlatform.0.NativeExecution.FTP.security_constraint
= DISABLED
property.RuntimePlatform.0.NativeExecution.Shell.security_constraint =
DISABLED
property.RuntimePlatform.0.NativeExecution.SQLPlus.security_constraint
=
```

```
    DISABLED To
    property.RuntimePlatform.0.NativeExecution.FTP.security_constraint
= NATIVE_JAVA
    property.RuntimePlatform.0.NativeExecution.Shell.security_constrai
nt = NATIVE_JAVA
    property.RuntimePlatform.0.NativeExecution.SQLPlus.security_constr
aint = NATIVE_JAVA
```

3. Connect to the OWBSYS user and execute <owb-home>/owb/rtp/sql/stop_service.sql.
4. Connect to the OWBSYS user and execute <owb-home>/owb/rtp/sql/start_service.sql.
5. Connect to the database with the sys user and execute the following procedures:

```
    EXECUTE DBMS_NETWORK_ACL_ADMIN.drop_ACL('acl_for_owb_cc.xml');
```

Note: Before executing below procedures, modify <SMTP SERVER> and <SMTP PORT> to appropriate values.

```
    EXECUTE DBMS_NETWORK_ACL_ADMIN.CREATE_ACL('acl_for_owb_cc.xml','A
CL for Control Center','OWBSYS', TRUE, 'connect');

    EXECUTE
DBMS_NETWORK_ACL_ADMIN.ASSIGN_ACL('acl_for_owb_cc.xml',<SMPT SERVER>,
<SMPT PORT>);
    COMMIT;
```

6. Execute the following:

```
    SELECT
    acl,host,
DECODE(DBMS_NETWORK_ACL_ADMIN.check_privilege_aclid(aclid,'OWBSYS',
'connect'),1, 'GRANTED', 0, 'DENIED', NULL) privilege
    FROM dba_network_acls ;
```

You will see the following:

```
    /sys/acls/acl_for_owb_cc.xml

    <SMPT SERVER>
    GRANTED
```

7. Connect to the database as BIREPOWN user and run **spl_exec_wf_prc.sql**. spl_exec_wf_prc.sql is located at../BI250/Scripts.
8. Connect to the DWADM schema and execute **spl_oms_snapshot_pkg.sql**. spl_oms_snapshot_pkg.sql is located at ../BI250/Scripts.
9. Connect to database with sys user and execute **owb_grants_synonyms.sql** located in ../**BI250/Scripts**.

Upgrading the Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder Package

Before upgrading, verify that the steps in section **Prerequisite Software for Oracle Utilities Analytics ETL Component based on Oracle Warehouse Builder** are followed.

After performing the above steps, proceed with upgrading Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder Package steps.

Perform the following:

1. Change to <TEMPDIR>/BI.OWB.V2.5.0 directory.
2. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.

3. Follow the below steps:
    - Log into the server host where Oracle Utilities Analytics ETL component based on Oracle Warehouse Builder Package is installed.
    - Connect to the Oracle Utilities Analytics database as sys user, and restart the database.
    - Go to $ORACLE_HOME/owb/rtp/sql and execute stop_service.sql and start_service.sql after logging as OWBSYS user.
4. Take a back up of the previously installed Oracle Warehouse Builder Package environment.
5. Log into the previously installed Oracle Warehouse Builder Package environment. Perform the following:
    - Go to the installed environment location e.g cd /bi_oradata_01/QABlds/BI_CANDIDATE_BLD
    - cd etc
    - Open ENVIRON.INI file and get the value of SPLENVIRON variable. It will look like SPLENVIRON=BI_CANDIDATE_BLD . Here BI_CANDIDATE_BLD is environment name
    - cd ../bin
    - . ./splenviron.sh -e <ENVIRONMENT NAME> e.g ./splenviron.sh -e BI_CANDIDATE_BLD
    - cd bin
6. Run ksh ./stopFileprocessordaemon.sh to stop the running file processor.
7. Open the new terminal/window and navigate to downloaded package.

    Now, proceed with Oracle Utilities Analytics 2.5.0 install

    Go to change to the <TEMPDIR>/BI.OWB.V2.5.0.
8. Execute the following script on both UNIX and Windows:

    Make sure to provide the new Oracle Home path. This is the Oracle Home path after upgrading to Oracle Database server to version 11.2.0.3.

    For UNIX:
    - export ORACLE_CLIENT_HOME=<ORACLE_HOME>
    - export PERL_HOME=$ORACLE_CLIENT_HOME/perl
    - export PATH=$PATH:$PERL_HOME/bin
    - Run ksh ./install.sh

    For Windows:
    - set ORACLE_CLIENT_HOME=<ORACLE_HOME>
    - set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
    - set PATH=%PERL_HOME%\bin;%PATH%
    - Run Install.cmd

    Note: On UNIX, ensure that you have the proper execute permission on install.sh.
9. The Oracle Utilities Analytics specific menu appears.
10. Select each Menu item to configure the values.
    For detailed description of the values, see **Configuration Worksheet for ETL Component based on Oracle Warehouse Builder Installation**.

11. After the configuring the values, press **P** to continue the installation.

    Note: As the database server was upgraded to 11.2.0.3 as a part of the Oracle Utilities Analytics upgrade, the existing Oracle Warehouse Builder environment should not be used. This is because the Oracle Home would have changed after database server upgrade to 11.2.0.3 and the old Oracle Warehouse Builder environment will have the old value for Oracle Home. The new Oracle Warehouse Builder environment should be created and new Oracle Home details should be provided while configuring it.

Environment Installation Options

1. Oracle Client Home Directory:
2. Environment Mount Point:
   Log Files Mount Point:
   Environment Name:
   Web Java Home Directory:

Configure each item in the above list for successful installation. Choose the following options from the menu items: (1, 2 <P> Process, <X> Exit).

Environment Configuration

1. Environment Description
   Environment Description:
2. Database Configuration
   OWB WorkSpace Owner:
   OWB WorkSpace Owner Password:
   Database Name:
   Database Server:
   Database Port:
3. Design repository configuration

   OWB WorkSpace User:
   OWB Workspace user Password:
   OWB WorkSpace Name:
   DWADM SCHEMA NAME:
   DWADM SCHEMA Password:
   WORKFLOW MANAGER SCHEMA NAME:
   WORKFLOW MANAGER SCHEMA Password:
4. Database character set configuration
   Database Character set: AL32UTF8
5. Editing process flow configuration
   Repository Operating System:
   Perl Compiler location:
   Data and control files location:
   Separator to be used:
   File Manager location:
6. Email configuration
   Email ID of Sender:
   Email ID for Reply-To address:
   Email ID of Receiver:
   SMTP server:
   SMTP server port:
7. Control Centre Configuration
   Repository Control Center Name:

8. External data source configuration
   Path of the External Datasource:
   Path of the External Datasource LOG:
   File Processor Daemon Execution Switch:
   File Processor Extract Max Load:
   File Processor Scheduler Poll Duration:60

   Configure each item in the above list for successful installation. Choose the following options from the menu items (1, 2, 3, 4, 5, 6, 7, 8 <P> Process, <X> Exit).

After completing the parameter setup steps, proceed with the option **P.** Write Configure file.

Once the install is completed successfully, you need to execute the post-upgrade steps as described in the section **Post Installation Tasks**.

Post Installation Tasks

Post-upgrade tasks involve the following:

- **Cleanup Unused Oracle Warehouse Builder Objects from Oracle Warehouse Builder**
- **Deploying ETL Workflows on Oracle Warehouse Builder**

Cleanup Unused Oracle Warehouse Builder Objects from Oracle Warehouse Builder

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./drop_unused_owb_objects.sh**.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **drop_unused_owb_objects.cmd**.

Deploying ETL Workflows on Oracle Warehouse Builder

In UNIX, you may get a Java heap space error while importing the MDL file. To resolve this error you need to make changes in the OMBPlus.sh file, located at: $ORACLE_HOME/owb/bin/unix/OMBPlus.sh.

In the following code, change the value -Xmx768M to -Xmx1024M, and then the -Dlimit value 768M to 1024M.

```
   $JAVAPATH/bin/java $JAVA64FLAG -Xms64M -Xmx768M $OPTS -Dlimit=768M
- DORACLE_HOME=$ORACLE_HOME -DOWBCC_HOME=$ORACLE_HOME -
DTCLLIBPATH="$TCLLIBPATH" -
DMARATHON_RETRY_COUNT="$MARATHON_RETRY_COUNT" -
DMARATHON_RETRY_INTERVAL="$MARATHON_RETRY_INTERVAL"
```

You need to make this value larger than 1024MB (1GB) depending on the size of the import: $CLASSPATH_LAUNCHER oracle.owb.scripting.OMBShell $*

Perform the following tasks:

- **Deploying Oracle Warehouse Builder Workflows**
- **Deploying Materialized Views**
- **Start File Processor**
- **Generating Security**
- **Generating Database Statistics**

Deploying Oracle Warehouse Builder Workflows

This procedure needs to be performed if changes are made to the parallel settings on external tables, materialized views, or mappings on an existing installation and needs to be retained during the upgrade process.

Run the following command to generate a report on the parallel settings that is currently set in the customer repository on external tables, materialized views and mappings.

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment by executing the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./parallelSetup.sh analyze**.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment by executing the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **parallelSetup.cmd analyze**.
5. This generates the following files under <SPLEBASE>/etc folder.
6. Review the above files for existing settings and make modifications if necessary. Once the files are reviewed, perform the following step to merge the existing settings with the default settings.

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment by executing the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./parallelSetup.sh merge**.

For Windows:

1. Navigate to <Install_Dir>/bin directory.

1. Initialize the environment by executing the ./splenviron.cmd -e <envname> command.
2. cd %SPLEBASE%\bin.
3. Run parallelSetup.cmd merge.
4. Review the following files under <SPLEBASE>/etc and verify that the existing values have been merged correctly before proceeding:

```
   cm-parallel-tables.txt
cm-parallel-mvs.txt
cm-parallel-maps.txt
```

5. Below is the format of parallel*.txt to change the <Degree> of parallelism in above listed files:

```
parallel-tables.txt file format: <Object_name>:<Degree>
parallel-mvs.txt file format: <MV_Name>:<Fact_Table>:<Degree>
parallel-maps.txt file format: <Object_name>:<Table_Name>:<Degree>
```

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run the **ksh ./Owbdeploy.sh**.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run the **owbdeploy.cmd.**

Deploying Materialized Views

Run the following commands for deploying materialized views.

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment by executing the ./splenviron.sh -e <envname> command.
3. Run the below script for upgrading the materialized views:
   - cd $PLEBASE\bin
   - Run the **ksh ./upgradeViews.sh**

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment by executing the ./splenviron.cmd -e <envname> command.
3. Run the below script for upgrading the materialized views.
   - cd %SPLEBASE%\bin
   - Run upgradeViews.cmd
4. Once deployment is complete, remove the <SPLEBASE>/tmp content to ensure all the complete files are removed:

Start File Processor

For UNIX:

cd $SPLEBASE/bin

```
nohup ksh ./startFileprocessordaemon.sh >&1 &
```

For Windows:

```
startFileprocessordaemon.cmd
```

Note: Go to <SPLEBASE>/logs/system to view the file processor log.

Generating Security

Edit database-name with the name of your database in **OraGenSec.bat** after completing the Oracle Warehouse Builder deployment and run it from BI250/DWADM/Security folder.

Generating Database Statistics

During the installation process, new database objects may be added to the target database. Before starting to use the database, generate the statistics for these new objects.

Oracle Utilities Analytics Dashboard Component Upgrade

This section describes the dashboard component installation and includes the following:

- **Prerequisite to the Dashboard Component Upgrade**
- **Copying and Decompressing Install Media**
- **Setting Permissions for cistab File in UNIX**
- **Oracle Utilities Analytics Dashboard Package Upgrade Steps**
- **Merging the RPD Files**
- **Post-Upgrade Tasks**

Prerequisite to the Dashboard Component Upgrade

The Oracle Utilities Analytics Dashboard component version 2.5.0 requires Oracle Business Intelligence Enterprise Edition version 11.1.1.7.1. Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 should be installed in a new Middleware Home before proceeding with Oracle Utilities Analytics Dashboard component upgrade. Refer to Oracle Business Intelligence Enterprise Edition documentation for details of installing 11.1.1.7.1.

Copying and Decompressing Install Media

The Oracle Utilities Analytics Dashboard component installation file is delivered in a zip format for both UNIX and Windows platforms. If you plan to install multiple Oracle Utilities Analytics environments operated by different Oracle Utilities Administrator user IDs, you must complete each of the following installation steps for each Administrator User ID.

1. Download the Oracle Utilities Analytics V2.5.0 Dashboard Component part (**Oracle Utilities Analytics V2.5.0 Dashboard Component Multiplatform.zip**) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Log into the application server host (where Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 software is installed) as the Oracle Utilities Analytics administrator user ID (default ceases).
3. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred as <TEMPDIR> in the step 3 below). This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory can be deleted after successful installation.
4. Unzip the **Oracle Utilities Analytics V2.5.0 Dashboard Component Multiplatform.zip** to <TEMPDIR>.
5. Decompress the file **BI.OBIEE.V2.5.0-MultiPlatform.jar**:
   - cd <TEMPDIR>
   - jar -xvf BI.OBIEE.V2.5.0-MultiPlatform.jar

     Note: You should have Java JDK installed on the machine used to (un)jar the Oracle Utilities Analytics dashboard component installation package. Install the JDK that is supported for the install on your platform to be able to use the jar command.

The Java packages are located at: http://java.sun.com/products/archive/index.html.

A sub-directory named "**BI.OBIEE.V2.5.0**" is created. It contains the installation software for the Oracle Utilities Analytics Dashboard component.

Setting Permissions for cistab File in UNIX

Note that every Oracle Utilities Analytics environment installed on a server must be registered in the /etc/cistab file located on that server.

On UNIX servers, generally only the root user ID has write permissions to the /etc directory. Since the installation process is run by the Oracle administrator user ID, this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the <TEMPDIR>/BI.OBIEE.V2.5.0 directory named cistab_<SPLENVIRON>.sh. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Analytics application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Analytics administrator user ID, so that the next time a new environment is created by the same Oracle Utilities Analytics administrator user ID, you do not need to run the generated script with the root user ID. Instead, the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility. No new registration occurs. The install utility interactively gives instructions about every step in each specific case.

To upgrade an existing environment, it is recommended that a backup be taken before initiating the installation process. The installation utility by itself does not create a backup of the existing environment.

Oracle Utilities Analytics Dashboard Package Upgrade Steps

Before upgrading, verify that the steps in section **Prerequisite Software for Oracle Utilities Analytics Dashboard Component** are followed.

To upgrade the Oracle Utilities Analytics Dashboard package, follow these steps.

1. Change to the <TEMPDIR>/BI.OBIEE.V2.5.0 directory.

   Perform the following steps:

   For UNIX:

   - export ORACLE_CLIENT_HOME=<ORACLE_HOME>
   - export PERL_HOME=$ORACLE_CLIENT_HOME/perl
   - export PATH=$PATH:$PERL_HOME/bin
   - Run **install.sh**.

   Note: Ensure that you have the required execute permission on install.sh.

   For Windows:

   - set ORACLE_CLIENT_HOME=<ORACLE_HOME>
   - set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
   - set PATH=%PERL_HOME%\bin;%PATH%
   - Run **install.cmd**.

2. The Oracle Utilities Analytics specific menu appears.

3. Select the each menu item to configure the values.

   For detailed description of the values, see **Configuration Worksheet for Dashboard Component Installation**.

   Note: As the Oracle Business Intelligence Enterprise Edition version was changed to 11.1.1.7.1 as a part of the Oracle Utilities Analytics upgrade, the existing Oracle Utilities Analytics Dashboard package environment should not be used. A new Oracle Utilities Analytics Dashboard package environment should be created.

Environment Installation Options

1. Oracle Client Home Directory:
2. Environment Mount Point:
   Log Files Mount Point:
   Environment Name:
   Web Java Home Directory:

Configure each item in the above list for a successful installation. Choose the following options from the menu item: (1, 2 <P> Process, <X> Exit).

For detailed description of the values, see **Configuration Worksheet for Dashboard Component Installation**.

Environment Configuration

1. Environment Description
   Environment Description:
2. OBIEE Environment Configuration
   Oracle BI Instance Home:
   Oracle BI Home:
   Oracle BI Domain Home:
   Weblogic Domain Console User Name:
   Weblogic Domain Console Host:
   Weblogic Domain Console Port Number:

   Target Database Details
   Target Database Name:
   Target Database Host:
   Target Database Port: 1521
   DWADM Schema Name: DWADM
   DWADM Schema Password:

Configure each item in the above list for a successful installation. Choose the following options from the menu item (1, 2, 3 <P> Process, <X> Exit).

After completing the parameter setup, proceed with the option **P.** Write the Configure file.

Merging the RPD Files

If you have made custom changes to deployed RPD, follow the Oracle Business Intelligence Enterprise Edition documentation for merging.

Post-Upgrade Tasks

Post-upgrade tasks involve the following:

- **Deploying the Repository (RPD) File**
- **Deploying the Web Catalog**
- **Configuring and Deploying MapViewer**
- **Deploying Write Back**

- **Enabling Analytics Help**
- **Enabling Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1**

Deploying the Repository (RPD) File

If you have not made any changes to the deployed RPD, then take the RPD file from following location: <install_dir>/Reports/rpd/ UtilitiesBusinessAnalytics.rpd, where <install_dir> is the Oracle Utilities Analytics Dashboard Package installation directory.

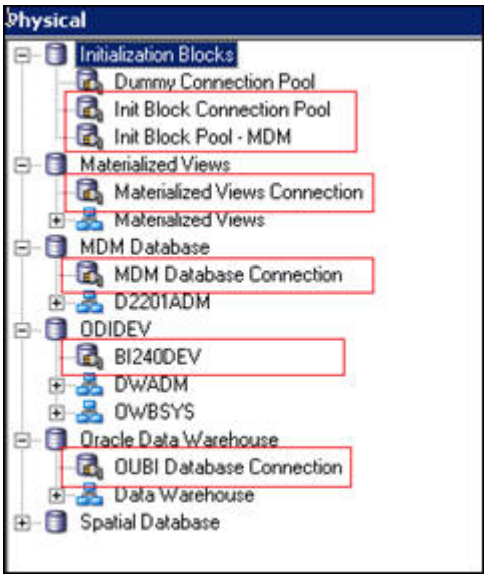
If you have done merging, then take the merged RPD and make the required database changes.

This RPD file should be copied to the windows machine on which Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 is installed.

Follow these steps to deploy the RPD file:

1. Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 should be installed on the Windows machine before proceeding with the below steps.
2. Launch the **Administration** tool from the **Start** menu.
   Start > Programs > Oracle Business Intelligence > BI Administration
3. Open the RPD in offline mode by selecting **File > Open > Offline...**
4. Provide the RPD password. The default password is "oracle123".

5. Edit the **Connection Pools** shown below by double-clicking on them.



6. In the **Init Block Connection Pool** group, enter the following:

   Datasource name = BI Database name

   User name = DWREAD

   Password = DWREAD User password

7. In the **Init Block Pool - MDM** group, provide the following (only for MDM):

   Datasource name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

8. .In the **Materialized Views Connection** group, enter the following:

   Datasource name = BI Database name

   User name =DWREAD

   Password = DWREAD User password

9. In the **MDM Database Connection** group, provide the following (only for MDM):

   Data source name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

10. In the **ODIDEV Connection Pool** group, provide the following:

    Data source name = BI database name

    User name = DWUSER

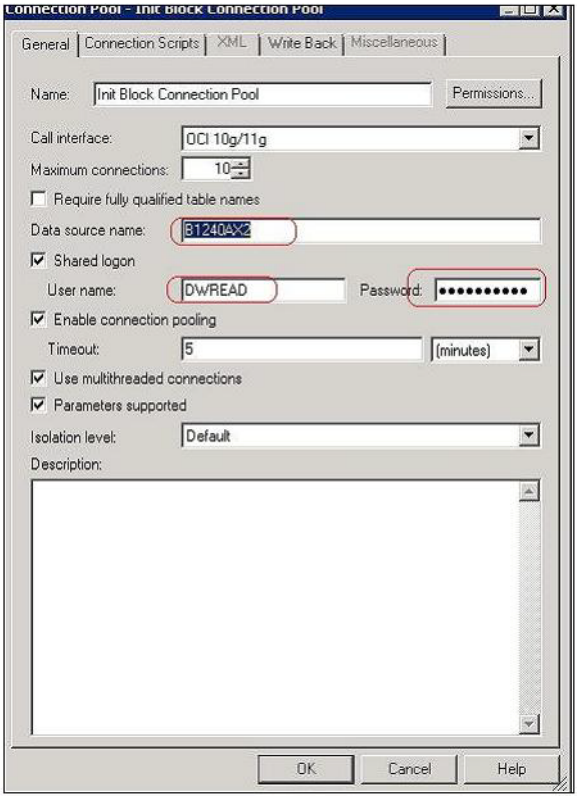
    Password = DWUSER User password

11. In the **OUBI Database Connection** group, provide the following:

    Data source name = BI database name

    User name = DWREAD

    Password = DWREAD User password



12. Click **Save**.

    Note: Click **Yes** when you see the prompt '*Do you wish to check global consistency*?' and ignore any warnings that appear after consistency check is complete.

13. Log into the Oracle Business Intelligence Enterprise Edition Enterprise Manager console.
14. Navigate to **BI Instance > Coreapplication > Deployment**.
15. Lock and edit.
    The repository text box will be enabled.
16. Browse to the modified rpd file and submit.
17. Provide the RPD password **"oracle123"**, and then click **Apply**.
18. Activate the changes and then restart Oracle Utilities Analytics services.

    Note: All the above databases set in the connection pool should be updated in tnsnames.ora file in <OBIEE_INSTALL_DIR>/Oracle_BI1/network/admin.

Deploying the Web Catalog

To deploy the web catalogs, follow these steps:

1. Go to <Catalog location>/root/shared and delete all contents except any customized catalog files.
2. Go to <Catalog location>/root/system and remove **spatialmetadata** directory and **spatialmetadata.atr** file.

   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

Deploying the Catalogs

To deploy the catalogs, follow these steps:

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. **ksh ./deploycatalog.sh**.
5. Enter the physical catalogs location configured in the Enterprise Manager.
   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. **deploycatalog.cmd**.
5. Enter the Physical Catalogs location configured in EM
   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

Configuring and Deploying MapViewer

Configuring and deploying the MapViewer involves the following:

- **Configuring MapViewer**
- **Modifying instanceconfig.xml**
- **Deploying Custom MapViewer**

Configuring MapViewer

To configure Mapviewer, follow these steps:

1. Log into the WebLogic console.
2. In the WebLogic console, create the '**MAP_DS**' datasource.
3. Lock and edit.
4. Navigate to **Services > Data Sources**.
5. Select **New > Generic Data Source** and provide the following:

   Name = MAP_DS

   JNDI Name = MAP_DS

   Database Type = oracle
6. Click **Next**.
7. Enter the following:
   Database Driver = XA thin database driver
8. Click **Next**.
9. Enter the following connection properties:
   - Database Name: BI Database Name

- Host Name: Database host
- Port: Database port
- Database User Name: dwadm
- Password: dwadm password

10. Click **Next,** and then click **Finish**.
11. Click **Activate Changes**.
12. Update the mapViewerConfig file with below mentioned tags:

    File location: <OBIEE_INSTALL_DIR>/Oracle_BI1/bifoundation/jee/

    mapviewer.ear/web.war/WEB-INF/conf/

    File: mapViewerConfig.xml

13. If there is a proxy used, insert the list of host names for all the third-party service providers in the security_config node.

```
<proxy_enabled_hosts>
elocation.oracle.com,maps.weatherbug.com,direct.weatherbug.com,api
.wxbug.net,de.tiles.weatherbug.com
</proxy_enabled_hosts>
```

14. Add the following ns_data_provider node:

```
<ns_data_provider id="obieeNsdp"
class="com.oracle.utilities.birdseye.BirdseyeNSDP" />
```

15. Add the current map_tile_server with the following map_tile_server node:

```
<map_tile_server>
<tile_storage default_root_path="/mytilecache/"/>
</map_tile_server>
```

Modifying instanceconfig.xml

Update the instanceconfig.xml file after taking a backup.

The following are the examples of location of instanceconfig.xml file.

For UNIX:

```
<OBIEE_INSTALL_DIR>/instances/instance1/config/
OracleBIPresentationServicesComponent/coreapplication_obips1
```

For Windows:

```
<OBIEE_INSTALL_DIR>\instances\instance1\config\OracleBIPresentatio
nServicesCo mponent\coreapplication_obips1
```

Perform the following changes to instanceconfig.xml file:

1. Update the security node with the following values. If the security node is not present, add the following code before </Serverinstance>:

```
<Security>
<ClientSessionExpireMinutes>210</ClientSessionExpireMinutes>
<HttpOnlyCookies>false</HttpOnlyCookies>
<CookieDomain />
<CookiePath>/</CookiePath>
</Security>
```

2. Update the following <ServerInstance> element:

```
<LightWriteback>true</LightWriteback>
```

3. Add the following before the end tag </ServerInstance>:

```
<UI>
<DefaultStyle>oubi</DefaultStyle>
<DefaultSkin>oubi</DefaultSkin>
</UI>
```

4. Add the following lines in between the <ServerInstance> </ServerInstance> tags.

```
<Prompts>
<MaxDropDownValues>256</MaxDropDownValues>
<AutoApplyDashboardPromptValues>true</
AutoApplyDashboardPromptValues>
<AutoSearchPromptDialogBox>true</AutoSearchPromptDialogBox>
<AutoCompletePromptDropDowns>
<SupportAutoComplete>true</SupportAutoComplete>
<CaseInsensitive>true</CaseInsensitive>
<MatchingLevel>MatchAll</MatchingLevel>
<ResultsLimit>50</ResultsLimit>
</AutoCompletePromptDropDowns>
</Prompts>
```

Deploying Custom MapViewer

To deploy the custom MapViewer, follow these steps:

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run ksh ./deploymapviewer.sh.
5. Enter the WebLogic Domain Console Password. For example, weblogic123.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. Run deploymapviewer.cmd.
5. Enter WebLogic Domain Console Password. For example, weblogic123.

Perform the following steps after deploying the custom MapViewer:

1. Update the MapViewer configuration by navigating to MapViewer > Administration > Configuration. Login to Mapviewer at this location: http://<HOST>:<MANAGERPORT>/mapviewer
2. Add the below content in the mapViewerConfig.xml with appropriate values:

```
<DB_HOST>,<DBNAME>,<DB_PORT>,<USER>,<PASSWORD>
<map_data_source name="MAPCONN"
jdbc_host="<DB_HOST>"
jdbc_sid="<BI Database Name>" jdbc_port="<DB_PORT>"
jdbc_user="DWADM"
jdbc_password="<!DWADM PASSWORD>"
jdbc_mode="thin"
number_of_mappers="32"
allow_jdbc_theme_based_foi="true"
/>
```

3. Click Save, and then restart.

   Note: The above step has to be performed each time after running the **deploymapviewer** command.

Deploying Write Back

For deploying Write Black, perform the following steps:

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. Run **ksh ./deploywriteback.sh**.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%/bin.
4. Run **deploywriteback.cmd**.

Enabling Analytics Help

To enable the **Analytics' Help**, perform these steps:

1. Download *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards User's Guide* from Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. After downloading *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards User's Guide*, change the name of the **Help** file to **OUA Help**.pdf.
3. Now, place the **Help** file in <install_dir>/Skin/res, where <install_dir> is the Oracle Utilities Analytics Dashboard Package installation directory.
4. Run the following commands:

   For UNIX:
   Perform the following steps:

   1. Navigate to <Install_Dir>/bin directory.
   2. Initialize the environment with the ./splenviron.sh -e <envname> command.
   3. cd $SPLEBASE/bin.
   4. Run ksh ./deployanalyticsear.sh.
   5. Enter the WebLogic Domain Console password. For example, weblogic123.

   For Windows:

   Perform the following steps:

   1. Navigate to <Install_Dir>/bin directory.
   2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
   3. cd %SPLEBASE%/bin.
   4. deployanalyticsear.cmd.
   5. Enter the WebLogic Domain Console Password. For example, weblogic123.
   6. Restart the Oracle Utilities Analytics core services.

7. Restart WebLogic and all Oracle Utilities Analytics services after the Oracle Business Intelligence Enterprise Edition deployment is completed.
8. Log into Analytics and navigate to **Administration>Manage Privileges>WriteBack>Write Back to Database**.
9. Click **Denied:Authenticated User** and select the permission **Granted.**

Enabling Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1

To enable auto complete feature on Oracle Business Intelligence Enterprise Edition, perform the following steps:

1. Restart the Oracle Business Intelligence Enterprise Edition admin server, managed server and opmn services.

   Note: Refer to Oracle Business Intelligence Enterprise Edition documentation for detailed instructions on how to start, stop admin server, managed server and opmn services.
2. Login to analytics (http://<Server>:<port>/analytics).
3. Click on the **WebLogic User** (top-most-right section of the page).
4. From the drop down menu, select **My Account**.
5. Set **Prompt Auto Complete** to **ON,** and click **OK**.

Oracle Utilities Analytics Admin Tool Component

This is only applicable for users installing Oracle Data Integrator based ELT. Oracle Utilities Analytics Admin tool is based on Oracle Application Express.

For detailed instructions on how to set up the Admin Tool, refer to the chapter **Installing the Oracle Utilities Analytics Admin Tool** for the complete details.

Also, refer to *Oracle Utilities Analytics Administrator's Guide* for details.

Checklist After the Installation

After the installation, perform the following steps:

1. Verify the **Install** and **Deploy** logs.
   - MDL Import Logs
     <INSTALL_DIR>/OWB/MetadataFiles/SPL-BI-Project_imp.log
     <INSTALL_DIR>/OWB/MetadataFiles/SPL-BI-Location_imp.log
   - OWB Deploy Logs
     <INSTALL_DIR>/logs/system/log_OWBDeployment_YYYYMMDD_####.txt
   - Custom Mapviewer deploy Logs
     INSTALL_DIR>/logs/system/mapviewerdeploy.sh.log
   - WriteBack Logs
     <INSTALL_DIR>/logs/system/Writeback.log
   - FileProcessorDaemon Logs
     <INSTALL_DIR>/bin/FileProcessorDaemon.log
2. Log into the **Oracle Business Intelligence Enterprise Edition Analytics** link. The Dashboard should display data with no errors.

Chapter 7

Demo Installation Procedure

This chapter provides instructions for installing the demo database.

> **Note**: Demo installation does not support ETL functionality. ETL Job control dashboard accesses the Oracle Warehouse Builder and Oracle Data Integrator tables, and the demo dump does not have Oracle Warehouse Builder, or Oracle Data Integrator objects. Hence, the ETL dashboard is not supported in the demo installation.

The chapter includes the following topics:

- **Oracle Utilities Analytics Demo Database Component Installation**
- **Oracle Utilities Analytics Dashboard Component Installation**
- **After the Installation**

Oracle Utilities Analytics Demo Database Component Installation

This section describes how to install the demo component of Oracle Utilities Analytics. The section includes the following:

- **Copying and Decompressing Install Media**
- **Database Creation and Dump File Import**
- **Security Configuration**
- **Spatial Configuration**

Copying and Decompressing Install Media

To copy and decompress the install media, follow these steps:

1. Download the Oracle Utilities Analytics V2.5.0 Demo Data part (**Oracle Utilities Analytics V2.5.0 Demo Data.zip**) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred to below as <TEMPDIR>). This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory as a part of the installation, can be deleted after completing a successful installation.
3. Unzip **Oracle Utilities Analytics V2.5.0 Demo Data.zip** to <TEMPDIR>.

Database Creation and Dump File Import

Ensure that Oracle Database Server Enterprise Edition 11.2.0.3 is already installed on the machine in order to create the database.

- Use the Database Configuration Assistant (DBCA) utility to create the database as shown in the section **Database Creation Using DBCA**.

Database Creation Using DBCA

Note: Refer to the Oracle database documentation to know more about the Database Configuration Assistant (DBCA).

For an initial installation database creation, it is recommended that you use the Database Configuration Assistant (DBCA) to create a data warehouse database with below-mentioned specifications:

1. Create a database with the AL32UTF8 character set. Set the open cursor limit to 3000 and processes to 1000 at the time of the database creation.
2. After database creation, set the query_rewrite_enabled parameter to "Force" and the query_rewrite_integrity parameter to "Trusted".

   To do this, connect to the sys user, and execute the following commands:

   ```
   alter system set query_rewrite_enabled=force;
   alter system set query_rewrite_integrity=trusted;
   ```
3. Ensure to create users in the database with the following names: DWADM, DWUSER, DWREAD, MDADM, RELADM, SPLADM, SPLUSER, SPLREAD, MASTER_REPO, WORK_REPO and DWSTAGE if these do not exist already, without giving specific roles.
4. Ensure to create roles with the following names: DW_USER, DW_READ, DW_REPLICATE, SPL_USER and SPL_READ roles if these do not exist already.
5. Connect to the sys user, execute the **Usersgrants.sql** in BI250/Scripts/Usersgrants.sql. This SQL will provide required grants to the users created above.

Import the Demo dump

Perform the following steps to import the demo dump:

1. Create the **dump_dir** directory in database.
2. You should also copy the **exp_demo.dmp** file to the **dump_dir**. Uncompress the **exp_demo.dmp.gz** file first to extract the exp_demo.dmp file. This file is in <TEMPDIR>\Demo directory.
3. Set the correct ORACLE_SID and ORACLE_HOME first, and then run the below command to import demo dump:

   ```
   impdp directory= dump_dir dumpfile= exp_demo.dmp logfile=
exp_demo.log schemas=DWADM,RELADM,MDADM
remap_tablespace=cists_01:<tablespace_name>
   ```

   Note: Run this command from database server:

   Note: Make sure to change the tablespace_name to the tablespace name on which DWADM, RELADM and MDADM have the quota. If DWADM, RELADM and MDADM users have quota on cists_01 tablespace, then exclude whole remap_tablespace clause from the command.

   Note: If you get the following error messages, it is recommended to ignore:

   ```
   ORA-31684: Object type USER:"MDADM" already exists
   ORA-31684: Object type USER:"RELADM" already exists
   ORA-31684: Object type USER:"DWADM" already exists
   ```

```
ORA-39083: Object type OBJECT_GRANT failed to create with error:
ORA-01917: user or role 'CCB1REP' does not exist
Failing sql is:
GRANT EXECUTE ON "MDADM"."B1_TEXT_ARRAY" TO "CCB1REP"

ORA-39083: Object type OBJECT_GRANT failed to create with error:
ORA-01917: user or role 'CCB1REP' does not exist
Failing sql is:
GRANT SELECT ON "MDADM"."B1_PROD_INSTANCE" TO "CCB1REP"
Job "SYSTEM"."SYS_IMPORT_SCHEMA_01" completed with 5 error(s)
```

4. Provide the system as the user and system user's password when prompted.
5. Connect to MDADM schema, and execute below commands

```
create public synonym B1_TARGET_ENTITY for B1_TARGET_ENTITY;
create public synonym B1_PROD_INSTANCE for B1_PROD_INSTANCE;
create public synonym B1_JOB_CONFIG for B1_JOB_CONFIG;

grant select on B1_TARGET_ENTITY to public;
grant select on B1_PROD_INSTANCE to public;
grant select on B1_JOB_CONFIG to public;
```

Security Configuration

For Security Configuration, perform the following steps:

1. Navigate to the ..\BI250\DWADM\Security folder.
2. Edit the file **OraGenSec.bat,** which is in the same location, and replace the parameter database-name with the name of your database. This file is provided for your convenience and executes the **Oragensec.exe** utility based on the parameters passed into it.

   Note: Ensure to run **OraGenSec.bat** from a Windows desktop that has the Oracle 11.2.0.3+32 bit client installed. Your database should already be listed in the local file **tnsnames.ora**.

   The script executes as following:

   oragensec -d DWADM,<DWADM password>,database_name -r DW_READ,DW_USER - a A -u DWUSER,DWREAD
3. Execute the edited **OraGenSec.bat** file from the command prompt.

Spatial Configuration

This section describes how to load spatial metadata in the USER_SDO* tables for Oracle Utilities Analytics.

Use the following procedure to load spatial metadata in the target database:

1. Create the **dump_dir** directory in the database and copy the **user_sdo.dmp** file from ../B1250/Spatial-Metadata folder to that location.
2. Import released spatial tables to the target database using the following command:

   ```
   impdp directory=dump_dir dumpfile=user_sdo.dmp logfile=
   impdp_user_sdo.log schemas=DWADM
   remap_tablespace=cists_01:<tablespace_name>
   ```

   Note: Run this command from database server.

Note: Make sure to change the tablespace_name to tablespace name on which DWADM has the quota. If DWADM user have quota on cists_01 tablespace, then exclude whole remap_tablespace clause from command.

3. Review the **impdp_user_sdo.log** file to ensure the tables were imported successfully.
4. After importing the tables, run following SQL scripts from the ../B1250/Spatial-Metadata folder:

   - sqlplus dwadm/<dwadm user password>@database-name @copy_spatial_metadata.sql

   - sqlplus dwadm/<dwadm user password>@database-name @clean_sdo_release_tbls.sql

5. Review the log files.

Oracle Utilities Analytics Dashboard Component Installation

This section describes how to install the dashboard component of Oracle Utilities Analytics. The section includes the following:

- **Copying and Decompressing Install Media**
- **Setting Permissions for cistab File in UNIX**
- **Oracle Utilities Analytics Demo Database Component Installation Dashboard Package Installation Steps**
- **Post-installation Tasks**

Copying and Decompressing Install Media

The Oracle Utilities Analytics Dashboard Component installation file is delivered in the zip format for both UNIX and Windows platforms. If you plan to install multiple Oracle Utilities Analytics environments operated by different Oracle Utilities Administrator User IDs, you must complete each of the following installation steps for each Administrator User ID.

1. Download the **Oracle Utilities Analytics V2.5.0 Dashboard Component part** (Oracle Utilities Analytics V2.5.0 Dashboard Component Multiplatform.zip) from the Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. Log into the application server host (where Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 software is installed) as the Oracle Utilities Analytics Administrator user ID (default ceases).
3. Create a temporary directory, such as c:\OUA\temp or /OUA/temp (Referred as <TEMPDIR> in the step 4 below. This directory must be located outside any current working Oracle Utilities application environment. All files that are placed in this directory, can be deleted after successful installation.
4. Unzip the **Oracle Utilities Analytics V2.5.0 Dashboard Component Multiplatform.zip** to <TEMPDIR>
5. Decompress the file **BI.OBIEE.V2.5.0-MultiPlatform.jar:**
   - cd <TEMPDIR>
   - jar -xvf BI.OBIEE.V2.5.0-MultiPlatform.jar

You should have Java JDK installed on the machine used to (un)jar the Oracle Utilities Analytics dashboard component installation package. Install the JDK that is supported for the install on your platform to be able to use the jar command.

The Java packages are located at: http://java.sun.com/products/archive/index.html

A sub-directory named "BI.OBIEE.V2.5.0" is created. It contains the installation software for the Oracle Utilities Analytics Dashboard component.

Setting Permissions for cistab File in UNIX

Every Oracle Utilities Analytics environment installed on a server must be registered in the /etc/cistab file located on that server. On UNIX servers, generally only the root user ID has the write permissions to the /etc directory. Since the installation process is run by the Oracle administrator User ID, this user ID may not be able to write to /etc/cistab table.

The install utility checks permissions and if it identifies a lack of the necessary permissions, it generates a script in the **<TEMPDIR>/BI.OBIEE.V2.5.0** directory named **cistab_<SPLENVIRON>.sh**. Run the generated script using the root account before continuing with the installation process. The script initializes the cistab file in /etc directory (if it is the first Oracle Utilities Analytics application environment on the server) and registers a new environment.

The generated script also changes the owner of /etc/cistab file to the Oracle Utilities Analytics administrator User ID, so that the next time a new environment is created by the same Oracle Utilities Analytics Administrator User ID, you do not need to run the generated script with the root user ID. Instead, the install utility itself proceeds with the registration.

If you are reinstalling an existing environment, only the validation of /etc/cistab entry is done by the install utility, no new registration occurs. The install utility interactively instructs you about every step that needs to occur in each specific case.

If you plan to upgrade an existing environment, take a backup prior to the installation process. The installation utility does not create a backup of the existing environment.

Oracle Utilities Analytics Demo Database Component Installation Dashboard Package Installation Steps

Before you install verify that the steps mentioned in **Prerequisite Software for Oracle Utilities Analytics Dashboard Component** are followed.

To install the Oracle Utilities Analytics Dashboard package, perform these steps.

1. Change to the **<TEMPDIR>/BI.OBIEE.V2.5.0** directory.
2. Set the ORACLE_CLIENT_HOME and PATH variables as Oracle Client Perl is required to run the installer.
3. Execute the following script:
   For UNIX:
   Perform the following steps:
   - export ORACLE_CLIENT_HOME=<oracle_client_home>
   - export PERL_HOME=$ORACLE_CLIENT_HOME/perl
   - export PATH=$PATH:$PERL_HOME/bin
   - Run ksh ./install.sh

   For Windows:
   Perform the following steps:
   - set ORACLE_CLIENT_HOME=<ORACLE_HOME>
   - set PERL_HOME=%ORACLE_CLIENT_HOME%\perl
   - set PATH=%PERL_HOME%\bin;%PATH%
   - Run Install.cmd

   Note: On UNIX, ensure that you have the proper execute permission on install.sh.
4. The Oracle Utilities Analytics specific menu appears.

5. Select the each **Menu Item** to configure the values. For detailed description of the values, see **Configuration Worksheet for Dashboard Component Installation**.

Environment Installation Options

1. Oracle Client Home Directory:
2. Environment Mount Point:
   Log Files Mount Point:
   Environment Name:
   Web Java Home Directory:

   Configure each item in the above list for successful installation. Choose the following options from the menu item (1, 2 <P> Process, <X> Exit).

   Note: For detailed description of these values, see **Configuration Worksheet for Dashboard Component Installation**.

Environment Configuration

1. Environment Description
   Environment Description:
2. OBIEE Environment Configuration
   Oracle BI Instance Home:
   Oracle BI Home:
   Oracle BI Domain Home:
   Weblogic Domain Console User Name:
   Weblogic Domain Console Host:
   Weblogic Domain Console Port Number
3. Target Database Details
   Target Database Name:
   Target Database Host:
   Target Database Port: 1521
   DWADM Schema Name: DWADM
   DWADM Schema Password:

   Configure each item in the above list for a successful installation. Choose the following options from the menu item (1, 2, 3 <P> Process, <X> Exit).

When you are finished with the parameter setup, proceed with option **P**. Write to the **Configure** file.

Once installation is successful, execute the post-installation steps as described in the section **Post-installation Tasks**.

Post-installation Tasks

Following topics are discussed in this section:

- **Deploying Repository (RPD) File**
- **Deploying the Web Catalog**
- **Configuring and Deploying MapViewer**
- **Deploying Write Back**
- **Enabling Analytics Help**
- **Enabling Auto Complete feature on Oracle Business Intelligence Enterprise Edition 11.1.7.1**

Deploying Repository (RPD) File

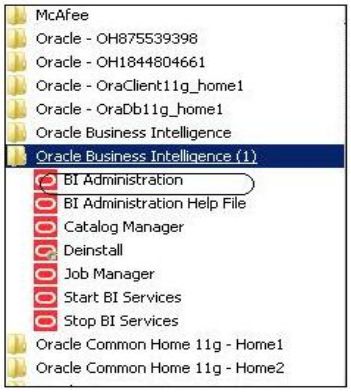
The RPD file is located at: <install_dir>/Reports/rpd/UtilitiesBusinessAnalytics.rpd, where <install_dir> is the Oracle Utilities Analytics Dashboard Package installation directory.

This RPD file should be copied to the Windows machine on which Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 is installed.

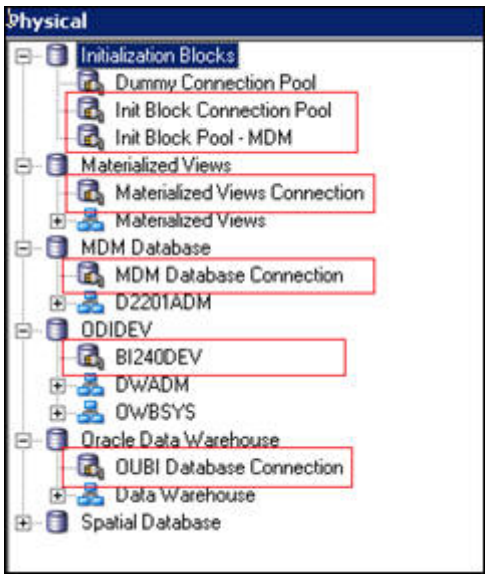
To deploy the RPD file, perform these steps:

1. Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 should have been installed on the Windows machine before proceeding with the steps below.
2. Launch the **Administration** tool from the **Start** menu from the Windows machine. This is only available in the Windows.

   Start > Programs > Oracle Business Intelligence > BI Administration.
3. Open the RPD in the offline mode by selecting **File > Open > Offline...**
4. Provide the RPD password. The default password is "oracle123".



5. Edit the connection pools shown below by double clicking on them.



6. In the **Init Block Connection Pool** group, enter the following:

   Datasource name = BI Database name

   User name = DWREAD

Password = DWREAD User password

7. In the **Init Block Pool - MDM** group, provide the following (only for MDM):

   Datasource name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

8. In the **MDM Database Connection** group, provide the following (only for MDM):

   Data source name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

9. In the **Materialized Views Connection** group, enter the following:

   Datasource name = BI Database name

   User name =DWREAD

   Password = DWREAD User password

10. In the **ODIDEV Connection Pool** group, provide the following:

    Data source name = BI database name

    User name = DWUSER

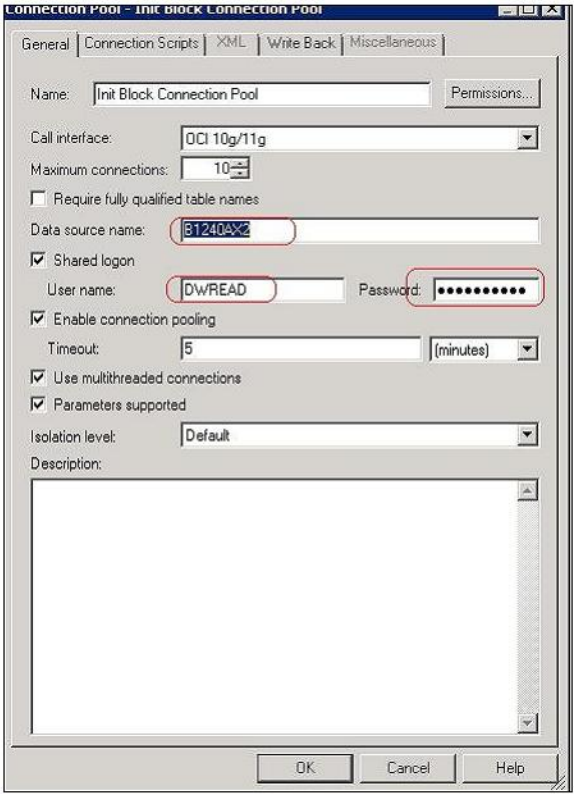
    Password = DWUSER User password

11. In the **OUBI Database Connection** group, provide the following:

    Data source name = BI database name

    User name = DWREAD

    Password = DWREAD User password



12. Click **Save.**

    Note: Click Yes when you see the prompt 'Do you wish to check global consistency?' and ignore any warnings that appear after consistency check is complete.

13. Log into the **OBIEE Enterprise Manager** console.
14. Navigate to **BI Instance >Coreapplication>Deployment.**
15. Lock and edit.

    The repository text box is enabled.

16. Browse to the modified rpd file and submit.
17. Provide the RPD password "oracle123". Click **Apply**.
18. Activate the changes, and then restart the Oracle Utilities Analytics services.

    Note: All the above databases set in the connection pool should be updated in the **tnsnames.ora** file in <OBIEE_INSTALL_DIR>/Oracle_BI1/network/admin.

Deploying the Web Catalog

To deploy the catalogs, follow these steps:

1. Go to <Catalog location>/root/shared and delete all contents except any customized catalog files.
2. Go to <Catalog location>/root/system and remove spatialmetadata directory and spatialmetadata.atr file.

   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

For UNIX:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. ksh ./deploycatalog.sh.
5. Enter the physical catalogs location configured in the Enterprise Manager.

   Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see catalog location.

For Windows:

Perform the following steps:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%\bin.
4. deploycatalog.cmd.
5. Enter the Physical Catalogs location configured in the Enterprise Manager.

Note: Login to the Enterprise Manager, navigate to **Coreapplication** > **Deployment** >**Repository** for viewing the catalog location. At the bottom, you will see the catalog location.

Configuring and Deploying MapViewer

Configuring and deploying the MapViewer involves the following:

- **Configuring MapViewer**
- **Modify instanceconfig.xml**
- **Deploying Custom MapViewer**

Configuring MapViewer

To configure and deploy the MapViewer, perform the following steps:

1. Login to the WebLogic console.
2. In the WebLogic console, create the '**MAP_DS**' datasource.
3. Lock and edit.
4. Navigate to S**ervices < Data Sources**.
5. Select **New > Generic Data Source** and provide the following:

   Name = MAP_DS

   JNDI Name = MAP_DS

   Database Type = oracle
6. Click **Next**.
7. Enter the following:

   Database Driver = XA thin database driver
8. Click **Next**.
9. Enter the following Connection properties:

   Database Name:BI Database Name

   Host Name:Database host

   Port:Database port

   Database User Name:dwadm

   Password:dwadm password
10. Click **Next**, and then click **Finish**.
11. Click **Activate Changes**.
12. Update the **mapViewerConfig** file with below mentioned tags:

    File location: <OBIEE_INSTALL_DIR>/Oracle_BI1/bifoundation/jee/mapviewer.ear/web.war/WEB-INF/conf/

    File: mapViewerConfig.xml
13. If there is proxy used, insert the list of host names for all the third-party service providers in the security_config node.

```
<proxy_enabled_hosts>
elocation.oracle.com,maps.weatherbug.com,direct.weatherbug.com,api
.wxbug.net,de.tiles.weatherbug.com
</proxy_enabled_hosts>
```

14. Add the following ns_data_provider node:

```
<ns_data_provider id="obieeNsdp"
class="com.oracle.utilities.birdseye.BirdseyeNSDP" />
```

15. Add the current map_tile_server with the following map_tile_server node:

```
<map_tile_server>
<tile_storage default_root_path="/mytilecache/"/>
</map_tile_server>
```

Modify instanceconfig.xml

Update the instanceconfig.xml file after taking a backup.

The following are the examples of location of **instanceconfig.xml** file.

For UNIX:

```
<OBIEE_INSTALL_DIR>/instances/instance1/config/
OracleBIPresentationServicesComponent/coreapplication_obips1
```

For Windows:

```
<OBIEE_INSTALL_DIR>\instances\instance1\config\OracleBIPresentatio
nServicesCo mponent\coreapplication_obips1
```

Perform the following changes to **instanceconfig.xml** file:

1. Update the security node with the following values. If the security node is not present, add the following code before </Serverinstance>:

```
<Security>
<ClientSessionExpireMinutes>210</ClientSessionExpireMinutes>
<HttpOnlyCookies>false</HttpOnlyCookies>
<CookieDomain />
<CookiePath>/</CookiePath>
</Security>
```

2. Update the following <ServerInstance> element:

```
<LightWriteback>true</LightWriteback>
```

3. Add the following before the end tag </ServerInstance>:

```
<UI>
<DefaultStyle>oubi</DefaultStyle>
<DefaultSkin>oubi</DefaultSkin>
</UI>
```

4. Add the following lines in between the <ServerInstance> </ServerInstance> tags:

```
<Prompts>
<MaxDropDownValues>256</MaxDropDownValues>
<AutoApplyDashboardPromptValues>true</
AutoApplyDashboardPromptValues>
<AutoSearchPromptDialogBox>true</AutoSearchPromptDialogBox>
<AutoCompletePromptDropDowns>
<SupportAutoComplete>true</SupportAutoComplete>
<CaseInsensitive>true</CaseInsensitive>
<MatchingLevel>MatchAll</MatchingLevel>
<ResultsLimit>50</ResultsLimit>
</AutoCompletePromptDropDowns>
</Prompts>
```

Deploying Custom MapViewer

To deploy the custom MapViewer, follow these steps:

For Unix:

- cd $SPLEBASE/bin.
- ksh ./deploymapviewer.sh.
- Enter the WebLogic Domain Console Password. For example, weblogic123.

For Windows:

- cd %SPLEBASE%\bin.
- deploymapviewer.cmd.
- Enter the WebLogic Domain Console Password. For example, weblogic123.

Perform the following steps after deploying the custom MapViewer:

1. Update the **MapViewer** configuration by navigating to **MapViewer > Administration > Configuration**.
2. Add the below content in the **mapViewerConfig.xml** with appropriate values:

```
<DB_HOST>,<DBNAME>,<DB_PORT>,<USER>,<PASSWORD>
<map_data_source name="MAPCONN"
jdbc_host="<DB_HOST>"
jdbc_sid="<BI Database Name>"
jdbc_port="<DB_PORT>"
jdbc_user="DWADM"
jdbc_password="<DWADM PASSWORD>"
jdbc_mode="thin"
number_of_mappers="32"
allow_jdbc_theme_based_foi="true"
/>
```

3. Click **Save**, and then restart.

   Note: The above step has to be performed every time you run the **deploymapviewer** command.

Deploying Write Back

To deploy Write Black, perform the following:

For UNIX:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.sh -e <envname> command.
3. cd $SPLEBASE/bin.
4. ksh ./deploywriteback.sh.

For Windows:

1. Navigate to <Install_Dir>/bin directory.
2. Initialize the environment with the ./splenviron.cmd -e <envname> command.
3. cd %SPLEBASE%/bin.
4. deploywriteback.cmd.

Enabling Analytics Help

To enable the Analytics' help, follow these steps:

1. Download *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards User's Guide* from Oracle Software Delivery Cloud (https://edelivery.oracle.com).
2. After downloading *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards User's Guide,* change the name of the **Help** file to **OUA Help**.pdf. Now, place the **Help** file in <install_dir>/Skin/res, where <install_dir> is the **Oracle Utilities Analytics Dashboard Package** installation directory.
3. Run the following commands:

   For UNIX:

   - cd $SPLEBASE/bin.
   - ksh ./deployanalyticsear.sh.
   - Enter the WebLogic Domain Console Password. For example, weblogic123.

   For Windows:

   - cd %SPLEBASE%/bin.
   - deployanalyticsear.cmd.
   - Enter the WebLogic Domain Console Password. For example, weblogic123.
4. Restart the Oracle Utilities Analytics core services.
5. Restart WebLogic and all Oracle Utilities Analytics services after the Oracle Business Intelligence Enterprise Edition deployment is completed.
6. Login to Analytics and navigate to **Administration > Manage Privileges > Write Back > Write Back to Database.**
7. Click **Denied:Authenticated User** and select the permission **Granted**.

Enabling Auto Complete feature on Oracle Business Intelligence Enterprise Edition 11.1.7.1

Perform the following steps:

1. Restart the Oracle Business Intelligence Enterprise Edition admin server, managed server and opmn services.

   Note: Refer to Oracle Business Intelligence Enterprise Edition documentation for detailed instructions on how to start, stop the admin server, managed server and opmn services.
2. Log into the Analytics: http://<Server>:<port>/analytics.
3. Click on the WebLogic User (top-right pane of page).
4. From the drop-down menu, select **My Account**.
5. Set the prompt **Auto Complete** to **ON.** and click **OK**.

After the Installation

After the installation, perform the following:

1. Verify Install and Deploy Logs.
   - Custom Mapviewer deploy logs:

     <INSTALL_DIR>/logs/system/mapviewerdeploy.sh.log

- WriteBack logs:

  <INSTALL_DIR>/logs/system/Writeback.log

2. Log into the **Oracle Business Intelligence Enterprise Edition Analytics** link that is pointing to the demo database. The dashboard should display the data with no errors.

Chapter 8

Configuring Your Applications

This chapter provides instructions for configuring additional applications for use with Oracle Utilities Analytics. It covers the following topics:

- **Spatial Configuration**
- **Oracle Business Intelligence Enterprise Edition (OBIEE) Configuration**

Spatial Configuration

This section contains information related to configuring Oracle Utilities Outage Analytics and how to set up the spatial data and its corresponding metadata. The mapping between the spatial columns and the dimensional columns, such as State from Address dimension would be defined in the map metadata that is available as a part of the WebCatalog. Using the spatial data and the map metadata, users can view the transactional data on the map view.

As an example, steps to setup the data for United States (US) are mentioned below:

- **Installing US State Spatial Data**
- **Installing US City Spatial Data**
- **Installing US Zip Code Spatial Data**
- **Installing US County Spatial Data**
- **Configuring Oracle Utilities Network Management System Device Spatial Data**
- **Loading Spatial Metadata**
- **Improving Performance by Prefetching Map Tiles**

Installing US State Spatial Data

The spatial data can be loaded from various sources. One of the approaches is to use the world sample data given by **NAVTEQ**. There is a pointer to the data set from the Oracle Utilities Analytic's OTN (Oracle Technology Network) page for downloading partner data:

http://www.oracle.com/technetwork/database-options/spatialandgraph/downloads/index.html

There are various versions of the world sample dataset. These instructions assume that you are using the version with a world_sample2010.dmp file. If you have a different version, then these instructions may not work and you should refer to the **README.txt** included in the downloaded world_sample.zip file.

These instructions also assume that the sample data will be loaded into the DWADM account, used for the data warehouse. If you want to follow the instructions in the world sample README These instructions also assume that the sample data will be loaded into the DWADM account,

used for the data warehouse. If you want to follow the instructions in the world sample **ReadMe.txt** file instead, then the data will be loaded into a WORLD_SAMPLE account, and the steps will need to be changed to use that account instead of DWADM.

Use the following procedure to install the world sample data.

1. Create a work directory on your machine for the data, and change directory to the new directory. For example:

```
mkdir NAVTEQ
cd NAVTEQ
```

2. Unzip the **world_sample.zip** file you downloaded to the new directory. For example:

```
unzip world_sample.zip
```

3. Connect to SQLPLUS using the DWADM, and remove the old tables (if present). For example:

```
sqlplus dwadm/dwadm@database @cln_sample_data.sql
```

4. Import the world sample dump file into the DWADM account. For example:

```
imp dwadm/dwadm@database file=world_sample2010.dmp
    log=world_sample.log full=y
```

5. After importing the world sample dump file, create the **MapViewer Spatial** metadata using the following *Insert* statements:

```
sqlplus  dwadm/dwadm@database
INSERT INTO user_sdo_maps SELECT * FROM sdo_maps;
INSERT INTO user_sdo_themes SELECT * FROM sdo_themes;
INSERT INTO user_sdo_styles SELECT * FROM sdo_styles;
INSERT INTO user_sdo_cached_maps SELECT * FROM sdo_cached_maps;
```

6. Create the State spatial table and metadata are used by the default themes present in the Oracle Utilities Analytics metadata. This assumes that the eLocation website is being used as the base map. If some other base map is used, then the transform parameter will need to specify the SRID of the base map being used.

```
sqlplus  dwadm/dwadm@database
create table q1_states54004 (
         feature_id number,
         feature_name varchar2(255),
         area_id number,
         name_langcode varchar2(35),
         feature_type varchar2(30),
         country_code_3 varchar2(5),
         geometry SDO_GEOMETRY,
         carto_id number(10,0));


insert into q1_states54004
select null, name, null, lang_code, feature_type,
          ISO_COUNTRY_CODE, sdo_cs.transform(geometry, 54004),
          carto_id
FROM wom_area
WHERE feature_type = 909996
     and iso_country_code = 'USA';


INSERT INTO user_sdo_geom_metadata
VALUES ( 'Q1_STATES54004','GEOMETRY',
MDSYS.SDO_DIM_ARRAY(MDSYS.SDO_DIM_ELEMENT('X',-
20500000,20500000,0.0005),MDSYS.SDO_DIM_ELEMENT('X',-
50000000,19000000,0.0005)), 54004);
```

```
create index q1_STATES54004_sdx
       on q1_STATES54004(geometry)
       indextype is mdsys.spatial_index;
```

Installing US City Spatial Data

US City shape data is available in the world sample dataset, however, only the three hundred largest cities are available there. To find additional sample data for each US State from the US Census Bureau, visit and search within the **Census** site:

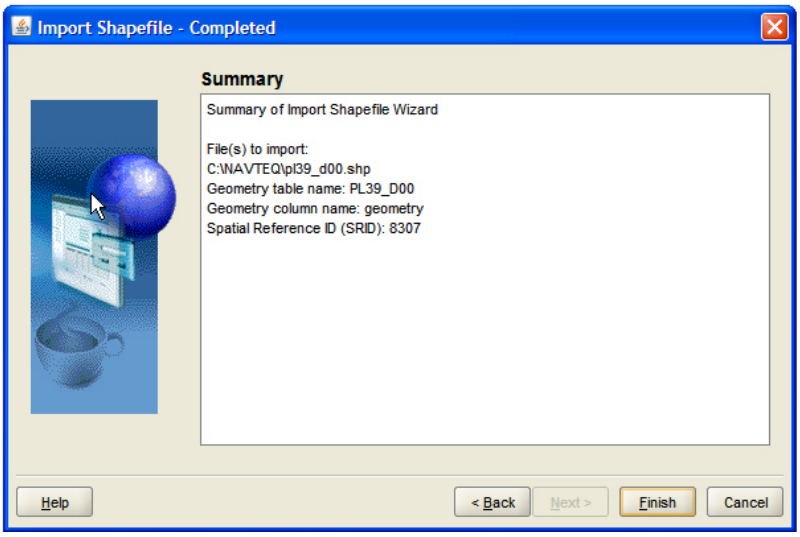
http://www.census.gov/

The following steps can be used to load the sample data for the state of Ohio, and similar steps can be followed to load city data for other US states.

1. Click the **Ohio** zip code in the **Shapefile** format and download the **zt39_d00_shp.zip** file to the **NAVTEQ** directory created in the previous procedure.
2. Unzip or decompress the **pl39_d00_shp.zip** file to the **NAVTEQ** directory.
3. Download standalone MapBuilder from this location:
   http://www.oracle.com/technetwork/middleware/mapviewer/downloads/index-100641.html
4. Start **MapBuilder**. This is installed when MapViewer is installed. On windows it can be started by running:
   ```
   java -jar mapbuilder.jar
   ```

   Refer to the MapViewer documentation for instructions on installing and running MapBuilder from this location:
   http://www.oracle.com/technetwork/middleware/mapviewer/documentation/index.html
5. If a connection is not created, then select **File -> New Connection,** and create a connection to the DWADM account in the Oracle Utilities Analytics Data Warehouse database.
6. Select **Tools -> Import Shapefile,** and click **Next**.
7. Click **Shapefile**.
8. Browse to the **C:\NAVTEQ** directory, select the **pl39_d00_shp.shp file**, and click **Open.**
9. Click **Next.**

   Note: Ensure that the name of the geometry table is set to pl39_d00. If this is not the desired name for the spatial table, then the select statement below will need to be changed to use the entered name.
10. Ensure the **Create Predefined Theme** box is unchecked, and click **Next.**
11. Review the summary information and click **Finish.**



12. Create the **Q1_CITY54004** table using the following SQL statement. This assumes that the eLocation website is being used as the base map. If some other base map is used, then the transform parameter will need to specify the SRID of the base map being used.

```
sqlplus  dwadm/dwadm@database
create table Q1_CITY54004 as
select upper(name) FEATURE_NAME,
          sdo_cs.transform(geometry, 54004) geometry,
          'OHIO' state
From pl39_d00
Where lsad_trans in ( 'city', 'village' );

INSERT INTO user_sdo_geom_metadata
VALUES ( 'Q1_CITY54004','GEOMETRY',
MDSYS.SDO_DIM_ARRAY(MDSYS.SDO_DIM_ELEMENT('X',-
20500000,20500000,0.0005),MDSYS.SDO_DIM_ELEMENT('X',-
50000000,19000000,0.0005)), 54004);

create index Q1_CITY54004_sdx
       on Q1_CITY54004 (geometry)
       indextype is mdsys.spatial_index;


UPDATE q1_city54004
     SET geometry = SDO_UTIL.RECTIFY_GEOMETRY(geometry, .05);
```

Installing US Zip Code Spatial Data

Sample shape files for US Zip Code Areas can be found at the following location:

http://www.census.gov/

The following steps can be used to load the sample data for the state of Ohio, and similar steps can be followed to load zip code data for other US states.

1. Click the **Ohio Zip Code** in **Shapefile** format and download the **zt39_d00_shp.zip** file to the **NAVTEQ** directory created in the previous procedure.
2. Unzip the **zt39_d00_shp.zip** file to the **NAVTEQ** directory.
3. Start the MapBuilder. This is installed when MapViewer is installed.

Refer to the MapViewer documentation for instructions on installing and running MapBuilder.

4. If a connection is not created, then select **File > New Connection,** and create a connection to the DWADM account in the Oracle Utilities Analytics Data Warehouse database.
5. Point **Tools > Import Shapefile,** and click **Next.**
6. Click **Shapefile**.
7. Navigate to the **C:\NAVTEQ** directory, select the **zt39_d00.shp file**, and click **Open.**
8. Click **Next.**

   Note: Ensure the name of the geometry table is set to **ZT39_D00**. If this is not the desired name for the spatial table, then the **Select** statement below will need to be changed to use the entered name.
9. Ensure the **Create Predefined Theme** box is unchecked, and click **Next.**
10. Review the summary information and click **Finish.**
11. Create the **Q1_USZIP54004** table using the following SQL statement. This assumes that the eLocation website is being used as the base map. If some other base map is used, then the transform parameter will need to specify the SRID of the base map being used.

```
sqlplus  dwadm/dwadm@database

create table q1_USZIP54004 as

select zcta ZCTA5CE,
          sdo_cs.transform(geometry, 54004) geom
From ZT39_D00;

INSERT INTO user_sdo_geom_metadata
VALUES ( 'Q1_USZIP54004','GEOM',
MDSYS.SDO_DIM_ARRAY(MDSYS.SDO_DIM_ELEMENT('X',-
20500000,20500000,0.0005),MDSYS.SDO_DIM_ELEMENT('X',-
50000000,19000000,0.0005)), 54004);

create index q1_USZIP54004_sdx
       on q1_USZIP54004 (geom)
       indextype is mdsys.spatial_index;
UPDATE q1_uszip54004
     SET geom = SDO_UTIL.RECTIFY_GEOMETRY(geom, .05);
```

Installing US County Spatial Data

Sample shape files for US Counties can be found at the following location:

http://www.census.gov/

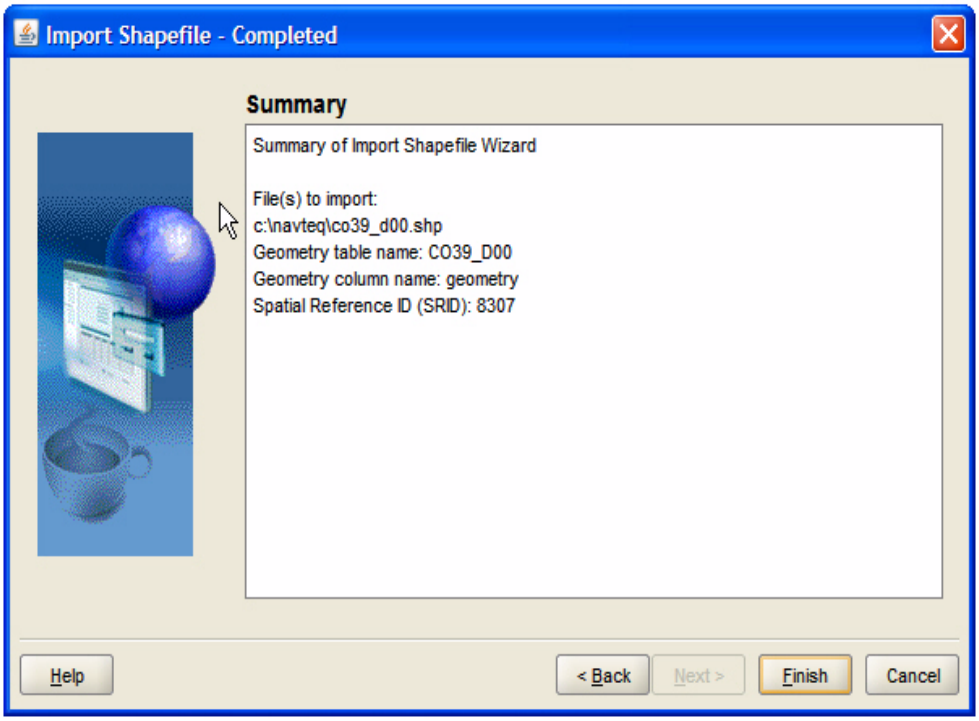
The following steps can be used to load the sample data for the state of Ohio, and similar steps can be followed to load county data for other US states.

1. Click on the **Ohio County** in the **Shapefile** format and download the **co39_d00_shp.zip** file to the **NAVTEQ** directory created in the previous procedure.
2. Unzip the **co39_d00_shp.zip** file to the NAVTEQ directory.
3. Start the **MapBuilder**. This is installed when MapViewer is installed.

   Note: Refer to *MapViewer* documentation for instructions on installing and running MapBuilder.
4. If a connection is not created, then select **File > New Connection,** and create a connection to the DWADM account in the Oracle Utilities Analytics Data Warehouse database.

5. Select **Tools > Import Shapefile,** and click **Next.**
6. Click **Shapefile**.
7. Browse to the **C:\NAVTEQ** directory, select the **co39_d00_shp.shp** file, and click **Open.**
8. Click **Next.**

   Note: Ensure the name of the geometry table is set to CO39_D00. If this is not the desired name for the spatial table, then the select statement below will need to be changed to use the entered name.
9. Ensure the **Create Predefined Theme** box is unchecked, and click **Next.**
10. Review the summary information, and click **Finish.**



11. Create the **Q1_COUNTY54004** table using the following SQL statement. This assumes that the eLocation website is being used as the base map. If some other base map is used, then the transform parameter will need to specify the SRID of the base map being used.

```
sqlplus  dwadm/dwadm@database

create table q1_COUNTY54004 as
select name FEATURE_NAME,
          sdo_cs.transform(geometry, 54004) geometry,
          'OHIO' state
From CO39_D00;

INSERT INTO user_sdo_geom_metadata
VALUES ( 'Q1_COUNTY54004','GEOMETRY',
MDSYS.SDO_DIM_ARRAY(MDSYS.SDO_DIM_ELEMENT('X',-
20500000,20500000,0.0005),MDSYS.SDO_DIM_ELEMENT('X',-
50000000,19000000,0.0005)), 54004);

create index q1_COUNTY54004_sdx
       on q1_county54004 (geometry)
       indextype is mdsys.spatial_index;
```

```
UPDATE q1_county54004
     SET geometry = SDO_UTIL.RECTIFY_GEOMETRY(geometry, .05);
```

Note: No predefined reports make use of the county data, so if county spatial reports are desired, the **Q1_COUNTY_54004** theme will need to be used in new requests and maps.

Configuring Oracle Utilities Network Management System Device Spatial Data

To implement the Oracle Utilities Network Management System Network Model on the spatial analytics, Oracle Utilities Analytics reports need Oracle Utilities Network Management System geometry data. The steps from this section are required to view data in spatial reports of Oracle Utilities Outage Analytics. There are several ways that the geometry data in the **DIAGRAM_OBJECTS NMS** device table can be accessed by the Oracle Utilities Analytics Mapping reports.

This section describes the following methods:

- **Replicating the DIAGRAM_OBJECTS Table**
- **Accessing the Oracle Utilities Network Management System Spatial Data Using a Database Link**

Replicating the DIAGRAM_OBJECTS Table

The easiest option is to replicate the DIAGRAM_OBJECTS table into the Oracle Utilities Analytics database. If this is done, then after replicating the DIAGRAM_OBJECTS table, the following steps will setup the Oracle Utilities Analytics dashboards to use the data in this replicated table.

1. Create the required spatial metadata:

```
INSERT INTO user_sdo_geom_metadata
VALUES ( 'DIAGRAM_OBJECTS','LL_GEOMETRY',
   MDSYS.SDO_DIM_ARRAY(
           SDO_DIM_ELEMENT('X', -20037508, 20037508, .05),
           SDO_DIM_ELEMENT('Y', -45884542, 45884542, .05)
   ), 54004);
```

2. Ensure that the spatial index is created on the **LL_GEOMETRY** column. The **LL_GEOMETRY** column by default stores spatial data using SRID 54004, so this will work without changes with the eLocation base map:

```
create index q1_DIAGRAM_OBJECTS_sdx
       on diagram_objects (ll_geometry)
       indextype is mdsys.spatial_index;
```

3. In MapBuilder, use duplicate to create a copy of the **B1_THEME_DIAGRAMOBJ_54004** geometry theme, with the following settings:
   - New Name: Q1_THEME_DIAGRAMOBJ_54004
   - Target Database: OUA Database
   - Base Table: DIAGRAM_OBJECTS
   - Spatial Column: LL_GEOMETRY

Once **DIAGRAM_OBJECTS** table is replicated to the Oracle Utilities Analytics database, follow the below steps to create **Q1_DIAGRAM_OBJECTS_54004** table:

1. Connect to the DWADM schema of Oracle Utilities Analytics database and execute "create table Q1_DIAGRAM_OBJECTS_54004 as select * from DIAGRAM_OBJECTS;"

2. INSERT INTO user_sdo_geom_metadata
VALUES ('Q1_DIAGRAM_OBJECTS_54004','LL_GEOMETRY',
MDSYS.SDO_DIM_ARRAY(SDO_DIM_ELEMENT('X', -20037508, 20037508,
.05),SDO_DIM_ELEMENT('Y', -45884542, 45884542, .05)), 54004);

3. Create index q1_DIAGRAM_OBJECTS_sdx_54004 on Q1_DIAGRAM_OBJECTS_54004 (ll_geometry) indextype is mdsys.spatial_index;

Accessing the Oracle Utilities Network Management System Spatial Data Using a Database Link

If it is not possible to replicate the DIAGRAM_OBJECTS table, and no existing Oracle Utilities Network Management System geometry theme can be used, then it is possible to access the DIAGRAM_OBJECTS table in the Oracle Utilities Analytics database using a database link.

To access the DIAGRAM_OBJECTS table in the Oracle Utilities Analytics database using a database link:

1. Create a database link in the Oracle Utilities Analytics database pointing to the Oracle Utilities Network Management System database.

2. Create a synonym DIAGRAM_OBJECTS for the DIAGRAM_OBJECTS table in the Oracle Utilities Network Management System database.

3. Update the **mapViewerConfig.xml** to add another datasource, pointing to the Oracle Utilities Network Management System database, just like the Oracle Utilities Analytics datasource was added earlier in the install documentation.

4. Restart **WebLogic** to make the Oracle Utilities Network Management System database available.

5. Create the required spatial metadata in the Oracle Utilities Analytics database:

```
INSERT INTO user_sdo_geom_metadata
VALUES ( 'DIAGRAM_OBJECTS','LL_GEOMETRY',
   MDSYS.SDO_DIM_ARRAY(
      MDSYS.SDO_DIM_ELEMENT('LONGITUDE',-180,180,0.05),
      MDSYS.SDO_DIM_ELEMENT('LATITUDE',-90,90,0.05)
   ), 54004);
```

6. In **MapBuilder**, use duplicate to create a copy of the B1_THEME_DIAGRAMOBJ_54004 geometry theme, with the following settings:

   - New Name: Q1_THEME_DIAGRAMOBJ_54004
   - Target Database: OUA Database
   - Base Table: DIAGRAM_OBJECTS
   - Spatial Column: LL_GEOMETRY

Loading Spatial Metadata

This section describes how to load spatial metadata in USER_SDO* tables for Oracle Utilities Advanced Spatial Operational Analytics.

Use the following procedure to load spatial metadata in the target database.

1. Create the **dump_dir** directory in database and copy **user_sdo.dmp** file from ../B1250/Spatial-Metadata folder to that location.

2. Import released spatial tables to the target database using following command:

```
impdp directory=dump_dir dumpfile=user_sdo.dmp logfile=
impdp_user_sdo.log  schemas=DWADM
remap_tablespace=cists_01:<tablespace_name>
```

Note: Run this command from database server:

Note: Make sure to change the tablespace_name to the tablespace name on which DWADM has the quota. If the DWADM tablespace has quota on cists_01 tablespace, then exclude whole remap_tablespace clause from the command.

3. Review the impdp_user_sdo.log file to ensure the tables were imported successfully.
4. After importing the tables, run following SQL scripts from the ../B1250/Spatial-Metadata folder:

```
 - sqlplus dwadm/<dwadm user password>@database-name
@copy_spatial_metadata.sql
   - sqlplus dwadm/<dwadm user password>@database-name
@clean_sdo_release_tbls.sql
```

5. Review the log files.

Flushing Map Cache

Before you can begin using the modified base map, you must flush the map cache as follows:

1. In the **MapViewer Console**, click **Admin** in the top-right corner of the page and log into the **Admin Console** page.
2. Click **Management**, select **Manage MapViewer**, and then select **Datasources**.
3. Click **Purge cached** metadata.
4. To verify the map changes, go to the Map zone that references the modified base map.
5. Delete the 'cacheduserinfo' files in the following path to remove any cache:

   <OBIEE_INSTALL_DIR>\instances\instance2\bifoundation\OracleBIPresentationServicesComponent\coreapplication_obips1\catalog\SampleAppLite\root\users\weblogic2_prefs

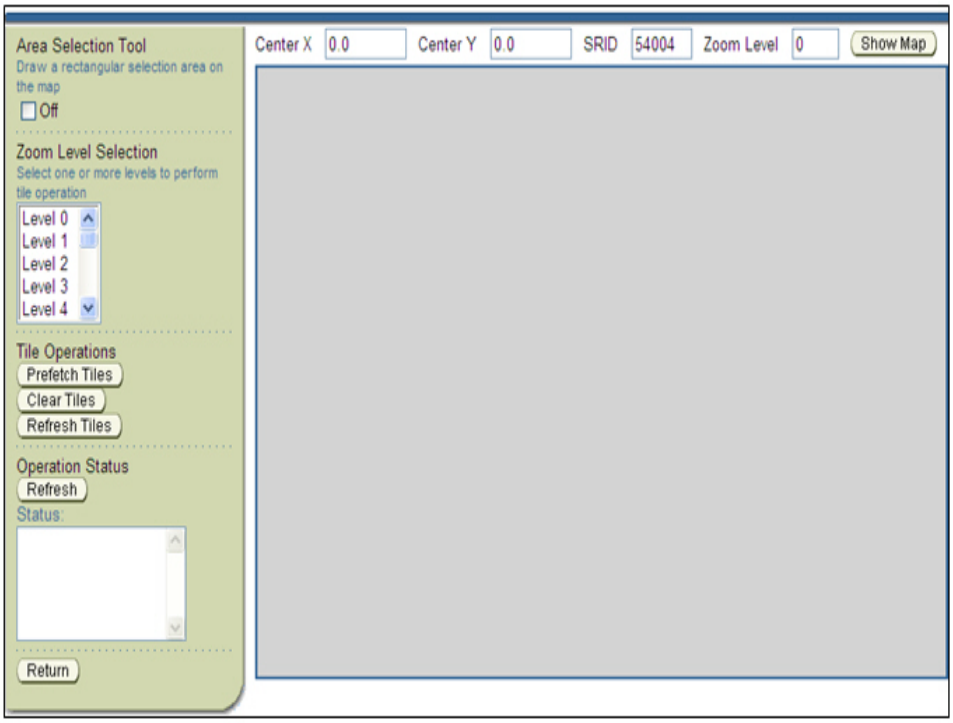
Improving Performance by Prefetching Map Tiles

Rendering map tiles dynamically can affect system performance. To avoid this, you should consider prefetching tiles by issuing an admin request to MapViewer on a non-production server or when the server is not under load. When MapViewer receives a prefetching request, it issues many concurrent map tile requests to itself, which are basically XML map requests, and stores them in the cache. This improves the system's performance as the images are readily available.

Follow the following procedure to prefetch map tiles.

1. In the **MapViewer** console, click **Admin** in the top-right corner of the page and log into the Admin Console page.
2. In the **Admin Console** page, click **Manage Map Tile Layers**.
3. Click **Manage** to display the list of existing map tiles.
4. Select the required map tile and click **View map/Manage Tiles**.

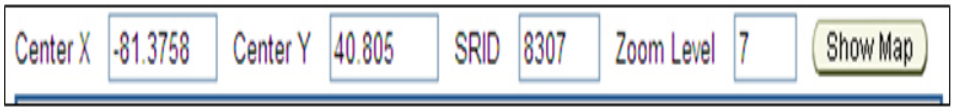
   The **Prefetching** wizard opens:



5. Enter the X, Y coordinates of the center of the map, the SRID and zoom level, and click **Show Map**.

   To prefetch map images, enter the latitude and longitude values. You need to know the latitude and longitude values of the center of the location in interest. The SRID is a unique value used to identify the coordinate system used in a GIS application. The SRID used is 8307.

   The X and Y axis used in the following example is for Canton, Ohio:



6. When you see the map, turn on the **Area Selection** tool and select the area on the map for which you want to prefetch the tiles.
7. Select one or more zoom-levels for which you want to prefetch the tiles.
8. Under **Tile Operations**, click on **Prefetch Tiles**.

This process will take some time, depending upon the hardware configuration of the system and the amount of data to be prefetched. To check the current status of the operation, click **Refresh** under the **Operation Status**. The status will change to "Finished" when the operation is done.

Oracle Business Intelligence Enterprise Edition (OBIEE) Configuration

This section contains information about configuring Oracle Business Intelligence Enterprise Edition (OBIEE) for use with Oracle Utilities Advance Spatial and Operational Analytics. Following topics are discussed:

- **Setting Up and Configuring User Security**
- **Managing Content in the Presentation Catalog**

Setting Up and Configuring User Security

Note: Refer to the **Configuring User Security** section in *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide* for details on configuring user security.

Managing Content in the Presentation Catalog

Oracle Utilities Analytics v2.5.0 Presentation Catalog has a different folder for each of the analytics.

The following folders are available on the Shared Folders:

- About
- Administration
- Common
- Credit & Collections Analytics
- Customer analytics
- Distribution Analytics
- Meter Data Analytics
- Mobile Workforce Analytics
- Outage Analytics
- Revenue Analytics
- Shared Objects
- Work & Asset Analytics
- Operational Device Analytics

Note: For more information on User Security and Managing Catalog objects, refer to *Oracle Business Intelligence Presentation Services Administration Guide.*

Managing Folders and Content

New folders can be created you if new answers or modifications to existing ones are needed.

To create new folders (or Development Folders), log onto the **Presentation Services** as an Administrator and access:

Catalog -> New Folder

Once a new folder is created, set the following values:

- Properties
- Name

- Delete
- Permissions
- Copy/Move

You can save new answers onto the development folders, thereby leaving the out-of-box folders as is. Once the answer is created, the report is written and unit testing is complete, the request can be moved to the common folder.

Default folders are loaded during the install of Oracle Business Intelligence Enterprise Edition. These folders, such as 00 Overview, 01 Ranks & Toppers, or 02 History & Benching, can be removed from view by navigating to catalog, and then deleting the dashboards that you do not want displayed from the list.

Editing Names and Descriptions of Objects

To edit names and descriptions of objects, log on to the **Presentation Services** as an administrator and access the following:

Catalog > Shared Folders

Chapter 9

Installing the Oracle Utilities Analytics Admin Tool

Oracle Utilities Analytics Admin tool is a Oracle Application Express (APEX) based configuration tool that can be used to configure Oracle Utilities Analytics.

This chapter describes how to install the Admin tool for the Oracle Data Integrator (ODI) configuration and change the default password of the Admin user.

- **Installing Admin Tool**
- **Changing the Default Password of Admin User**

Installing Admin Tool

Perform the steps below to install Apex run time and deploy the Admin tool for Oracle Data Integrator configuration:

1. Download **apex_4.2.1.zip** file from: http://www.oracle.com/technology/products/database/application_express/download.html
2. Unzip **apex_4.2.1.zip** to the directory <APEX_UNZIPPEDPATH> and copy to the database server.
3. Change the directory to <APEX_UNZIPPEDPATH>/apex after unzipping **apex_4.2.1.zip** file.
4. Logon using sqlplus as sys user and run the SQL file **apxrtins.sql** with the parameters as shown below:

```
@apxrtins <Tablespace Name for apex> <Tablespace Name for apex>
<Temporary tablespace name> /i/
```

5. Change the password of admin account by running the following SQL command:

```
@apxchpwd
```

6. Restart the database.
7. Configure the embedded PL/SQL gateway - logon as sys user and run.

```
@apex_epg_config  <APEX_UNZIPPEDPATH>
```

8. Unlock the anonymous account:

```
ALTER USER ANONYMOUS ACCOUNT UNLOCK;
```

9. Start the XML DB run:

   EXEC DBMS_XDB.SETHTTPPORT(<not in use port>);

   e.g EXEC DBMS_XDB.SETHTTPPORT(8080);

10. Verify using:

```
SELECT DBMS_XDB.GETHTTPPORT FROM DUAL;
```

11. Import the **Admin** tool for Oracle Data Integrator configuration:
    - Oracle Utilities Analytics V2.5.0 ETL Component Based on ODI Multiplatform.zip file has a folder called AdminTool.
    - Unzip this file and copy the **AdminTool** directory contents.
    - Create the ../**AdminTool** directory on the database server and copy the contents of the AdminTool directory (from the zip file) to this directory.
    - Go to the ../**AdminTool** directory, i.e., cd ../AdminTool
    - Connect as system user and execute the following scripts:
    - Create workspace and configure users:
      - @CreateAppWorkspace.sql
    - Import application:
      - @DeployAdminApp.sql
    - Deploy supporting objects:
      - @DeploySupportingObjects.sql
12. The **Admin** tool for Oracle Data Integrator configuration can be accessed using the URL http://<hostname>:8080/apex/f?p=104

    The username to access the Admin tool is Admin. The default password is Admin_123.

    Note: For a complete description of the **Admin** tool, refer to *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide*.

Changing the Default Password of Admin User

The following APEX API can be used to change the password of admin user. This script should be run after connecting to the database as user SYSTEM.

The string 'New password' should be replaced with the new password for admin account before running the script.

```
    begin

wwv_flow_api.set_security_group_id(p_security_group_id=>nvl(wwv_flow_a
pplication_install.get_workspace_id,2090606133849294));
    end;
    /

    begin
    apex_util.edit_user(
    p_user_id      => '2090514487849294',
    p_user_name => 'ADMIN',
    p_web_password => 'New password',
    p_new_password => 'New password'
```

```
);
end;
/

commit;
/
```

Important Note: It is strongly recommended that you should the default password after logging in.

Appendix A

Data Warehouse Implementation Guidelines

This chapter provides guidelines for implementing the data warehouse setup for Oracle Utilities Analytics.

The following sections are discussed in detail:

- **Init.ora Settings**
- **Oracle Partitioning**

Init.ora Settings

Internal performance testing for a large Business Intelligence (BI) database installation has identified the following parameter settings that resulted in a fast load and materialized view refresh for a fact table with over 100,000,000 records.

> **Note**: The settings mentioned in the below table were noticed for an Oracle 10.2 database running on an IBM AIX 5.2 machine with 8 CPUs and 15 GB of memory; hence, some of these values may not apply for different hardware or software settings.

Parameter	Value
db_file_multiblock_read_count	32
db_cache_size	0M
shared_pool_size	0M
large_pool_size	0M
Java_pool_size	0M
parallel_max_servers	8
parallel_execution_message_size	65535
log_buffer	64554432
Pga_aggregate_target	2000M
query_rewrite_enabled	FORCE
query_rewrite_integrity	TRUSTED
session_cached_cursors	60

Parameter	Value
optimizer_index_caching	80
optimizer_index_cost_adj	30
Sga_max_size	4000M
Sga_target	2000M
shared_pool_reserved_size	64M
workarea_size_policy	AUTO
db_writer_processes	8
timed_statistics	False
cursor_space_for_time	True
Disk_asynch_io	True

Oracle Partitioning

As the primary keys for all tables are sequential, it is possible to partition any table based on the primary key field. However, the fact tables should be partitioned based on one of the Date Keys present in the table. Some of the date keys are optional; hence, it is important to pick a date key field that will always have a non-zero value.

> **Note**: As the Recent fact table needs to be purged daily, it does not require to be partitioned. Also, partitioning should be done only when materialized views do not prove sufficient enough to achieve the desired performance.

For details on partitioning, refer to *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide.*

Appendix B

Installation Menu Functionality

This chapter provides functionality details regarding installation menu for installing the Oracle Utilities Analytics application.

The following sections are discussed here:

- **Installation Menu Functionality Overview**
- **Installation Menu Functionality Details**

Installation Menu Functionality Overview

The main configuration menu is structured so that the related variables and/or options are grouped together and are associated by a menu item number. To access a particular group of variables and options, enter the menu item number associated with that group. Each option within a group is displayed in turn on the screen along with a prompt so that you can type the desired value for the option, if it is not the same as the default or current value.

When performing the initial installation, you need to go through all menu options. The menu options may have a default value, a list of the valid values, and a validation check.

On each option prompt, you can keep the current value by simply leaving the input line empty. In order to erase a variable value, enter a single dot ("."). The leading spaces are trimmed out on each values that are entered.

Note: While working with the menu, you will notice the following:

- **Valid Values [ALFANUM]**: This indicates you will need to enter an alphanumeric value in the prompt.
- **Valid Values [NUM]**: This indicates you will need to enter an numeric value in the prompt.

When all the menu options are set, type <**P**> at the main menu prompt option. The option values selected throughout the configuration are saved.

During this processing, the global variables are validated and the configuration file <SPLEBASE>/etc/ENVIRON.INI is created or updated. This file contains all the variables entered and calculated. These are required by the next part of the installation process.

To exit the configuration utility without saving any of the values entered, type <**X**> and click **Enter**.

Installation Menu Functionality Details

The Environment Installation Utility requires that Oracle Client Home is set in the path for the user performing the installation. Prior to running the installation utility, you must review the supported platforms document to ensure that you have all the required third-party software installed at your end. In the Installation menu if the variables are set prior to execution, then these variable values will be defaulted by the installation utility during installation.

When installation completes successfully, the values will be written to an **ENVIRON.INI** file. When splenviron.sh / cmd is executed, it reads from the **ENVIRON.INI** file to set the environment variables.

In the worksheets, there are three different types of values given:

- **Default Values**: Values, which can be defaulted while running the installation utility.
- **Security Values:** Values, which should be changed when in production.
- **Example Values**: Values, which can be used for a default installation.

  Note: The production environment should not be run with default values.

Refer to *Server Administration Guide* for additional information about configuring these values.

When you enter passwords, you cannot see password characters on the screen as they are entered in the silent mode. The passwords are encrypted when the values are entered by a user.

Install the Oracle client software specified in the Chapter 3: **System Requirements and Supported Platforms** prior to running any installation utilities.

The following prompt appears when executing the installation utility:

Enter Oracle Client Home Directory (<ENTER> quit):

Note: If the environmental variable ORACLE_CLIENT_HOME is set, then the install script validates the variable. If it passes the validation, you will not be prompted for it. This is needed in order to run Perl installation utilities.

Appendix C

Installation and Configuration Worksheets

This chapter provides the installation and configuration worksheets for Oracle Utilities Analytics.

Following topics are discussed:

- **Configuration Worksheet for ETL Component based on Oracle Warehouse Builder Installation**
- **Configuration Worksheet for ELT Component based on Oracle Data Integrator Installation**
- **Configuration Worksheet for Dashboard Component Installation**

Configuration Worksheet for ETL Component based on Oracle Warehouse Builder Installation

Environment installation options are as shown in the section below:

- **Environment Installation Options**
- **Environment Configuration Options**

Environment Installation Options

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Oracle Client Home Directory	ORACLE_CLIENT_HOME	The home directory of the Oracle client. The application uses the Perl included under this Oracle client. Example Location: /oracle/client/product/11.2.0.3	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Environment Mount Point	<SPLDIR>	The mount point into which the application is installed. The local directory where the components are to be installed. For example: /OUA for UNIX and C:\OUA for Windows This mount point must exist and the Administrator User ID must be able to write to this directory. (This is the user ID, created specifically to administer the environments; the installation sets permissions on all subdirectories installed under this directory). See <SPLENVIRON> below for more information on how this mount point is used.	
Log File Mount Point	<SPLDIROUT>	A mount point that contains any application output or application logs. For example, the value is /OUA/sploutput for UNIX installation or C:\OUA\sploutput for Windows	
Environment Name	<SPLENVIRON>	A descriptive name to be used as both a directory name under the mount point <SPLDIR> and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Web Java Home Directory	JAVA_HOME	The location on the disk where Java 1.6 is installed. For example, $ORACLE_BI_HOME/jdk	

Environment Configuration Options

Following topics are discussed in this section:

- **Environment Description**
- **Database Configuration**
- **Design Repository Configuration**
- **EMAIL Configuration**
- **Control Center Configuration**
- **External Data Source Configuration**

Environment Description

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Environment Description	DESC	This is the text field to describe the purpose of the environment.	

Database Configuration

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OWB WorkSpace Owner	OWB_WS_OWNER	Oracle Warehouse Builder workspace owner created in the section **Creating and Configuring Oracle Warehouse Builder Workspace for an Initial Installation**.	BIREPOWN

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OWB WorkSpace Owner Password	OWB_WS_OWNER_PASS	Oracle Warehouse Builder workspace owner password created in the section **Creating and Configuring Oracle Warehouse Builder Workspace for an Initial Installation**. The password to login to Oracle warehouse Builder design center. This is a security value.	BIREPOWN user password
Database Name	OBIEE_DBNAME	The name of the database instance that the application is connecting to.	BI Database Name
Database Server	OBIEE_DBSERVER	The host name of the server where database resides.	BI Database Server
Database Port	OBIEE_DBPORT	The database port number on the database server used for connecting to the database.	BI Database PORT

Design Repository Configuration

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OWB WorkSpace User	OWB_WS_USER	Oracle Warehouse Builder workspace user created in the section **Creating and Configuring Oracle Warehouse Builder Workspace for an Initial Installation**. The User to login to Oracle Warehouse Builder design control center.	BIREPO

Menu Option	Name Used In Documentation	Usage	Customer Install Value
OWB Workspace user Password	OWB_WS_PASS	Oracle Warehouse Builder workspace User Password created in the section **Creating and Configuring Oracle Warehouse Builder Workspace for an Initial Installation**. The password to login to Oracle Warehouse Builder design control center. This is a security value.	BIREPO user password
OWB WorkSpace Name	OWB_WS_NAME	The name of the workspace created using the Repository Assistant.	SPLBIREP
DWADM SCHEMA NAME	DWADM_SCHEMA	The user ID to register OWB locations.	DWADM
DWADM SCHEMA Password	DWADM_PASS	The password to register OWB locations.	DWADM user password
WORKFLOW MANAGER SCHEMA NAME	OWFMGR_SCHEMA	The user ID to register OWB locations.	OWFMGR
WORKFLOW MANAGER SCHEMA Password	OWFMGR_PASS	The password to register OWB locations.	OWFMGR user password

Database Character Set Configuration

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Database Character set	DBCS	The database character set to used to create the database.	AL32UTF8

Editing Process Flow Configuration

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Repository Operating System	REPOPSYS	The database operating system. For example, Win or Linux (any other platform) The valid values are as listed: Win: windows Linux: for any non windows platforms	
Perl Compiler location	PERLCMD	The Perl compiler set in the database. For example: /usr/bin/perl	<ORACLE_HOME>/perl/bin/perl
Data and control files location	CTLFOLDER	The data and the control file extracts location, where flat files placed to pickup by the file processor. For example: user location	
Separator to be used	FILESEP	The separator to be used for Oracle Warehouse Builder deployment, where database resides. For example: Win '\\' and for Linux '/	For Unix: Use ‘ /’ For Windows: Use ‘\\’
File Manager location	FILEMGR	The File Manager location on the database server. Copy the **splfilemanager.plx** file from **BI250/Scripts** directory to this location.	

EMAIL Configuration

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Email ID of Sender	EMAILIDSEN	The Email ID of the sender to be configured in Oracle Warehouse Builder while in deployment For example: OWB@oracle.com	
Email ID for Reply-To address	EMAILIDRPL	The Email ID of the Reply TO to be configured in Oracle Warehouse Builder while in deployment.	
Email ID of Receiver	EMAILIDREC	The Email ID of the Receiver to be configured in Oracle Warehouse Builder while in deployment.	
SMTP server	SMTPSRV	The host name of the server where SMTP Service configured.	
SMTP server port	SMTPPORT	The port number on the server where SMTP Service configured.	

Control Center Configuration

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Repository Control Center Name	CCNAME	The Oracle Warehouse Builder Repository Control Center to be created or used to deploy the Oracle Warehouse Builder objects.	

External Data Source Configuration

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Path of the External Datasource	EXTERNAMEDS	The path of the extracts location.	Must be the same as the value of 'Data and control files location'.

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Path of the External Datasource LOG	EXTERNAMEDS_LOG	The path of the extracts log location.	Must be same as the value of 'Data and control files location'.
File Processor Daemon Execution Switch	FPDEXECUTION_SWITH	The file processor execution switch.	1
File Processor Extract Max Load	FPDEXTRACT_MAXLOAD	The file processor to pick up the extractor to load.	5
File Processor Scheduler Poll Duration	SCHEDULER_POLL_DURATION	The file processor scheduler poll duration.	60

Configuration Worksheet for ELT Component based on Oracle Data Integrator Installation

Environment installation options are as shown in the section below:

- **Environment Installation Options**
- **Environment Configuration Options**

Environment Installation Options

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Oracle Client Home Directory	ORACLE_CLIENT_HOME	The home directory of the Oracle client. The application uses the Perl included under this Oracle client. The user used to install the Oracle client should be used to install ELT component based on Oracle Data Integrator. Example Location: /oracle/client/product/11.2.0.3	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Mount Point	<SPLDIR>	The mount point into which the application is installed. The Local directory where components to be installed. For example:/OUA for UNIX and C:\OUA for Windows This mount point must exist and the administrator user ID must be able to write to this directory. (This is the user ID, created specifically to administer the environments; the installation sets permissions on all subdirectories installed under this directory. See <SPLENVIRON> below for more information on how this mount point is used.	
Log Files Mount Point	<SPLDIROUT>	A mount point that contains any application output or application logs. For example, the value is / OUA/sploutput for the UNIX installation, or C:\OUA\sploutput for the Windows	
Environment Name	<SPLENVIRON>	A descriptive name to be used as both a directory name under the mount point. <SPLDIR> and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV	
Web Java Home Directory	JAVA_HOME	The location on the disk where Java 1.6 is installed. For example: $ORACLE_BI_HOME/jdk	

Environment Configuration Options

Following options are discussed in this section:

- **Environment Description**
- **Oracle Data Integrator Environment Configuration**
- **Oracle Data Integrator Agent Configuration**
- **Target GoldenGate Configuration**

- **Source GoldenGate Configuration**

Environment Description

Environment description details are as shown in the table below:

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Environment Description	DESC	This is a free form text field to describe the purpose of the environment.	

Oracle Data Integrator Environment Configuration

Oracle Data Integrator environment configuration description details are as shown in the table below:

Menu Option	Name Used in Documentation	Usage	Customer Install Value
WEBLOGIC HOME	WLS_HOME	The directory where WebLogic to be used for Oracle Data Integrator has been installed. For example: /WLS_HOME/ wlserver_10.3	
ODI HOME	ODI_HOME	The directory where Oracle Data Integrator (ODI) has been installed.	
ODI SUPERVISOR USER	ODI_SUP_USER	For example: /WLS_HOME/ Oracle_DI1	SUPERVISOR
ODI SUPERVISOR Password	ODI_SUP_PASSWORD	Oracle Data Integrator Supervisor password.	SUPERVISOR user password
Target Database Name	OBIEE_DBNAME	The name of the database instance from which the application connects to.	
Target Database Host	OBIEE_DBSERVER	The host name of the server where the database resides.	
Target Database Port	OBIEE_DBPORT	The database port number on the database server used for connecting to the database.	
DWADM Schema Name	DWADM_SCHEMA	The Target Schema User for the facts and the dimensions present.	DWADM

Menu Option	Name Used in Documentation	Usage	Customer Install Value
DWADM Schema Password	DWADM_PASS	The password for DWADM.	DWADM user password
ODI Master Schema Name	ODI_MASTER_SCHEMA	The Oracle Data Integrator Master Schema user where the Oracle Data Integrator master repository is created.	MASTER_REPO
ODI Master Schema Password	ODI_MASTER_SCHEMA_PASS	The Oracle Data Integrator Master Schema user password.	MASTER_REPO user password
ODI Work Schema Name	ODI_WORK_SCHEMA	The Oracle Data Integrator Work Schema User where the Oracle Data Integrator Work Repository is get created. The default WORK REPO is OBIU.	WORK_REPO
ODI Work Schema Password	ODI_WORK_SCHEMA_PASS	Oracle Data Integrator Work Schema User Password.	WORK_REPO user password
ODI Master Repository ID	ODI_MASTER_REPO_ID	Oracle Data Integrator Master Repository ID. The default value is 601.	
ODI Work Repository ID	ODI_WORK_REPO_ID	Oracle Data Integrator Work Repository ID The default value is 602.	
MDADM Schema Name	MDADM_SCHEMA	The metadata user	MDADM
MDADM Schema Password	MDADM_Pass	The password for MDADM.	MDADM user password

Oracle Data Integrator Agent Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
ODI WebLogic Agent Host	ODI_AGENT_HOST	The host on which Oracle Data Integrator WebLogic Domain is created.	Database host name

Menu Option	Name Used in Documentation	Usage	Customer Install Value
ODI WebLogic Agent port	ODI_AGENT_PORT	The port on which Oracle Data Integrator WebLogic agent is configured to run. This is the port of Oracle Data Integrator WebLogic Managed Server Port.	Provide available port and make sure to use the same port while creating Oracle Data Integrator managed server.

Target GoldenGate Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Target GoldenGate Manager Port	TRG_GG_MGR_PORT	The port number on which Oracle GoldenGate Manager is running on the target database server.	
Target GoldenGate Dynamic Minimum Port	TRG_GG_DYN_PORT_MIN	This is the dynamic minimum port configured in Oracle GoldenGate on the target database server.	Provide the start range value set for the target GoldenGate manager process.
Target GoldenGate Dynamic Maximum Port.	TRG_GG_DYN_PORT_MAX	This is the dynamic maximum port configured in Oracle GoldenGate on the target database server.	Provide the end range value set for the target GoldenGate manager process.
Target GoldenGate Algorithm	TRG_GG_ALGORITHM	This is the algorithm configured in Oracle GoldenGate on the target database server. The default value is 1.	

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Target GoldenGate Encryptkey	TRG_GG_ENCRYPTKEY	This is the Encrypt Key configured in Oracle GoldenGate on the target database server. The default value is "DEFAULT".	
Target GoldenGate Shared Secret	TRG_GG_ SHARED_SECRET	This is shared secret key configured in Oracle GoldenGate on the target database server. The default value is "DEFAULT".	Go to the GoldenGate prompt and run the command: encrypt password <password of MDADM user>, encryptkey DEFAULT Provide the result of above command to this menu item.
Target Database Home	TRG_DB_HOME	This is database home is installed location on the target database server. For example: /u00/oracle/app/oracle/product/11.2.0/dbhome_1	
Target GoldenGate Home	TRG_GG_HOME	This is the GoldenGate installed location on the target database server. For example: opt/local/ggs_11.2.1.0.5_2	

Source GoldenGate Configuration

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Source Instance Name	SRC_INST_NAME	The source from which data has to be extracted.	The valid values are ODM1,ODM2...ODM9 for Oracle Utilities Operational Device Management application and CCB1,CCB2...CCB9 for Oracle Utilities Customer Care and Billing source application. Provide the same value that is passed to -c option while running configureSourcedb script.
Source GoldenGate Manager Port	SRC_GG_MGR_PORT	The port number on which Oracle GoldenGate Manager is running on the source database server.	
Source GoldenGate Dynamic Minimum Port	SRC_GG_DYN_PORT_MIN	This is the dynamic minimum port configured in Oracle GoldenGate on the source database server.	Provide the start range value set for the source GoldenGate manager process.
Source GoldenGate Dynamic Maximum Port.	SRC_GG_DYN_MAX_PORT	This is the dynamic maximum port configured in Oracle GoldenGate on the source database server.	Provide the end range value set for the source GoldenGate manager process.

Menu Option	Name Used in Documentation	Usage	Customer Install Value
Source GoldenGate Algorithm	SRC_GG_ALGORITHM	This is the algorithm configured in Oracle GoldenGate on source database server. The default value is 1.	
Source GoldenGate Encryptkey	SRC_GG_ENCRYPTKEY	This is the Encrypt Key configured in Oracle GoldenGate on the source database server. The default value is "DEFAULT".	
Source GoldenGate Shared Secret	SRC_GG_ SHARED_SECRET	This is shared secret key configured in Oracle GoldenGate on the source database server. The default value is "DEFAULT".	Go to the GoldenGate prompt and run the command: encrypt password <password of source golden gate owner user>, encryptkey DEFAULT Provide the result of above command to this menu item.
Source Database Name	SRC_DB_NAME	This is the source database name, where Oracle Data Integrator connects to reverse engineer the source tables.	
Source Database Host	SRC_DB_HOST	This is source database server host.	
Source Database Port	SRC_DB_PORT	This is source database port.	
Source Database Home	SRC_GG_DB_HOME	This is the source database home installed location.	
Source GoldenGate Home	SRC_GG_HOME	This is the Oracle GoldenGate installed location.	

Configuration Worksheet for Dashboard Component Installation

Following topics are included here:

- **Oracle Business Intelligence Enterprise Edition Environment Configuration Options**
- **Oracle Business Intelligence Enterprise Edition Environment Configuration Options**
- **Target Database Details**

Environment Installation Options

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Oracle Client Home Directory	ORACLE_CLIENT_HOME	The home directory of the Oracle client. The application uses the Perl included under this Oracle client. Example location: <ORACLE_BI_HOME>/Oracle_BI1	
Environment Mount Point	<SPLDIR>	The mount point into which the application is installed. For example: /OUA for UNIX and C:\OUA for Windows This mount point must exist and the administrator user ID must be able to write to this directory. (This is the user ID, created specifically to administer the environments; the installation sets permissions on all subdirectories installed under this directory). See <SPLENVIRON> below for more information on how this mount point is used.	
Log File Mount Point	<SPLDIROUT>	A mount point contains any application output or application logs. For example, the value is /OUA/sploutput for UNIX installation or C:\OUA\sploutput for Windows	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Environment Name	<SPLENVIRON>	A descriptive name to be used as both a directory name under the mount point <SPLDIR> and an environment descriptor. This value typically identifies the purpose of the environment. For example, DEV01 or CONV	
Web Java Home Directory	JAVA_HOME	The location on the disk where Java 1.6 is installed. For example: $ORACLE_BI_HOME/jdk	

Oracle Business Intelligence Enterprise Edition Environment Configuration Options

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Oracle BI Instance Home	ORACLE_INSTANCE	The location on the disk where Oracle Business Intelligence Enterprise Edition software is installed instance home. Example location for Oracle Database: /orasw/Middleware/ instances/instance1	
Oracle BI Home	ORACLE_BI_HOME	The location on the disk where Oracle Business Intelligence Enterprise Edition software is installed Oracle_BI Home. Example location for Oracle Database: /orasw/Middleware/ Oracle_BI1	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Oracle BI Domain Home	DOMAIN_HOME	The location on the disk where Oracle Business Intelligence Enterprise Edition software is installed Oracle_BI home. Example location for Oracle Domain home: /orasw/Middleware/ user_projects/domains/ bifoundation_domain	
WebLogic Domain Console User Name	WLS_EM_USER	WebLogic domain login user name. You will be prompted for the password after installation.	
WebLogic Domain Console Host	WLS_EM_HOST	The host name on which the web application server resides. Default value: <current server name>	
WebLogic Domain Console Port Number	WLS_EM_PORT	A unique port number within the system that is assigned to the HTTP port. This is the port number that is used as a part of the client URL request to connect to the host. This is Oracle Business Intelligence Enterprise Edition WebLogic console admin port number. Example value: 7001	

Target Database Details

Target database details are as listed in the below table:

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Target Database Name	OBIEE_DBNAME	The name of the target database	
Target Database Host	OBIEE_DBSERVER	The host on which database is created.	

Menu Option	Name Used In Documentation	Usage	Customer Install Value
Target Database Port	OBIEE_DBPORT	This is the target database port.	
DWADM Schema Name	DWADM_SCHEMA	The schema name of the star schema.	DWADM
DWADM Schema Password	DWADM_PASS	The password for DWADM	DWADM user password

Appendix D

Additional Resources

Contacting Oracle Support

To contact Oracle support, visit the Oracle Support website at:

http://www.oracle.com/support/index.html

Appendix E

License and Copyright Notices

This chapter describes about licensing and optional features, including:

- **Oracle Warehouse Builder Licensing and Optional Features**
- **Oracle Warehouse Builder Licensing and Optional Features**
- **Disabling the Optional Features in Oracle Warehouse Builder**
- **Oracle GoldenGate Licensing**

Oracle Database Licensing and Optional Features

With Oracle Utilities Analytics release 2.5.0, the **Standard Edition** of Oracle database is now supported. Currently, this support is only for the customers using those Extractors and Schema products, which are based on Oracle Data Integrator (ODI) based extraction, and includes:

- Oracle Utilities Operational Device Management Extractors and Schema
- Oracle Utilities Customer Care and Billing Extractors and Schema

However, Oracle recommends to use the **Enterprise Edition** of Oracle database for performance and scalability reasons, as the Oracle Utilities Analytics data warehouse is expected to handle large volumes of data. Oracle Utilities Analytics also supports the **Oracle Partitioning** feature, which is an extra cost option on the top of the Oracle Database Enterprise Edition. Using this feature, it is also recommended for the efficient data storage and retrieval by the Oracle Utilities Analytics product.

By default, the **Enterprise Edition** and the **Partitioning** features are turned off in the Oracle Utilities Analytics product. Once the appropriate licenses have been purchased, these features can be turned on in the **Global Configuration** settings using the Oracle Utilities Analytics Administration tool described in the **Appendix B** of *Oracle Utilities Analytics for Oracle Utilities Extractors and Schema and Oracle Utilities Analytics Dashboards Administration Guide*.

Oracle Warehouse Builder Licensing and Optional Features

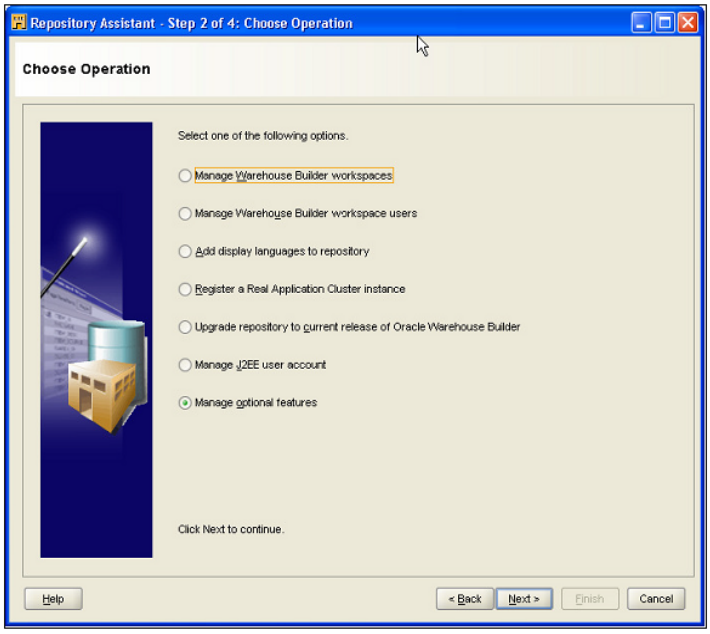
Oracle Warehouse Builder (OWB) provides various optional features, which are not included in the basic Extraction, Transformation, and Loading (ETL) feature group. The basic ETL feature group is included in the Oracle Database Enterprise Edition license. Hence, there is no additional license cost required to use, or install the basic features. The standard ETL processes included in Oracle Utilities Analytics (OUA) uses only the features that are included in the basic ETL feature group.

In addition, the Oracle Warehouse Builder Code Generator does not create any code that requires the use of optional Oracle Warehouse Builder features. Hence, any additional Extraction, Transformation, and Loading (ETL) code created by an implementation using the Oracle

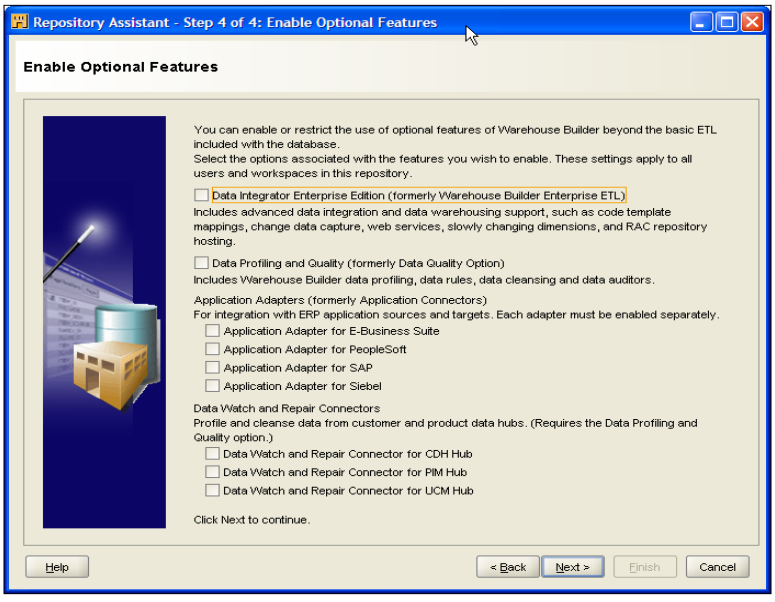
Warehouse Builder Code Generator does not require any additional Oracle Warehouse Builder license costs. However, if Oracle Warehouse Builder is used to create other ETL code outside of the Oracle Warehouse Builder Code Generator, then using some of these optional features may require additional Oracle Warehouse Builder licenses.

Disabling the Optional Features in Oracle Warehouse Builder

In order to ensure that optional features are not used, Oracle Warehouse Builder (OWB) provides a means to disable the use of optional features. After starting the Warehouse Builder Repository Assistant, choose the "**Manage optional features**" operation, as shown in the following image.



After entering the password for the OWBSYS user, deselect all of the licensed option names on the **Enable Optional Features** page.



Once the options are deselected, the new selections will take effect for any new connections to Oracle Warehouse Builder, and if options are used that are not available, an error dialog is displayed.

> **Note**: For further details regarding the feature groups and licensing of Oracle Warehouse Builder, visit the Oracle Warehouse Builder page on the Oracle Technology Network (OTN) at this location:
>
> http://www.oracle.com/technetwork/developer-tools/warehouse

Oracle GoldenGate Licensing

The GoldenGate license purchased along with Oracle Utilities Analytics 2.5.0, can be used to replicate additional tables from the any of the source systems products whose ELT processes are based on Oracle Data Integrator (ODI), which includes:

- Oracle Utilities Operational Device Management
- Oracle Utilities Customer Care and Billing

For any other usage of the Oracle Golden Gate product, you need to purchase a full license of the Oracle GoldenGate product. Please contact Oracle Support for the details.