Oracle Utilities Analytics

Installation Guide

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Oracle Utilities Analytics Installation Guide, Release 2.5.2

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Contents

Preface ..... **i-i**
Audience ..... i-i
Prerequisite Knowledge ..... i-i
Related Documents ..... i-ii
Conventions ..... i-iii
Acronyms ..... i-iii

Chapter 1

Introduction **1-1**
About Oracle Utilities Analytics Installation 1-1
Installation Components 1-1
Installation Types 1-2
Initial Installation 1-2
Upgrade 1-4
Demo Installation 1-5

Chapter 2

Preparing for Installation **2-1**
Installation Checklist 2-2
Prerequisite Software 2-2
Prerequisite Software for Oracle Utilities Analytics Database Component 2-2
Prerequisite Software for Oracle Utilities Analytics Installer 2-2
Prerequisite Software for Oracle Data Integrator Based ELT Component 2-3
Prerequisite Software for Oracle Utilities Analytics Administration Tool Component 2-3
Prerequisite Software for Oracle Utilities Analytics Dashboards Component 2-3
Deployment 2-4
Operating Systems and Application Servers 2-5
Supported Source Application Versions 2-6
Additional Notes on the Supported Platforms 2-6
Oracle Unbreakable Enterprise Kernel 2-6
Oracle VM Support 2-6
Oracle Support Policy on VMWare 2-7

Chapter 3

Oracle Utilities Analytics Initial Installation **3-1**
Installing Oracle Utilities Analytics Database Component 3-1
Copying and Decompressing the Install Media 3-1
Creating the Database 3-2
Creating the Users and the Tablespaces 3-2
Installing the RELADM Schema 3-2
Installing the MDADM Schema 3-4
Installing the DWADM Schema 3-5
Configuring the Spatial Data 3-7
Installing Oracle Data Integrator Based ELT Component 3-7
Setting up Oracle GoldenGate 3-8
Copying and Decompressing the Install Media 3-11

Starting the Installer ... 3-11
Creating the Required Directories and Files ... 3-12
Installation Steps ... 3-12
Creating a Database Directory ... 3-16
Creating the WebLogic Domain for Oracle Data Integrator Agent ... 3-16
Starting the WebLogic Admin Server ... 3-22
Authenticating the Oracle Data Integrator Supervisor User in WebLogic and Starting the Managed Server ... 3-23
Installing Oracle Utilities Analytics Administration Component ... 3-24
Installation Steps ... 3-24
Changing the Default Password of the Admin User ... 3-35
Installing Oracle Utilities Analytics Dashboards Component ... 3-35
Copying and Decompressing the Install Media ... 3-36
Starting the Installer ... 3-36
Installation Steps ... 3-36
Deploying the Repository (RPD) File ... 3-39
Deploying the Web Catalog ... 3-41
Configuring and Deploying the MapViewer ... 3-42
Post-deploying the Custom MapViewer ... 3-45
Enabling WriteBack ... 3-45
Enabling the Analytics Help ... 3-45
Enabling the Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 ... 3-46

Chapter 4

Upgrading Oracle Utilities Analytics ... 4-1
Supported Upgrade Paths ... 4-1
Upgrading Oracle Utilities Analytics ... 4-1
Prerequisites ... 4-1
Upgrading Oracle Utilities Analytics Database Component ... 4-8
Upgrading Oracle Utilities Analytics Based ELT Component ... 4-15
Upgrading Oracle Utilities Analytics Administration Tool Component ... 4-27
Upgrading Oracle Utilities Analytics Dashboards Components ... 4-39

Chapter 5

Installing Demo Database ... 5-1
Installing Oracle Utilities Analytics Demo Database Component ... 5-1
Copying and Decompressing the Install Media ... 5-1
Creating the Database and Importing the Dump File ... 5-2
Configuring the Security ... 5-5
Configuring the Spatial Data ... 5-5
Installing Oracle Utilities Analytics Dashboards Component ... 5-6
Copying and Decompressing the Install Media ... 5-6
Starting the Installer ... 5-6
Installation Steps ... 5-7
Deploying the Repository (RPD) File ... 5-9
Deploying the Web Catalog ... 5-12
Configuring and Deploying the MapViewer ... 5-12
Post-deploying the Custom MapViewer ... 5-15
Enabling WriteBack ... 5-15
Enabling the Analytics Help ... 5-15
Enabling the Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 ... 5-16

Chapter 6

Spatial Configuration ... 6-1
Acquiring the Spatial Data ... 6-1
Installing Spatial Data ... 6-1
Importing the Spatial Data into Oracle Utilities Analytics Spatial Data Tables ... 6-2
Importing Theme Related Spatial Data into Oracle Utilities Analytics ... 6-3
Improving Performance by Prefetching the Map Tiles ... 6-6

Loading the Oracle Utilities Specific Themes 6-7
Additional Setup for Oracle Utilities Outage Analytics 6-7

Chapter 7

Installing the NMS Business Intelligence Publisher Reports 7-1

Preface

This guide describes how to install and configure Oracle Utilities Analytics, 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 Analytics.

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:

- Oracle Data Warehouse:

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

- Oracle Data Integrator:

  http://docs.oracle.com/cd/E28280_01/nav/odi.htm

- Oracle GoldenGate:

  http://docs.oracle.com/goldengate/1212/gg-winux/index.html

- Oracle WebLogic Server:

  http://docs.oracle.com/cd/E23943_01/nav/wls.htm

- Oracle Business Intelligence Enterprise Edition:

  http://docs.oracle.com/cd/E28280_01/nav/bi.htm

Related Documents

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

- *Oracle Utilities Analytics Getting Started Guide*
- *Oracle Utilities Analytics License Information User Guide*
- *Oracle Utilities Analytics Administration Guide*
- *Oracle Utilities Analytics Quick Install Guide*
- *Oracle Utilities Analytics Developer's Guide*
- *Oracle Utilities Analytics 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.
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
- **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 Analytics Installation
- Installation Components
- Installation Types

About Oracle Utilities Analytics Installation

The installation of Oracle Utilities Analytics v2.5.2 is a full installation of Oracle Utilities Analytics product. This means that you do not need to install any previous version Oracle Utilities Analytics before installing Oracle Utilities Analytics v2.5.2.

Installation Components

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

- Oracle Utilities Analytics Database component containing star schemas and product metadata
- Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI) containing pre-built Oracle Data Integrator objects necessary for the ELT processes.

  Note: Oracle GoldenGate (OGG) is utilized to capture the data and this is required for Oracle Data Integrator based ELT.
- Oracle Utilities Analytics Administration Tool component is an Oracle Application Express application used to maintain several Oracle Utilities Analytics configuration parameters.
- Oracle Utilities Analytics Dashboard component contains the pre-built Oracle Business Intelligence Enterprise Edition Web Catalog, RPD file and answers based on Oracle Business Intelligence Enterprise Edition.

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

  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 5: Installing Demo Database for steps involved in installing each of the required components.

  Note: See the section Prerequisite Software of the Chapter 2: Preparing for Installation for the list of prerequisite software necessary for installing each component.

Installation Types

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

- Initial Installation, an installation from scratch.
- Upgrade, an upgrade from an earlier version to Oracle Utilities Analytics v2.5.2.
- Demo Installation, an installation with pre-populated demo data.

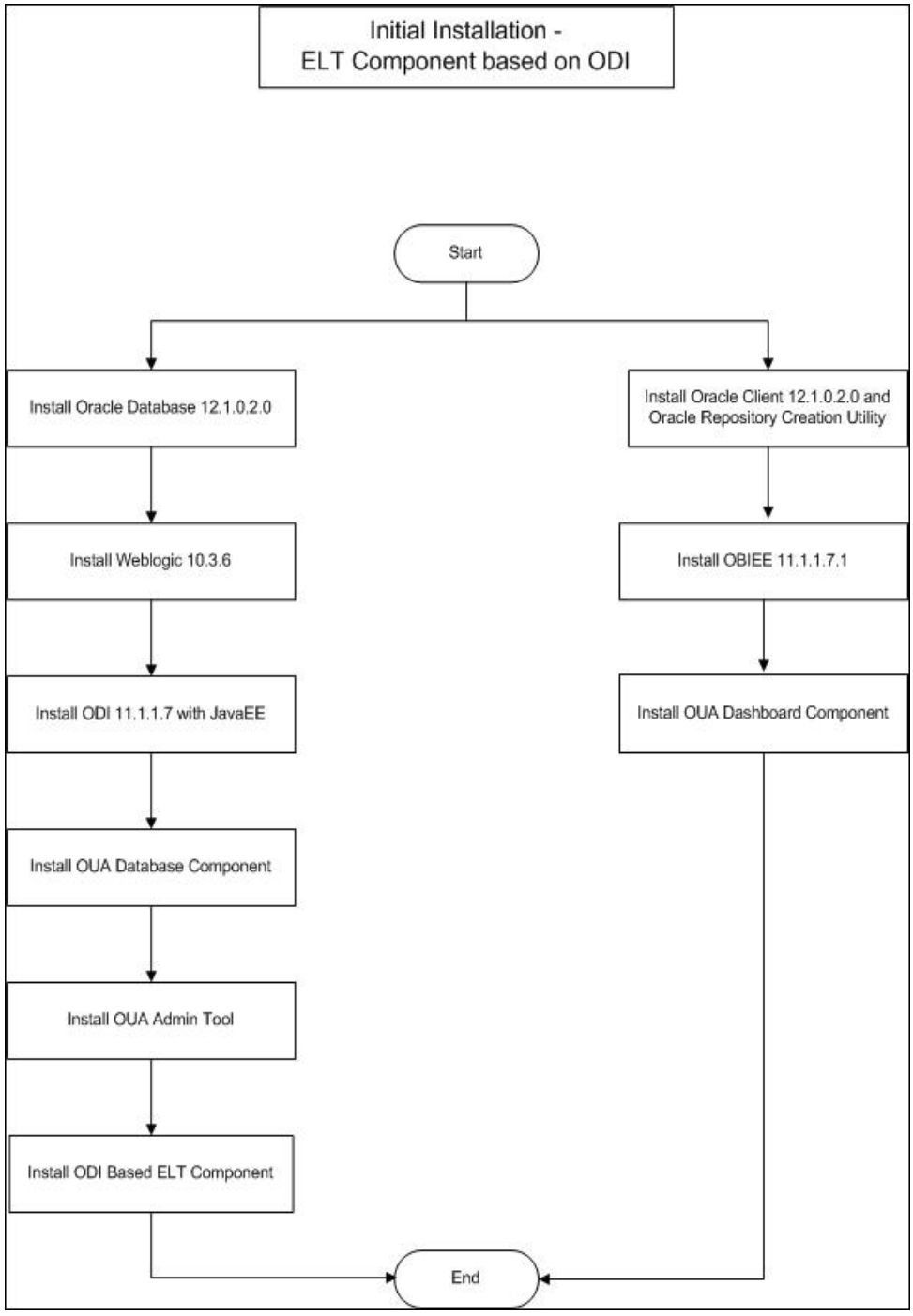
Initial Installation

This installation type is applicable when installing Oracle Utilities Analytics for the first time, or from scratch. The prerequisite software for each of the component should be installed prior to installing the component. 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
- Oracle Utilities Analytics Dashboard component
- Oracle Utilities Analytics Administration Tool component

> **Note**: Refer to the Chapter 3: Oracle Utilities Analytics Initial Installation for the steps involved in installing each of the above-mentioned components.

The following diagram shows the workflow for the initial installation process:



Upgrade

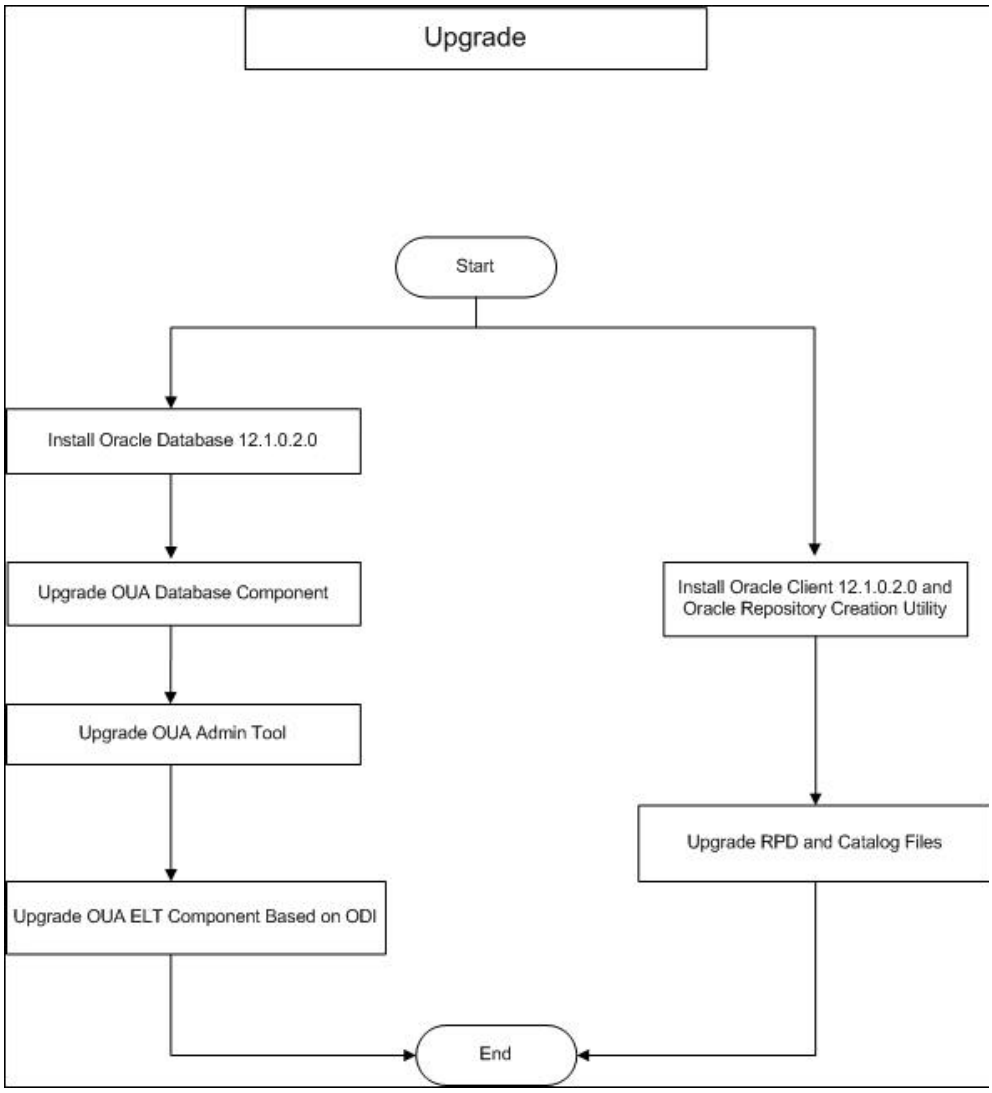
This installation type is applicable when upgrading to Oracle Utilities Analytics v2.5.2 from an earlier version. The prerequisite software may need to be upgraded before upgrading the Oracle Utilities Analytics components.

> **Note**: Refer to the section Supported Upgrade Paths of the Chapter 4: Upgrading Oracle Utilities Analytics to find out how upgrade of your particular version is supported.
>
> **Note**: Refer to the Chapter 4: Upgrading Oracle Utilities Analytics for the steps involved in upgrading each of the required components.

Each of the following components should be upgraded during an upgrade process:

- Oracle Utilities Analytics Database component.
- Oracle Utilities Analytics ELT component based on Oracle Data Integrator
- Oracle Utilities Analytics Dashboard component
- Oracle Utilities Analytics Administration Tool component

The following diagram shows the workflow for the upgrade process:



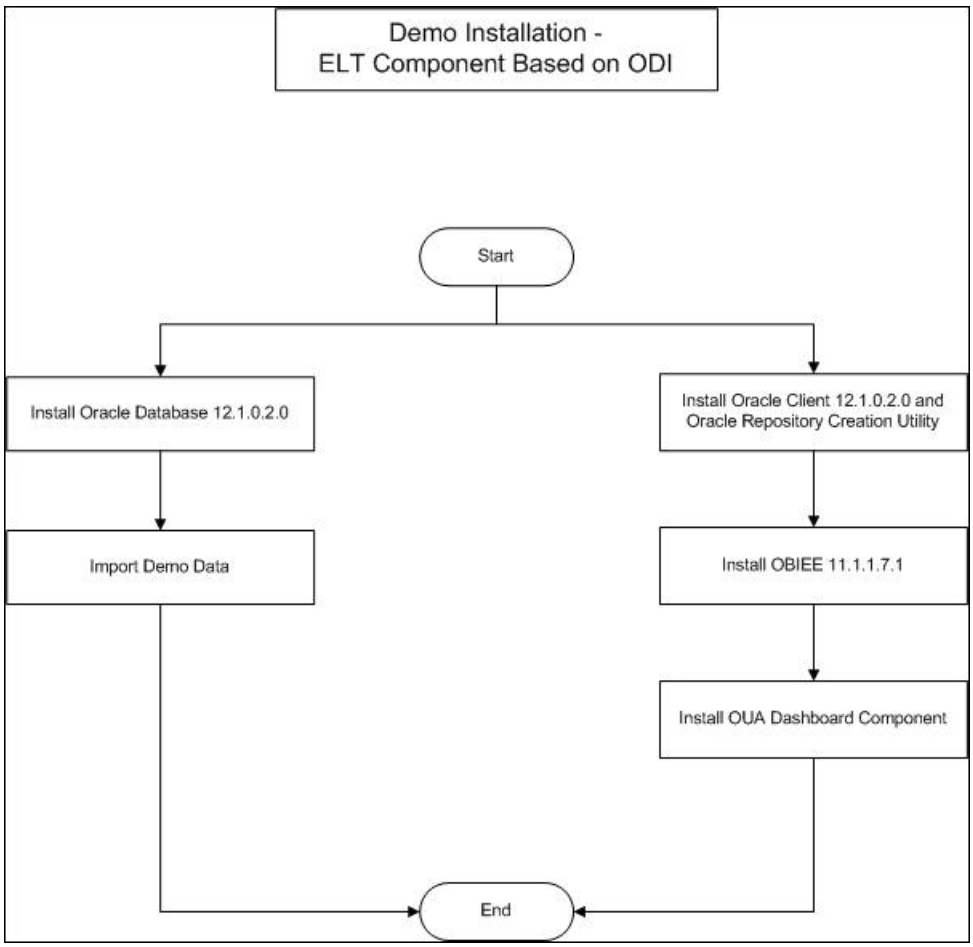
Demo Installation

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 5: Installing Demo Database for the steps involved in installing each of the required components.

The following diagram shows the workflow for the demo installation process:



Chapter 2

Preparing for Installation

This chapter provides information about planning Oracle Utilities Analytics (OUA) installation v2.5.2, including:

- Installation Checklist
- Prerequisite Software
- Deployment
- Operating Systems and Application Servers
- Supported Source Application Versions
- Additional Notes on the Supported Platforms

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 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.

Installation Checklist

The following checklist guides you through the installation process for Oracle Utilities Analytics v2.5.2:

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

1. Determine the installation type. See Installation Types 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 required Oracle Utilities Analytics components.

   Note: Refer to the Chapter 3: 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 v2.5.2, refer to the Chapter 4: Upgrading Oracle Utilities Analytics.

   Note: Refer to Chapter 5: Installing Demo Database for instructions about demo installation.
4. Configure the application.

Prerequisite Software

For installing Oracle Utilities Analytics v2.5.2, 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 Installer
- Prerequisite Software for Oracle Data Integrator Based ELT Component
- Prerequisite Software for Oracle Utilities Analytics Administration Tool Component
- Prerequisite Software for Oracle Utilities Analytics Dashboards 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 12.1.0.2.0

  Note: Oracle Utilities Analytics v2.5.2 is supported on Oracle Database Server Standard Edition 12.1.0.1.0 when using ELT component based on Oracle Data Integrator.

Prerequisite Software for Oracle Utilities Analytics Installer

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

- JDK 1.7

Prerequisite Software for Oracle Data Integrator Based ELT Component

The prerequisite software products for Oracle Utilities Analytics ELT component based on Oracle Data Integrator (ODI) are listed below:

- JDK 1.6.0 (35)
- Oracle Database Server Enterprise Edition 12.1.0.2.0, or Oracle Database Server Standard Edition 12.1.0.1.0
- Oracle WebLogic 10.3.6
- Oracle Data Integrator 11.1.1.7 with Java EE
- Oracle GoldenGate on the source application database server and the target database server. This can be downloaded from Oracle Software Delivery Cloud (https://edelivery.oracle.com).
- Oracle Utilities Analytics Administration Tool

  Note: Oracle Utilities Analytics Database Component must be installed before the installation of Oracle Utilities Analytics ELT Component Based on Oracle Data Integrator.

Prerequisite Software for Oracle Utilities Analytics Administration Tool Component

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

The prerequisite software products for the Oracle Utilities Analytics Administration Tool component are as follows:

- Oracle Database Server Enterprise Edition 12.1.0.2.0 or Oracle Database Server Standard Edition 12.1.0.1.0
- Oracle REST Data Services 3.0
- Oracle Apex 4.2.6

Prerequisite Software for Oracle Utilities Analytics Dashboards Component

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

- Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 (**Install Oracle Business Intelligence Enterprise Edition 11.1.1.7.0 and apply the patch 18818588**) with the **Enterprise Install** option.

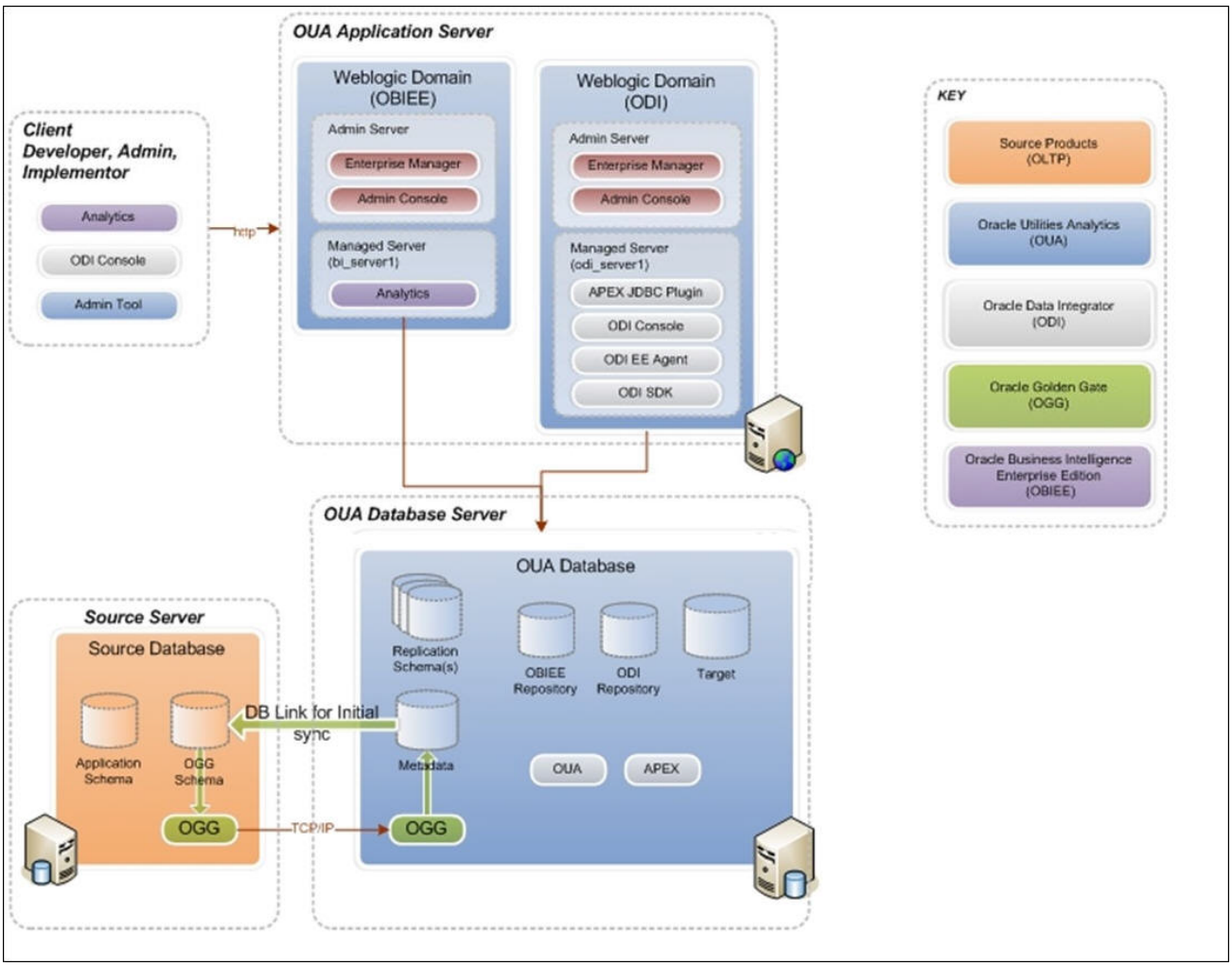
  Note: Install the Oracle 12.1.0.2.0 client if Oracle Business Intelligence Enterprise Edition software is not installed on the database server. If Oracle Business Intelligence Enterprise Edition software is installed, then there is no need to install the Oracle client.

  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.

Deployment

A standard deployment of the Oracle Utilities Analytics product consists of a database and an application server. Two Weblogic installations are performed on the application server, one for Oracle Business Intelligence Enterprise Edition and another for Oracle Data Integrator. And, Oracle GoldenGate is installed on the source database server and on the target database server.

The diagram below depicts a standard deployment of the Oracle Utilities Analytics product.



Operating Systems and Application Servers

Oracle Utilities Analytics v2.5.2 installation is supported to operate on many operating system, application server, and database server combinations.

The following table details the versions of the browser, operating system, and application server combinations on which Oracle Utilities Analytics v2.5.2 has been tested and supported:

Browser	Operating System (Client)	Operating System (Server)	Chipset	Application Server	Oracle Business Intelligence Enterprise Edition (OBIEE)	Oracle Data Integrator (ODI)	JDK	Oracle GoldenGate	Oracle REST Data Service	Database
IE 11.x Firefox 34.0ESR + (OBIEE only)	Windows 7/8(64 Bit)	AIX 7.1 (64-bit)	Power 64-bit	WebLogic 10.3.6	11.1.1.7.x	11.1.1.7	1.6.0 2.4	12.1.2.1.1	3.0	Oracle 12.1.0.2.0
		Oracle Linux 6.5 (64-bit)	x86_64	WebLogic 10.3.6	11.1.1.7.x	11.1.1.7	1.6.0 (35)	12.1.2.1.0	3.0	Oracle 12.1.0.2.0
		Oracle Solaris 11 (64-bit)	SPARC	WebLogic 10.3.6	11.1.1.7.x	11.1.1.7	1.6.0 (35)	12.1.2.1.0	3.0	Oracle 12.1.0.2.0
		Windows Server 2008 R2 (64-bit)	x86_64	WebLogic 10.3.6	11.1.1.7.x	11.1.1.7	1.6.0 (35)	12.1.2.1.0	3.0	Oracle 12.1.0.2.0

Important Note: For the latest system requirements and supported platforms details, refer to the knowledge article "System Requirements and Supported Platforms for Oracle Utilities Analytics v2.5.2 (Doc ID 2041305.1)" available on My Oracle Support (https://support.oracle.com/).

Important Note: Oracle Utilities Analytics supports Oracle Data Integrator based ELT *only* from the following combination of source and target databases.

11g source --> 12c target

12c source --> 12c target

For Oracle Utilities Meter Data Management and Oracle Utilities Mobile Workforce Management source systems, make sure the source database is on Oracle Database Server 12c.

You must have the software listed below:

- Oracle Utilities Analytics version v2.5.2 is supported on Oracle Database Server Standard Edition 12.1.0.2.0 when using ELT component based on Oracle Data Integrator.
- Oracle Business Intelligence Enterprise Edition (OBIEE) 11g is required for Oracle Utilities Analytics Dashboards.
- Oracle Data Integrator, Oracle GoldenGate, Oracle WebLogic and Oracle Application Express are required for Oracle Utilities Analytics ELT component based on Oracle Data Integrator.
- JDK 1.6.0 (35) and JDK 1.7.0+.

Supported Source Application Versions

The following are the supported source application versions:

Source Application	Version
Oracle Utilities Customer Care and Billing	2.3.1 2.4.0.2 2.4.0.1 2.5.0
Oracle Utilities Network Management System	1.12.0.2 1.11.0.4.24
Oracle Utilities Work and Asset Management	1.9.1.2
Oracle Utilities Meter Data Management	2.1.0.3
Oracle Utilities Mobile Workforce Management	2.2.0.3
Oracle Real-Time Scheduler	2.2.0.3
Oracle Utilities Operational Device Management	2.0.1.2

Note: For the latest edge application version details, refer to the knowledge article "System Requirements and Supported Platforms for Oracle Utilities Analytics v2.5.2 (Doc ID 2041305.1)" available on My Oracle Support (https://support.oracle.com/).

Note: Oracle Warehouse Builder based ETL is used for Oracle Utilities Work and Asset Management source application. If you are planning to use Oracle Utilities Work and Asset Management as a source application, contact Oracle Support personnel for detailed instructions on the installation process.

Additional Notes on the Supported Platforms

The following topics are discussed in this section:

- Oracle Unbreakable Enterprise Kernel
- Oracle VM Support
- Oracle Support Policy on VMWare

Oracle Unbreakable Enterprise Kernel

Oracle Utilities Analytics v2.5.2 is supported on Oracle Unbreakable Enterprise Kernel.

Oracle VM Support

Oracle Utilities Analytics v2.5.2 is supported on Oracle VM Server for x86 3.3 for the 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 (https://support.oracle.com) for Oracle's support policy on VMWare.

Chapter 3

Oracle Utilities Analytics Initial Installation

This chapter provides an overview of how to install Oracle Utilities Analytics. This section includes the following topics:

- Installing Oracle Utilities Analytics Database Component
- Installing Oracle Data Integrator Based ELT Component
- Installing Oracle Utilities Analytics Administration Component
- Installing Oracle Utilities Analytics Dashboards Component

Installing Oracle Utilities Analytics Database Component

Note: Install Oracle Utilities Analytics Database component on the Oracle Utilities Analytics database server.

Note: Verify that the prerequisite software products mentioned in the section Prerequisite Software for Oracle Utilities Analytics Database Component are installed.

This section describes how to install the database component of Oracle Utilities Analytics v2.5.2. It includes the following topics:

- Copying and Decompressing the Install Media
- Creating the Database
- Creating the Users and the Tablespaces
- Installing the RELADM Schema
- Installing the MDADM Schema
- Installing the DWADM Schema
- Configuring the Spatial Data

Copying and Decompressing the Install Media

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

1. Download Oracle Utilities Analytics version 2.5.2 Oracle Database part (**Oracle Utilities Analytics V2.5.2 Oracle Database Multiplatform.zip**) from the Oracle Software Delivery Cloud (https:// edelivery.oracle.com).
2. Create a temporary directory, such as c:\OUA\temp for a Windows machine or /OUA/temp for a Linux machine. This directory (referred as <TEMPDIR> below) 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 V2.5.2 Oracle Database Multiplatform.zip** to <TEMPDIR> using any zip utility.
4. Unzip the zip file **<TEMPDIR>/OUA-V2.5.2-Database-Multiplatform.zip** using any zip utility.

Creating the Database

Ensure that Oracle Database Server Enterprise Edition 12.1.0.2.0 is already installed on the machine in order to create the database. Use the **Database Configuration Assistant (DBCA)** utility to create the database.

> **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 to 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.

Creating the Users and the Tablespaces

Perform the following steps for creating the required users and the tablespaces:

1. Create users in the database with the following names: DWADM, DWUSER, DWREAD, MDADM, RELADM, MASTER_REPO, WORK_REPO and DWSTAGE without giving specific roles.
2. Create roles with the following names: DW_USER, DW_READ, DW_PRIVS_ROLE and DW_REPLICATE roles.
3. Connect to the **sys user**, execute the **Usersgrants.sql** in **BI252/Scripts/Usersgrants.sql**. This SQL provides the required grants to the users created above.

Installing the RELADM Schema

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

This section describes initial installation of the RELADM schema, including:

- Reviewing the Storage.par File
- Installation Steps
- Generating the Database Statistics

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.
- The location for jar files (the Jar files are bundled with the database package in BI252\RELADM\Jarfiles).
- Java Home (for example: C:\Java\jdk1.6.0_20).

Reviewing the Storage.par File

The **storage.par** file (that comes with the product and is in location ..\BI252\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 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 the RELADM user does not have quota on CISTS_01 tablespace, you must edit the Storage.par file to indicate the correct tablespace name on which RELADM has quota.**

Installation Steps

> **Note**: Ensure to run the **CDXDBI.exe** (in the step below) from a Windows desktop that has the Oracle 12c 32 bit client and the 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 the target database to connect to the target database.

Perform the following steps to install the RELADM schema:

1. Run the **CDXDBI.exe** from ..\BI252\RELADM\Install-Upgrade. Run the utility from the command prompt. The utility prompts you to enter values for the following parameters:
   - The name of the target database: <DB NAME>.
   - The password for the system user account in the database (in silent mode).
   - The name of the owner of the database schema: RELADM.
   - The location of Java Home: <..\jdk1.6.0_20>.
   - The location of TUGBU Jar files: <..\BI252\RELADM\Jarfiles>.
   - The password for the user (in silent mode): <RELADM user password>.
   - The Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle database role with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
2. The utility creates the RELADM 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 the 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');
```

Installing the MDADM Schema

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

This section describes initial installation of the MDADM schema, including:

- Reviewing the Storage.par File
- Installation Steps
- Generating the Database Statistics

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.
- The location for jar files (the Jar files are bundled with the database package in BI252\MDADM\Jarfiles).
- Java Home (for example: C:\Java\jdk1.6.0_20).

Reviewing the Storage.par File

The **storage.par** file (that comes with the product and is in location ..\BI252\MDADM\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 the MDADM user does not have quota on CISTS_01 tablespace, you must edit the Storage.par file to indicate the correct tablespace name on which MDADM has quota.**

Installation Steps

Perform the following steps to install the MDADM schema:

> **Note**: Ensure to run the **CDXDBI.exe** (in the step below) from a Windows desktop that has the Oracle 12c 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 the target database to connect to the target database.

1. Run the **CDXDBI.exe** from ..\BI252\MDADM\Install-Upgrade. Run the utility from the **Command Prompt**. The utility prompts you to enter values for the following parameters:
   - The name of the target database:<DB NAME>.
   - The password for the system user account in the database (in silent mode).
   - The name of the owner of the Database Schema: MDADM.
   - The location of Java Home: <..\jdk1.6.0_20>.
   - The location of TUGBU Jar files: <..\BI252\MDADM\Jarfiles>.
   - The password for the user (in silent mode).
   - The Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle database role with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
2. The utility creates the MDADM 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 the 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');
```

Installing the DWADM Schema

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 initial installation of the DWADM schema, including:

- Reviewing the Storage.par File
- Installation Steps
- Generating the Database Statistics

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.
- The location for jar files (the Jar files are bundled with the database package in BI252\DWADM\Jarfiles).
- Java Home (for example: C:\Java\jdk1.6.0_20).

Reviewing the Storage.par File

The **storage.par** file (that comes with the product and is in location ..\BI252\DWADM\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 the DWADM user does not have quota on CISTS_01 tablespace, you must edit the Storage.par file to indicate the correct tablespace name on which DWADM has quota.**

Installation Steps

Perform the following steps to install the DWADM schema:

> **Note**: Ensure to run the **CDXDBI.exe** (in the step below) from a Windows desktop that has the Oracle 12c 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 the target database to connect to the target database.

1. Run the **CDXDBI.exe** from ..\BI252\DWADM\Install-Upgrade. Run the utility from the **Command Prompt**. The utility prompts you to enter values for the following parameters:
   - The name of the target database: <DB NAME>.
   - The password for the system user account in the database (in silent mode).
   - The name of the owner of the Database Schema: DWADM.
   - The location of Java Home: <..\jdk1.6.0_20>.
   - The location of TUGBU Jar files: <..\BI252\DWADM\Jarfiles>.
   - The password for the user (in silent mode).
   - The Oracle user with the read-write privileges to the database schema: DWUSER.
   - The Oracle user with the read-only privileges to the database schema: DWREAD.
   - The Oracle database role with the read-write privileges to the database schema: DW_USER.
   - The Oracle database role with the read-only privileges to the database schema: DW_READ.

2. If you choose to continue, the 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 installing 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 the 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('DWADM');
```

Configuring the Spatial Data

Refer to the Chapter 6: Spatial Configuration for the details regarding the spatial configuration.

Installing Oracle Data Integrator Based ELT Component

Note: Install the Oracle Utilities Analytics Based ELT component on the Oracle Utilities Analytics application server (refer to the section Deployment for the details on deploying Oracle Utilities Analytics).

Note: 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.

Note: Source 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.

Note: Verify that the prerequisite software products mentioned in the section Prerequisite Software for Oracle Data Integrator Based ELT Component are installed.

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

Note: While installing Oracle Data Integrator, select the **Developer Installation** and **Java EE Installation** options in the **Select Installation Type** step.

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

- Setting up Oracle GoldenGate
- Copying and Decompressing the Install Media
- Starting the Installer
- Creating the Required Directories and Files
- Installation Steps
- Creating a Database Directory
- Creating the WebLogic Domain for Oracle Data Integrator Agent

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

Setting up Oracle GoldenGate

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

Download Oracle GoldenGate 12.1.2.0.0 from the Oracle Software Delivery Cloud (https://edelivery.oracle.com) and set up Oracle GoldenGate on the source and the target database servers.

This section describes the following:

- Setting up Oracle GoldenGate on the Source Database Server
- Setting up Oracle GoldenGate on the Target Database Server

Setting up Oracle GoldenGate on the Source Database Server

Perform the following steps for each source instance:

1. Create a directory on the source database server. For example, ../GoldenGate Home. Oracle GoldenGate should be installed in this directory. This will be **Oracle GoldenGate 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. Install Oracle GoldenGate software and provide the GoldenGate Home location as the directory location created in the step 1.

3. 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%
   ```

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

   For Unix:

   ```
   ./ggsci
   ```

   For Windows:

   ```
   ggsci
   ```

   This opens the Oracle GoldenGate prompt.

5. On the **Oracle GoldenGate** prompt, execute the **create SUBDIRS** command.

6. On the **Oracle GoldenGate** prompt, execute the **start mgr** command to start the Oracle GoldenGate manager process.

7. On the **Oracle GoldenGate** prompt, execute the **info all** command to view the manager process is running. Exit Oracle **GoldenGate** by executing the **Exit** command.

8. Ensure that the source database is in the **archivelog** mode.
9. Connect to the source database as the sys user and execute the **alter database add supplemental log data (primary key) columns** command.
10. Go to the **Oracle GoldenGate home** (**OGG_Home**) directory.
11. Connect to the database as the sys user using the **SQL*Plus** (**OGG_Home** should be the current directory while invoking **SQL*Plus**).
12. 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.

13. Connect to the source database with sys user and execute the following commands:

    Note: Make sure to change GoldenGate owner placeholder with actual name of database user as created in previous step.

```
grant CREATE SESSION,CONNECT,RESOURCE,ALTER SYSTEM to <GoldenGate
Owner>;
grant unlimited tablespace to <GoldenGate owner> with admin
option;
EXECUTE dbms_goldengate_auth.grant_admin_privilege('<GoldenGate
Owner>','capture');
grant unlimited tablespace to <GoldenGate Owner> with admin
option;
Revoke dba from <GoldenGate Owner>;
grant create any view to <GoldenGate Owner>;
grant select any dictionary to <GoldenGate Owner>;
GRANT CREATE ANY DIRECTORY TO <GoldenGate Owner>;
GRANT DROP ANY DIRECTORY TO <GoldenGate Owner>;
GRANT EXP_FULL_DATABASE TO <GoldenGate Owner>;
GRANT IMP_FULL_DATABASE TO <GoldenGate Owner>;
```

14. 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 the step mentioned above>

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

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

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

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

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

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

For Oracle Utilities Meter Data Management source database, then execute the following grants:

Grant select on <application ADM Schema>.F1_MST_CONFIG to

<GoldenGate Owner>;

Grant select on <application ADM Schema>.F1_EXT_LOOKUP_VAL to

<GoldenGate Owner>;

Note: While executing the SQL commands in the steps 16, 17 and 18, provide the GoldenGate owner user if prompted for. All the scripts mentioned below are located in **GoldenGate Home** directory and must be executed after connecting to the sys user.

15. Run the command:
@marker_setup.sql
16. Run the command:
@ddl_setup.sql
17. Run the command:
@role_setup.sql
18. Exit the **SQL*Plus** login and create a directory named **diroby** inside **OGG_Home** directory.

Setting up Oracle GoldenGate on the Target Database Server

Perform the following steps:

1. Create a directory on the target database server. For example, ../GoldenGateHome. Oracle GoldenGate should be installed in this directory. 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. Install Oracle GoldenGate software and provide the GoldenGate Home location as the directory location created in the step 1.
3. 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%
   ```

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

   For Unix:

   ```
   ./ggsci
   ```

   For Windows:

   ```
   ggsci
   ```
   This opens the Oracle GoldenGate prompt.
5. On the **Oracle GoldenGate** prompt, execute the **create SUBDIRS** command.

6. On the **Oracle GoldenGate** prompt, execute the **start mgr** command to start the Oracle GoldenGate manager process.
7. On the **Oracle GoldenGate** prompt, execute the **info all** command to view the manager process is running.
8. Exit Oracle GoldenGate by executing **exit** command and create a directory named **diroby** inside the **OGG_Home** directory.

Copying and Decompressing the Install Media

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

1. Download the Oracle Utilities Analytics version 2.5.2 Multiplatform part (**Oracle Utilities Analytics V2.5.2 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 <TEMPDIR> below). 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 V2.5.2 Multiplatform.zip** to <TEMPDIR>.

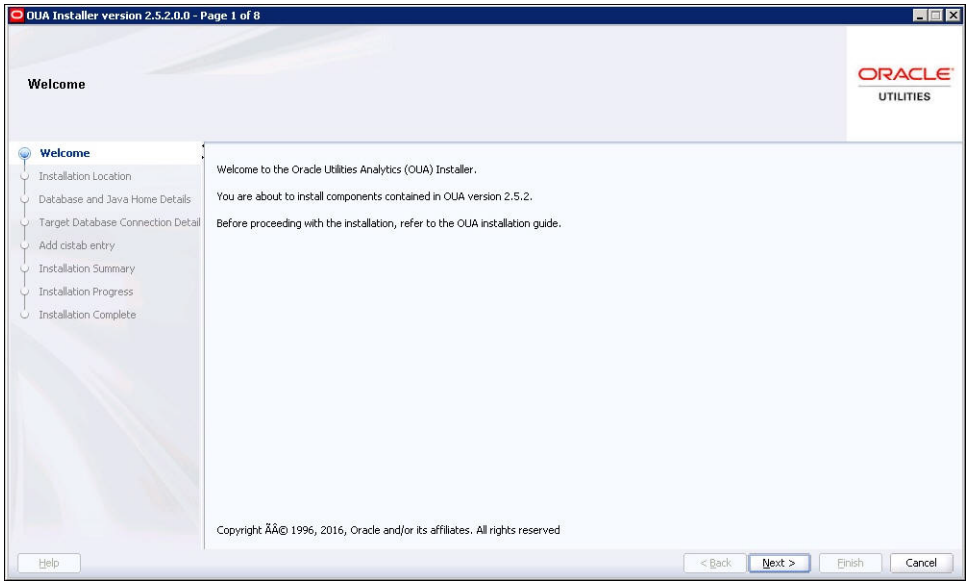
Starting the Installer

Go to the temporary folder where you have downloaded the installer and run the following command from this folder:

```
java -jar <TEMPDIR>/OUA_2.5.2.0.0_generic.jar -logLevel finest
```

> **Note**: The minimum JDK required for running the Oracle Utilities Analytics installer is JDK 1.7.

The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.



A navigation pane on the left that summarizes the tasks the installer will help you complete. Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.

If you select **Oracle Data Integrator Based ETL** as an **Installation Type**, you need to define **Database and Java Home Details**, **Target Database Connection Details**, **Oracle Data Integrator Home and Schema Details**, **Oracle Data Integrator Agent and Repository Details** and **Target GoldenGate Details**.

If you select **Dashboard** as an **Installation Type**, you need to define **Database and Java Home Details**, **Target Database Connection Details** and **OBIEE Home Details**.

If you select both **Oracle Data Integrator Based ETL** and **Dashboard** as an **Installation Type**, you need to define **Database and Java Home Details**, **Target Database Connection Details**, **Oracle Data Integrator Home and Schema Details**, **Oracle Data Integrator Agent and Repository Details**, **Target GoldenGate Details** and **OBIEE Home Details**.

Creating the Required Directories and Files

Before running the installer for Oracle Utilities Analytics for the first time on any server, the following directories need to be created (only applicable for windows):

```
C:\spl\etc
C:\spl\temp
```

Before running the installer for Oracle Utilities Analytics for the first time on any server, the following files need to be created:

- **On windows:**

  ```
  C:\spl\etc\cistab
  ```

- **On Unix:**

  ```
  /etc/cistab
  ```

Permissions on the cistab file should be set in such a way that the user that is used to run the installer has at least read permission on the file.

> **Note**: If you are running installer multiple times on a server, make sure there is no file named ENVIRON.INI in /tmp (for unix) or C:\spl\temp (for windows) before invoking the installer.

Installation Steps

To install Oracle Data Integrator Based ETL, perform the following steps

1. Run the Oracle Utilities Analytics Installer. The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.
2. The **Installation Location** page appears. Define the **Installation Location** here and click **Next.**

   > **Note**: The specified Oracle home directory must be an empty directory.

3. The **Select Installation Type** page appears. In the **Select Installation Type** page, select **ODI Based ETL** and click **Next**.

   Note: Based on the selected installation type, the options on the left navigation panel changes. When you select **Oracle Data Integrator Based ETL** as an **Installation Type**, you need to define **Database and Java Home Details**, **Target Database Connection Details**, **Oracle Data Integrator Home and Schema Details**, **Oracle Data Integrator Agent and Repository Details** and **Target GoldenGate Details**.

4. The **Database and Java Home Details** page appears. Enter the following details in the respective fields and click **Next**.

Field Name	Description	Value
Database Client Home	This is the database client home location.	Example: /u01/app/product/12.1.0/dbhome_1
Java Home	This is the JDK home location.	Provide location of JDK 1.6 (1.6.0_35+) Example: /u01/jdk_1.6.0_35

5. The **Target Database Connection Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
Host	The host name of the server where the database resides.	Oracle Utilities Analytics Database Server
Port	The database port number on the database server used for connecting to the database.	Oracle Utilities Analytics Database Port. The default value is 1521.
Service Name	The service name for the database	
Target Schema Password	The password for the target schema (DWADM).	
Confirm Target Schema Password	Confirm the password for the target schema (DWADM) here.	
Metadata Schema Password	The password for the metadata schema (MDADM).	
Confirm Metadata Schema Password	Confirm the password for the metadata (MDADM) schema here.	

6. The **ODI Home and Schema Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
Weblogic Home	The directory where WebLogic to be used for Oracle Data Integrator has been installed.	Example: /u01/Middleware/wlserver_10.3
ODI Home	The directory where Oracle Data Integrator (ODI) has been installed.	Example: /u01/Middleware/Oracle_ODI1
Supervisor User	The name of the Oracle Data Integrator Supervisor.	SUPERVISOR
Supervisor Password	The password of the Oracle Data Integrator Supervisor.	SUPERVISOR user password

Field Name	Description	Value
Confirm Supervisor Password	Confirm the password of the Supervisor here.	
Master Repository Schema Name	Oracle Data Integrator master repository schema name.	MASTER_REPO
Master Repository Schema Password	The password of the master repository schema.	MASTER_REPO user's password
Confirm Master Repository Schema Password	Confirm the password of the Oracle Data Integrator master repository schema here.	
Work Repository Schema Name	Oracle Data Integrator work repository schema name.	WORK_REPO
Work Repository Schema Password	The password of the work repository schema.	WORK_REPO user's password
Confirm Work Repository Schema Password	Confirm the password of the Oracle Data Integrator work repository schema here.	

7. The **ODI Agent and Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
ODI Agent Host	The host on which Oracle Data Integrator WebLogic Domain is created.	It is Oracle Data Integrator Server host name.
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.
Master Repository ID	Oracle Data Integrator Master Repository ID.	The default value is 601.
Work Repository ID	Oracle Data Integrator work Repository ID.	The default value is 602.

Note: Oracle Data Integrator imposes certain restrictions on the source for the objects imported. Each environment should have a unique Work Repository ID and Master Repository ID. The Master and Work Repository IDs should be greater than 600. The ID values less than 600 should not be used as these are reserved for the base repository from Oracle Utilities Analytics product. Failure to comply to this rule, would result in ID conflicts during upgrades to newer releases of Oracle Utilities Analytics.

8. The **Target GoldenGate Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
GoldenGate Host	The host on the Oracle GoldenGate Manager.	
GoldenGate Home	This is the Oracle GoldenGate installed location.	Example: /opt/local/ggs_12.1.2.0.0
Target Database Home	This is the database home installed location on the target database server. In case GoldenGate for target is not installed on the Oracle Utilities Analytics database server, provide oracle client home location on the server on which GoldenGate is installed.	Example: /u00/oracle/app/oracle/product/11.2.0/dbhome_1
GoldenGate Manager Port	The port number on which Oracle GoldenGate Manager is running on the GoldenGate host.	The default value is 7830
GoldenGate Dynamic Min Port	This is the dynamic minimum port configured in Oracle GoldenGate.	Provide the start range value set for the target GoldenGate manager process. The default value is 7830.
GoldenGate Dynamic Max Port	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. The default value is 7880.
GoldenGate Algorithm	This is the algorithm configured in Oracle GoldenGate on the target database server.	The default value is 1.
GoldenGate Encryptkey	This is the Encrypt Key configured in Oracle GoldenGate on the target database server.	The default value is "DEFAULT".
GoldenGate Shared Secret	This is shared secret key configured in Oracle GoldenGate on the target database server. The default value is"DEFAULT".	Go to the Oracle GoldenGate prompt and run the command: *encrypt password <password of MDADM user>, encryptkey DEFAULT* Provide the result of above command as the value.

9. The **Add Cistab Entry** page appears.

10. Register the installed Oracle Utilities Analytics environment in the /etc/cistab file for Unix based Operating systems and in the C:\spl\etc\cistab file for Windows Operating system.

The **cistab** file needs to be created in the specified location if it does not already exist. Copy the text shown, add the text in a new line in the **cistab** file and save the file. Click **Next**.

11. The **Installation Summary** page appears. Verify the installation options you selected.
12. Click **Install** to begin the installation.

    If you want to make any changes to the configuration before starting the installation, use the navigation pane and select the topic you want to edit.

13. The **Installation Progress** page appears which allows you to see the progress of the installation. Operations being performed as a part of the installation are logged to the terminal from which the installer was run. The Detailed logs of the installation are also available in the logs/system directory under the installation location.

    If you want to quit before the installation is completed, click **Cancel**. Doing so will result in a partial installation; the portion of the software that was installed on your system before you click **Cancel** will remain on your system, and you will have to remove it manually.

14. In the **Installation Completed** page, click **Finish** to dismiss the installer.

The Oracle Data Integrator based ETL is now installed.

> **Note**: To configure source, refer to the **Chapter 5: Configuring Oracle Utilities Analytics** in *Oracle Utilities Analytics Administration Guide*.

Creating a Database Directory

Create a database directory 'B1_DATA_DUMP_DIR' on the target database. This directory is used for logging the export import task used during the initial ELT load. The following is a sample SQL that creates the database directory pointing to the file system path /scratch/file_data:

```
CREATE DIRECTORY B1_DATA_DUMP_DIR AS '/scratch/file_data';
```

Creating the WebLogic Domain 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 the WebLogic ODI Agent:

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.

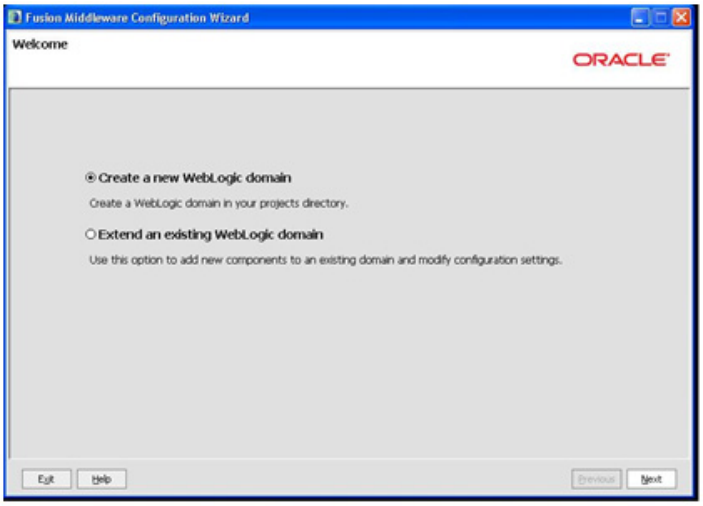
   For Unix:

   - Run ./Config.sh

   For Windows:

   - Run Config.cmd

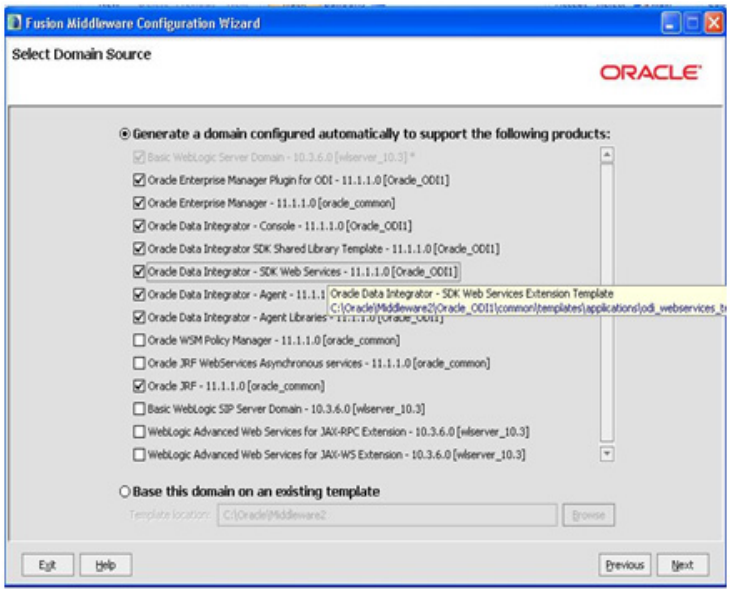
2. Create a new WebLogic domain.



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

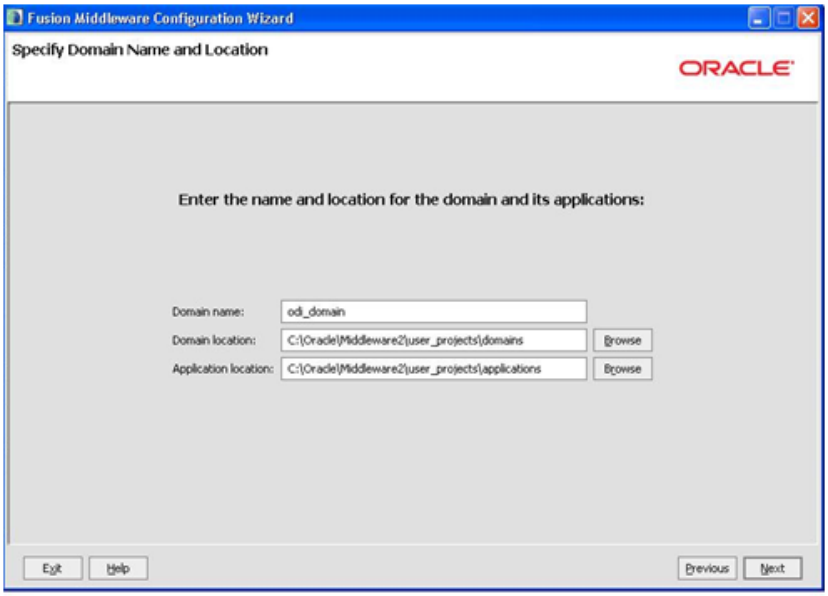


Then, click **Next** to proceed.

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

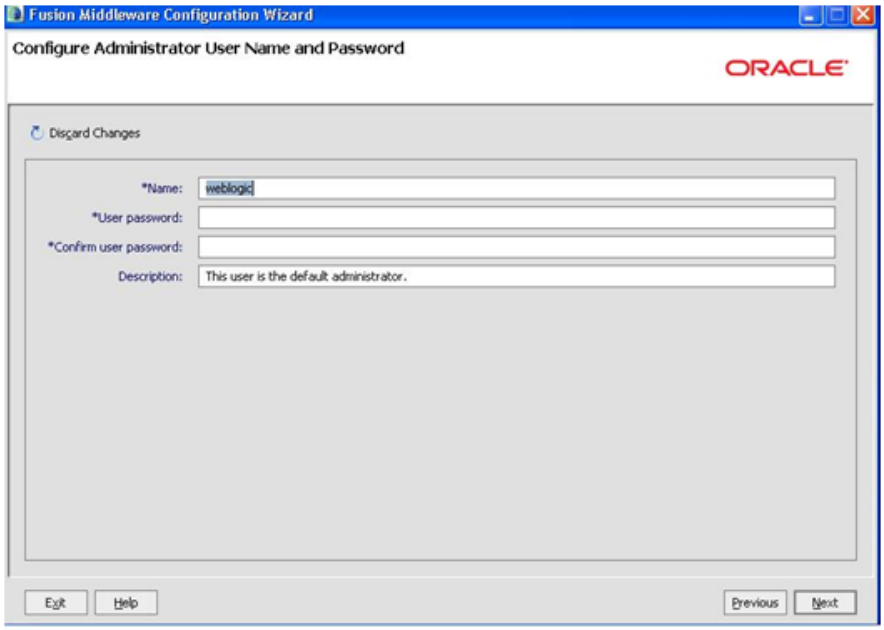
    - Provide the domain name: odi_domain

- Location will be default



Click **Next** to proceed.

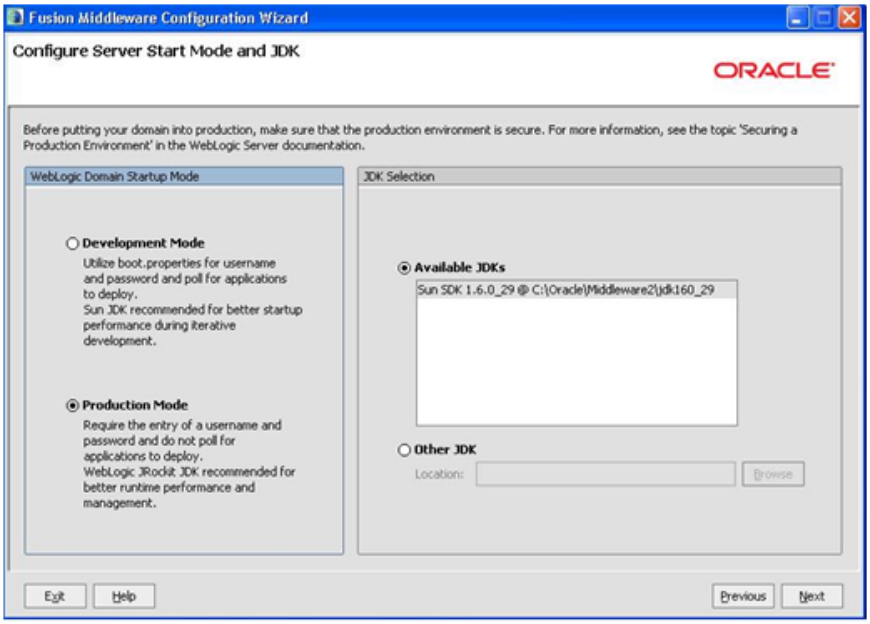
5. Configure the **Administrator User Name** and **Password** for the WebLogic. Provide the WebLogic password.



Click **Next**.

6. Configure the **Server StartUp Mode** and **JDK**:
   - Select the **Production Mode** option.

- Provide the **JDK 1.6.0_35**



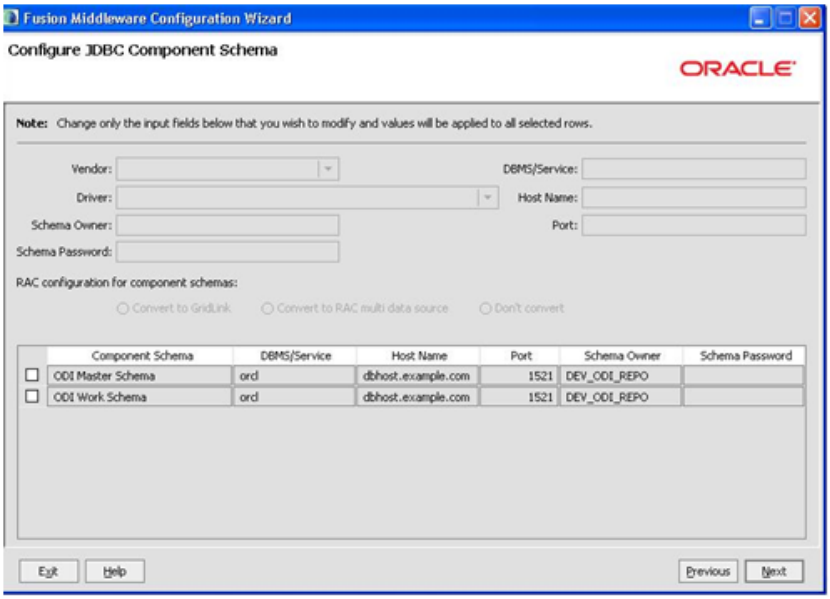
7. Configure the **JDBC Component Schema**.

   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

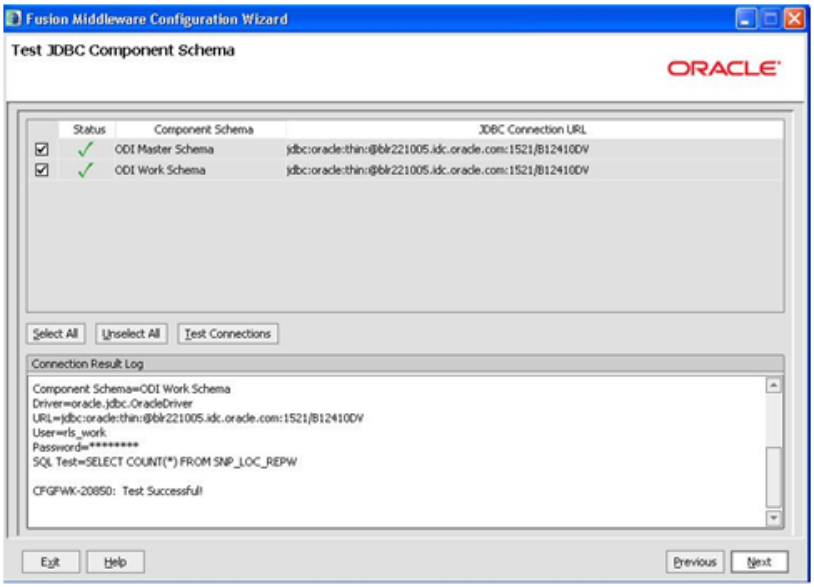
8. Deselect the **ODI Master Schema** checkbox.
9. Select the **ODI Work Schema** checkbox. Provide the below details:
   - DBMS/Service: Target Database Name
   - Host Name: Database Serverhost
   - Port: Database Port
   - Schema Owner: WORK_REPO

- Schema Password: WORK _REPO Password



Click **Next** to proceed.

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

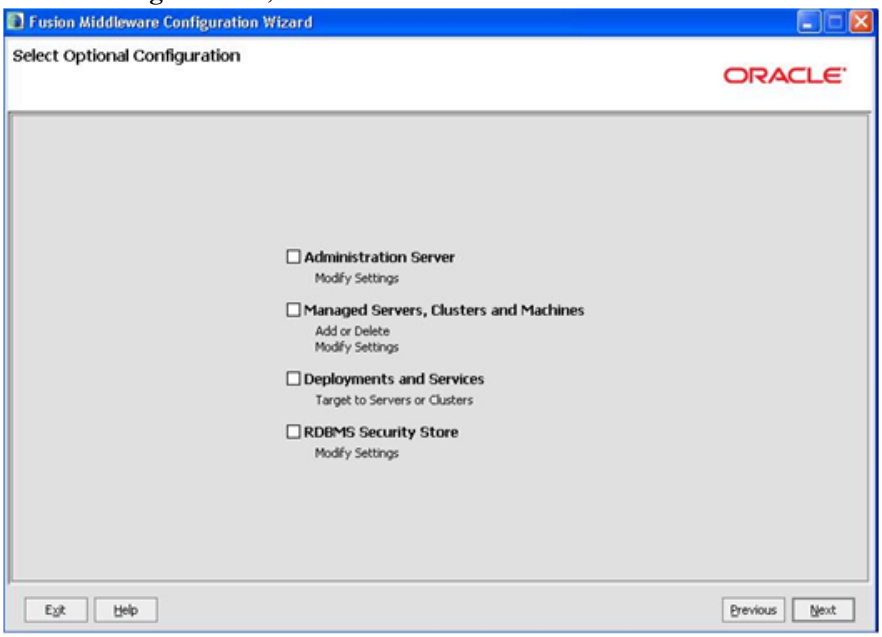


Click **Next** to proceed.

11. Select the **Optional Configuration**:

- Select the checkboxes:
  - **Administration Server**

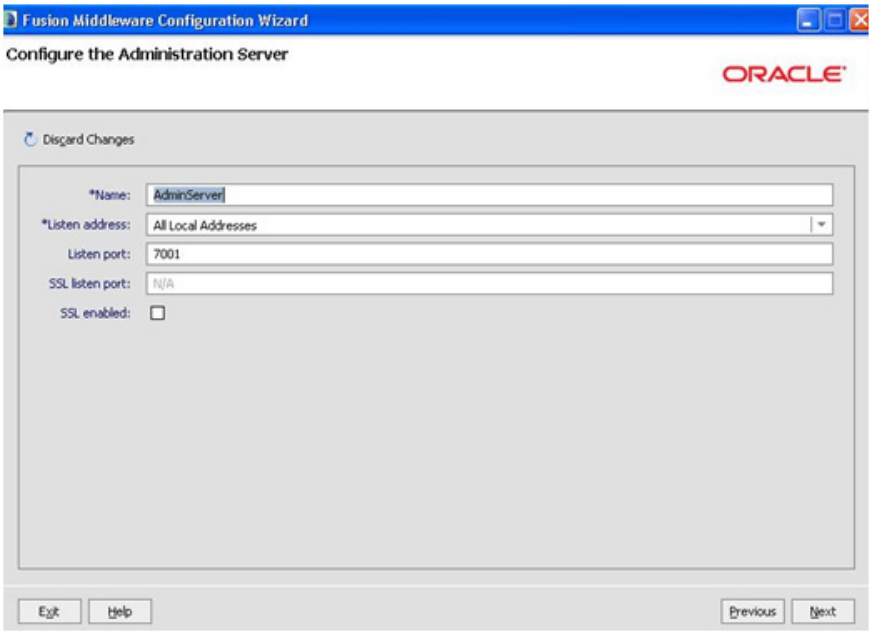
- **Managed Server, Clusters and Machines**



Select **Next** to proceed.

12. Configure the **Administration Server**:

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

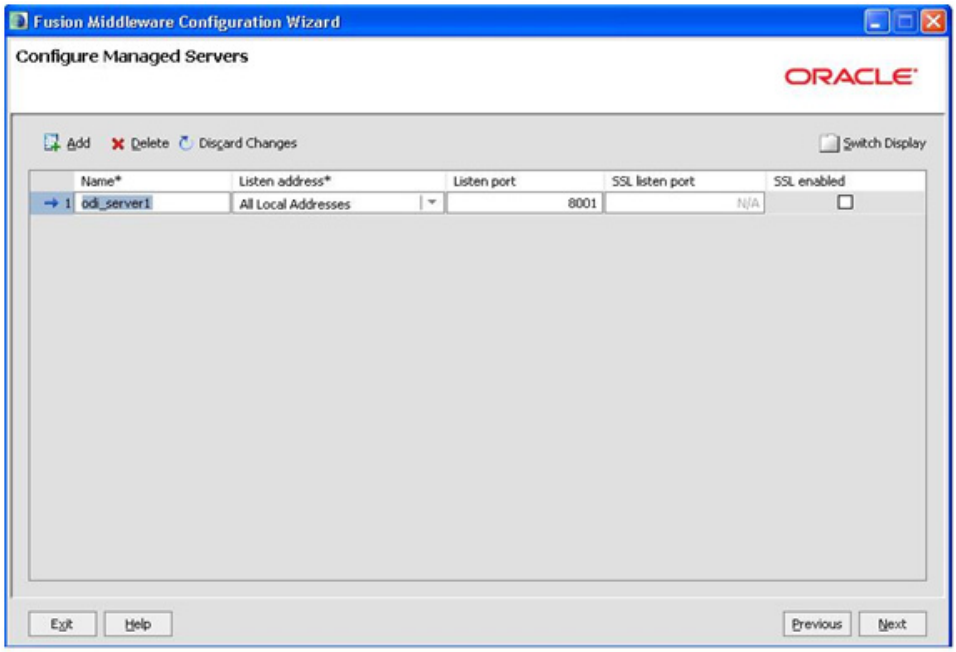


Click **Next** to proceed.

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

- **Name**: odi_server1
- **Listen Address**: All Local Addresses

- **Port**: Provide the port, which is provided in the step 7 in the section Installation Steps.)



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 the domain location, create the **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** file 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**, and then create **boot.properties** file 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 the 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 Oracle Date 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.

Starting Managed Server odi_server1

Perform the following steps:

1. To start managed server odi_server1, change the directory to the 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
   ```

2. From the **Oracle Data Integrator Studio**, navigate to **Topology** > **Agents**> **OracleDIAgent**. Right-click on **OracleDIAgent** and click **Test** to test connectivity of configured Oracle Data Integrator Java EE agent.

Installing Oracle Utilities Analytics Administration Component

Oracle Utilities Analytics Administration Tool is an Oracle Application Express (APEX) based configuration tool that can be used to configure Oracle Utilities Analytics. This section describes how to install the Administration Tool for Oracle Utilities Analytics configuration and change the default password of the Admin user, including:

- Installation Steps
- Changing the Default Password of the Admin User

Note: Install the Oracle Utilities Analytics Administration component on the Oracle Utilities Analytics database server.

Installation Steps

Note: Verify that the prerequisite software products mentioned in the section Prerequisite Software for Oracle Utilities Analytics Administration Tool Component are installed.

Perform the following steps to install Oracle Utilities Analytics Administration Tool:

1. Download Apex 4.2.6 and copy to database server under the /temp directory. Unzip the file.

   ```
   cd /temp/apex
   ```

   Connect to the Oracle Utilities Analytics database with the sys user and execute the following command:

   a. @apxremov.sql

   b. @apxrtins <Tablespace name> <Tablespace name> <Temp Tablespace name> /i/

      For example, @apxrtins CISTS_01 CISTS_01 TEMP /i/

   c. @apxchpwd.sql

   d. ALTER USER APEX_PUBLIC_USER ACCOUNT UNLOCK;

   e. ALTER USER APEX_PUBLIC_USER IDENTIFIED BY APEX_PUBLIC_USER;

   f. @apex_rest_config.sql

   You must remember the password for these two users, APEX_Listener user and APEX_REST_PUBLIC_USER

   ```
   SQL> @apex_rest_config.sql
   Enter a password for the APEX_LISTENER user              []
   Enter a password for the APEX_REST_PUBLIC_USER user              []
   ```

2. Import the Admin Tool for Oracle Data Integrator configuration:

   a. Unzip the **Oracle Utilities Analytics V2.5.2 Multiplatform.zip** file. This file has a folder called AdminTool.

   b. Create the ../AdminTool directory on the database server and copy the contents of the AdminTool directory (from the zip file) to this directory.

   c. Go to the ../AdminTool directory, i.e., cd ../AdminTool.

   d. Connect as the system user and execute the following scripts:

      - Create the workspace and configure the users: @CreateAppWorkspace.sql

- Import application:
  @DeployAdminApp.sql
- Deploy supporting objects:
  @DeploySupportingObjects.sql

3. Download Apex 4.2.6 and copy to the server where you want to set up the Administration Tool under /scratch/bi_oradata_01/Softwares/apex_4.2.6 directory.

   Note: Create /scratch/bi_oradata_01/Softwares/apex_4.2.6 directory if it does not exist.

4. Download Oracle Rest Data service and copy to the server where you want to set up the Administration Tool under /scratch/bi_oradata_01/Softwares/apex_listner directory.

   Note: Create /scratch/bi_oradata_01/Softwares/apex_listner directory if it does not exist.

5. Navigate to the scratch/bi_oradata_01/Softwares/apex_listner directory and unzip the file ords.3.0.0.121.10.23.zip.

   ```
   cd /scratch/bi_oradata_01/Softwares/apex_listner
   ```

6. Navigate to the cd /scratch/bi_oradata_01/Softwares/apex_4.2.6 directory and unzip the file apex_4.2.6_en.zip.

   ```
   cd /scratch/bi_oradata_01/Softwares/apex_4.2.6
   ```

7. Create a directory on the server for the Apex configuration.
   For example, mkdir/scratch/bi_oradata_01/apex_configuration

8. Navigate to the /scratch/bi_oradata_01/Softwares/apex_listner directory:

   ```
   cd /scratch/bi_oradata_01/Softwares/apex_listner
   ```

9. Execute the following command:

   ```
   java -jar ords.war install advanced
   ```

   Note: Use JDK1.7 or later to execute.

   Note: You need to provide the required inputs as shown below:

```
bash-4.1$ java -jar ords.war install advanced
This Oracle REST Data Services instance has not yet been configured.
Please complete the following prompts

Enter the location to store configuration data:/scratch/bi oradata 01/apex_configuration
Enter the name of the database server [localhost]:
Enter the database listen port [1521]:
Enter 1 to specify the database service name, or 2 to specify the database SID [1]:
Enter the database service name:
Enter 1 if you want to verify/install Oracle REST Data Services schema or 2 to skip this step [1]:
Enter the database password for ORDS_PUBLIC_USER:
Confirm password:

Please login with SYSDBA privileges to verify Oracle REST Data Services schema. Installation may be required.


Enter the username with SYSDBA privileges to verify the installation [SYS]:sys
Enter the database password for sys:
Confirm password:
Jun 22, 2015 2:08:51 AM oracle.dbtools.rt.config.setup.SchemaSetup addSchemaParams
INFO:
Oracle REST Data Services schema does not exist and will be created.


Enter the default tablespace for ORDS_METADATA [SYSAUX]:
Enter the temporary tablespace for ORDS_METADATA [TEMP]:
Enter the default tablespace for ORDS_PUBLIC_USER [USERS]:
Enter the temporary tablespace for ORDS_PUBLIC_USER [TEMP]:
Enter 1 if you want to use PL/SQL Gateway or 2 to skip this step [1]:
Enter the PL/SQL Gateway database user name [APEX_PUBLIC_USER]:
Enter the database password for APEX_PUBLIC_USER:
Confirm password:
```

```
Enter 1 to specify passwords for Application Express RESTful Services database users (APEX_LISTENER, APEX_REST_PUBLIC_USER) or 2 to skip
 this step [1]:
Enter the database password for APEX_LISTENER:
Confirm password:
Enter the database password for APEX_REST_PUBLIC_USER:
Confirm password:
Jun 22, 2015 2:09:36 AM oracle.dbtools.common.config.file.ConfigurationFilesBase update
INFO: Updated configurations: defaults, apex_pu, apex, apex_al, apex_rt
Jun 22, 2015 2:09:36 AM oracle.dbtools.installer.Installer installORDS
INFO:
Installing Oracle REST Data Services version 3.0.0.121.10.23
... Log file written to /scratch/bi_oradata_01/Softwares/apex_listner/logs/ordsinstall_2015-06-22_020936_00353.log
... Verified database prerequisites
... Created Oracle REST Data Services schema
... Granted privileges to Oracle REST Data Services
... Created Oracle REST Data Services database objects
... Created Oracle REST Data Services proxy user
Jun 22, 2015 2:09:48 AM oracle.dbtools.installer.Installer installORDS
INFO: Completed installation for Oracle REST Data Services version 3.0.0.121.10.23. Elapsed time: 00:00:12.203

Enter 1 if you wish to start in standalone mode or 2 to exit [1]:2
```

10. Navigate to the **/scratch/bi_oradata_01/Softwares/apex_listner** directory:

    ```
    cd /scratch/bi_oradata_01/Softwares/apex_listner
    ```

    Execute the following command:

    ```
    java -jar ords.war static /scratch/bi_oradata_01/Softwares/
apex_4.2.6/apex/images
    ```

    Note: It creates i.war file.

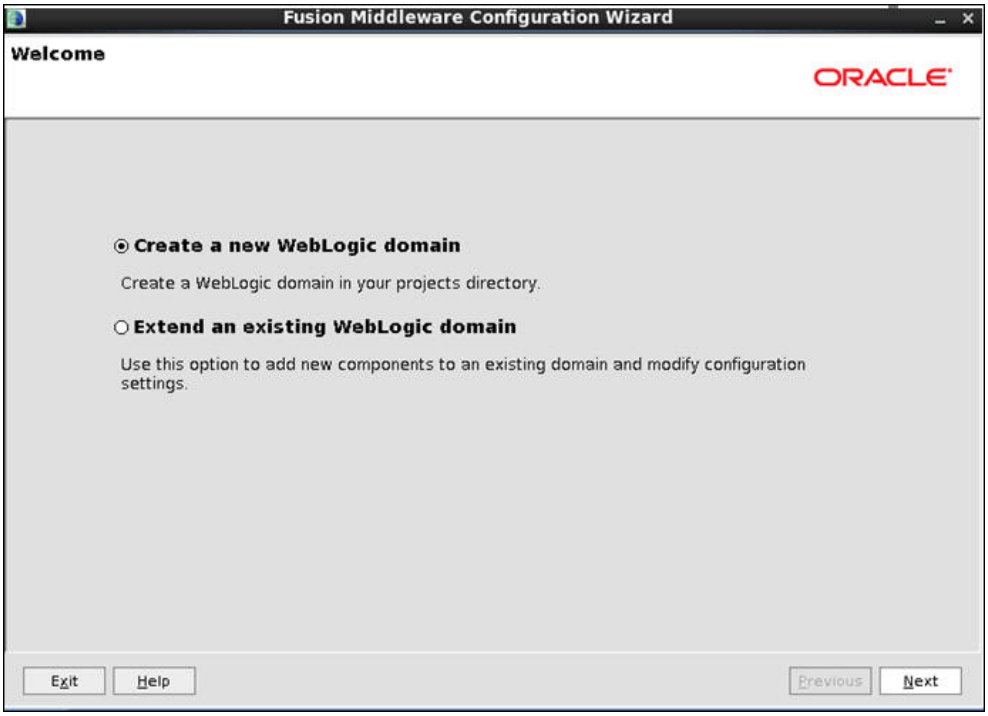
11. Install Weblogic 10.3.6 with jdk 1.7.0+.

12. Create Weblogic domain.

    Navigate to the <Middleware Home>/wlserver_10.3/commin/bin
    cd <Middleware Home>/wlserver_10.3/commin/bin

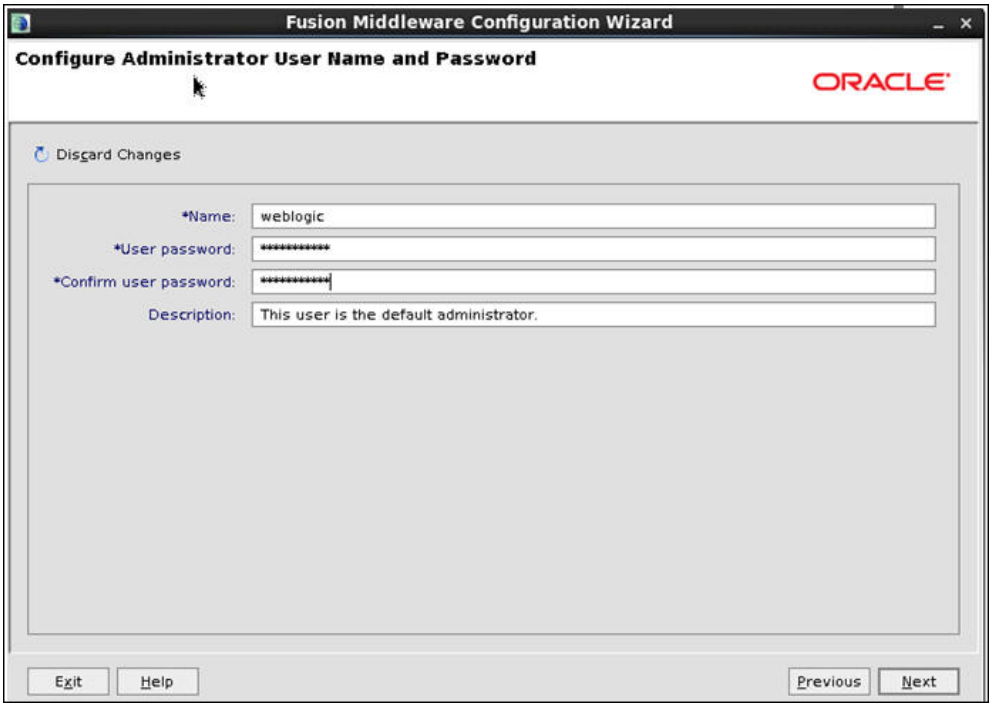
    Execute the following:
    ./config.sh

    a. Click **Next**.

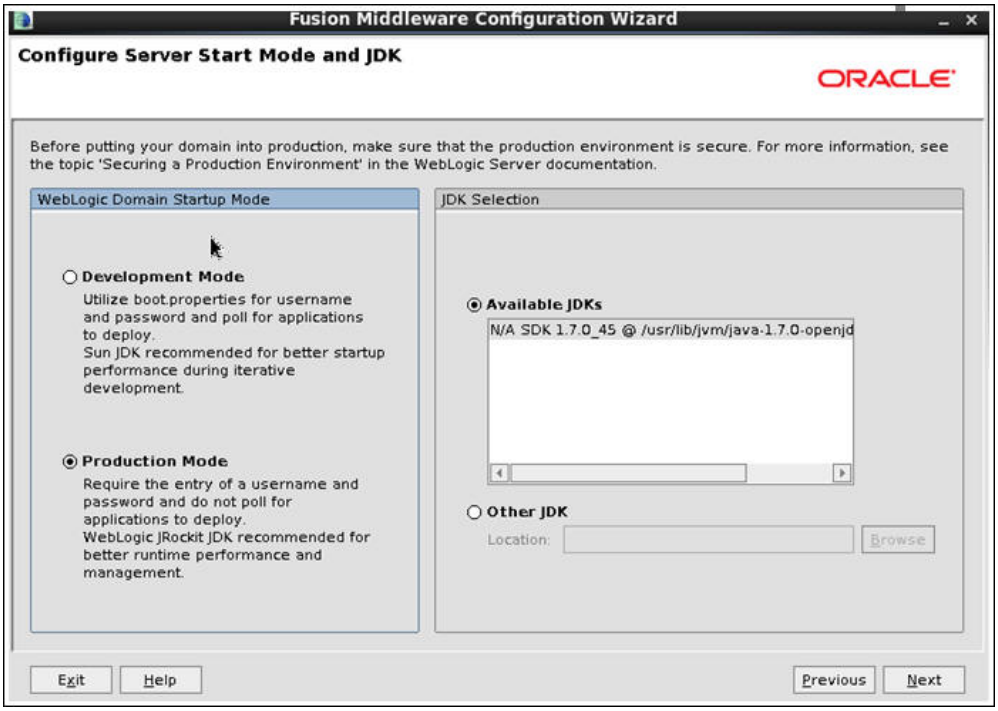


b. Provide the domain name and do not change the domain location. Click **Next.**

c. Provide **Weblogic User Password** and make sure to remember it.

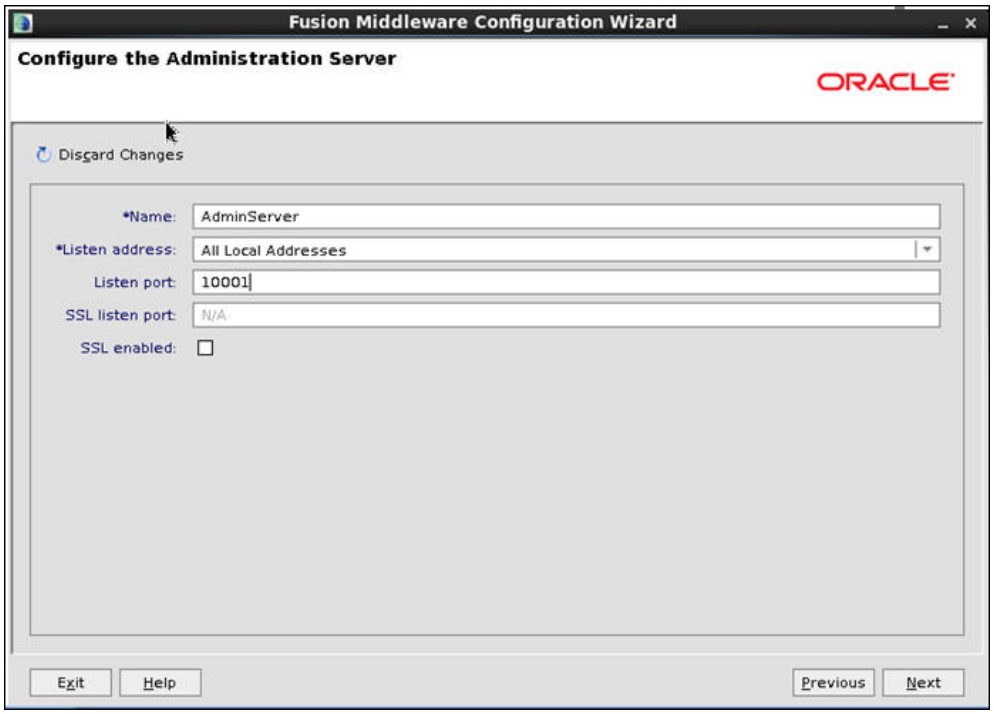


d. Select jdk1.7 and click **Next**.

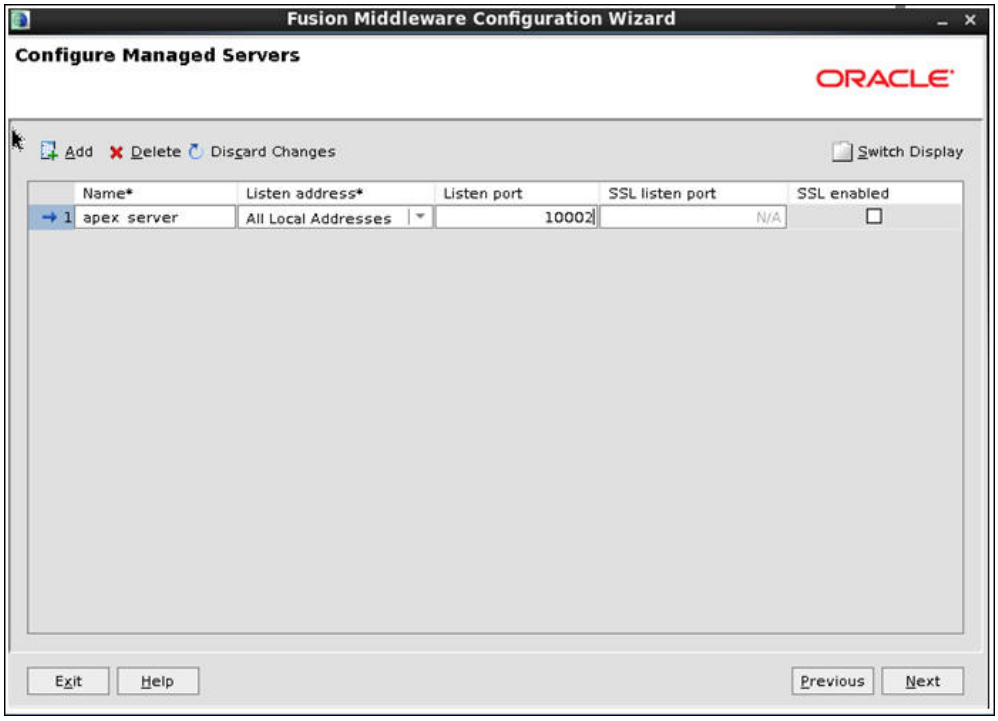


e. Select the **Administration Server**, **Managed Servers, Clusters and Machines** options as shown below:

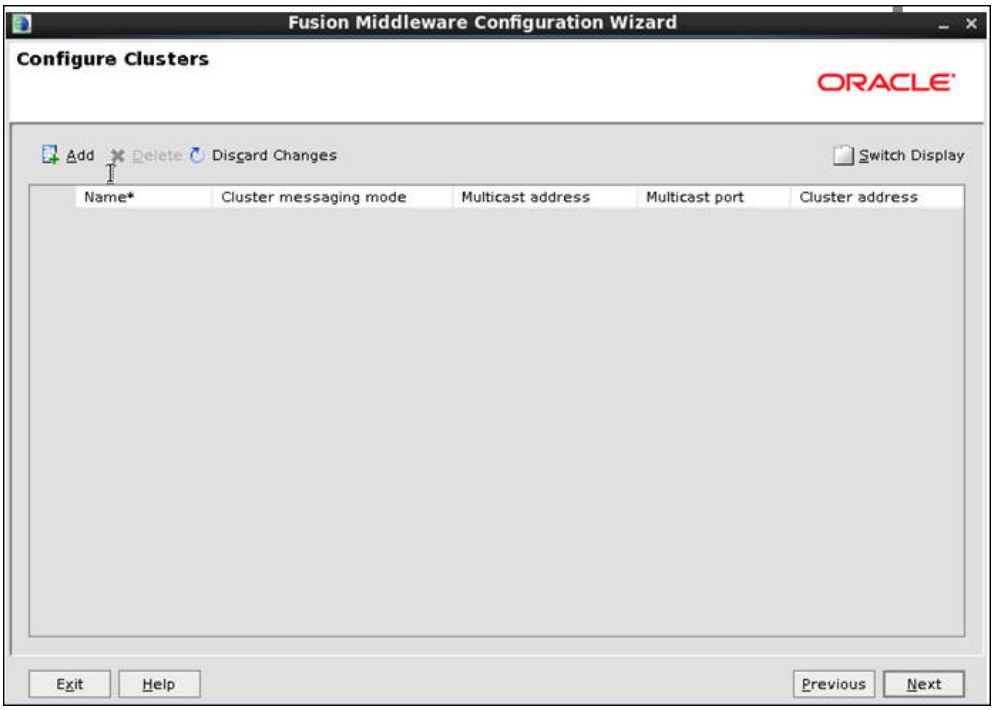
f. Provide Listen Port as available port and remember this port number. Click **Next**:



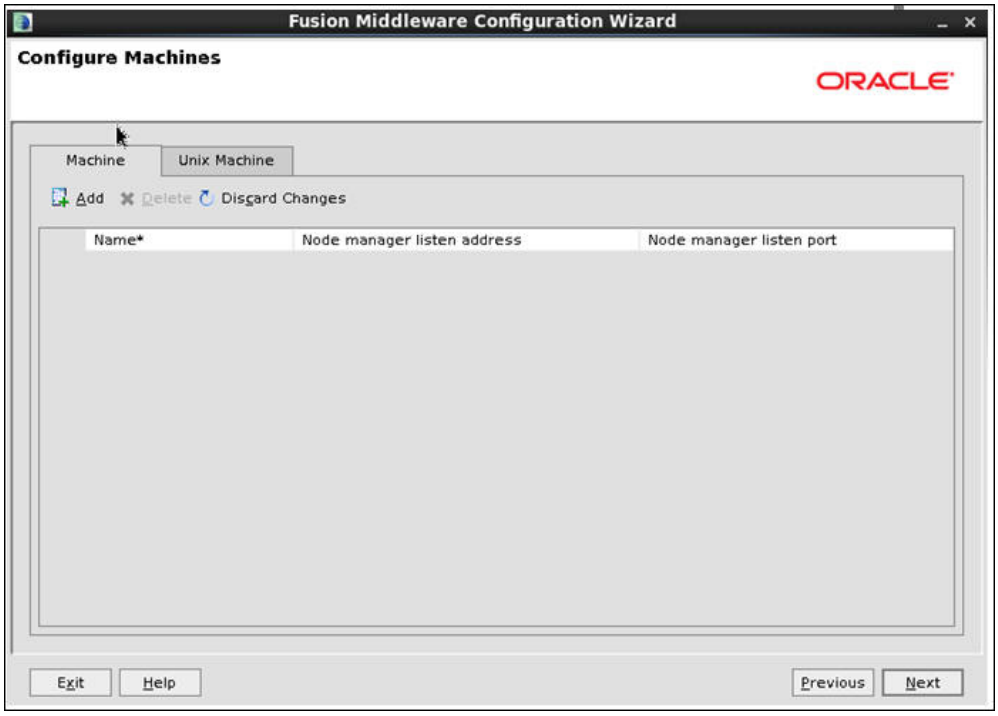
g. Click **Add** and provide values as shown below:



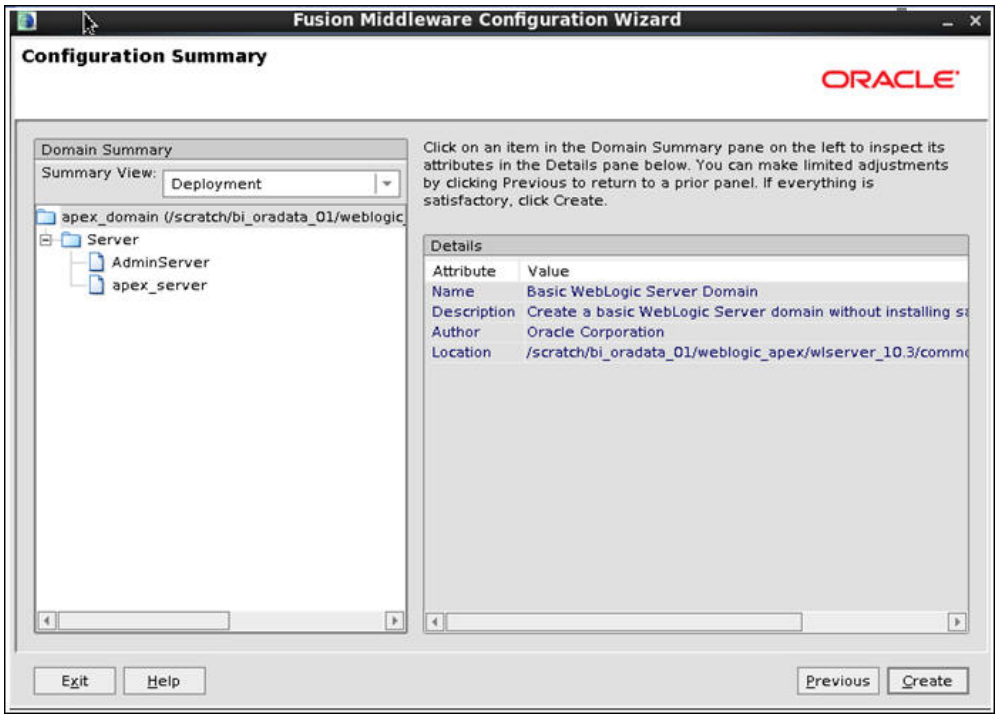
h. Click **Next**:



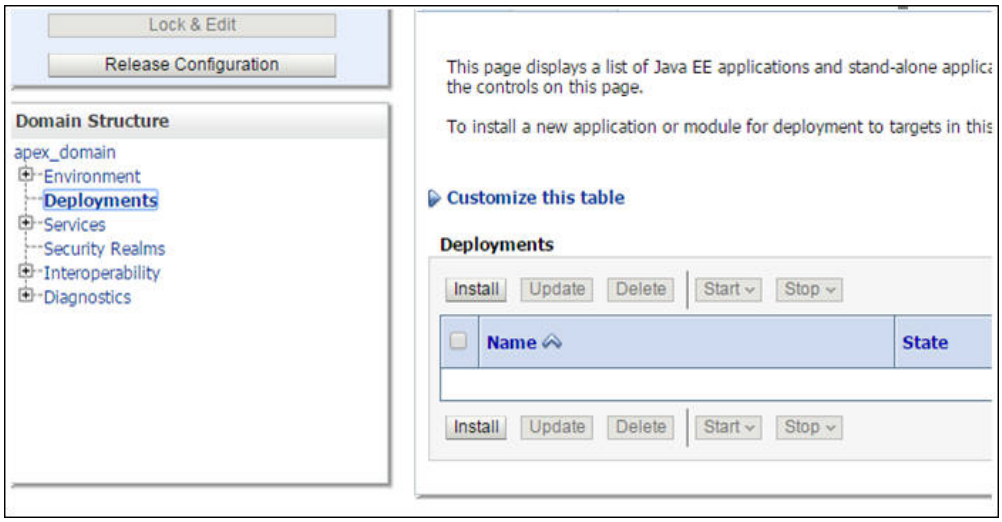
i. Click **Next.**



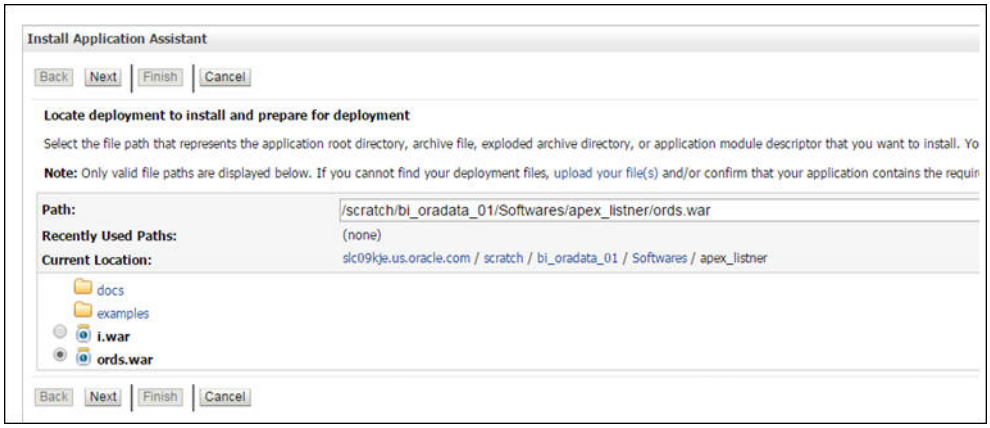
j. Click **Next.**



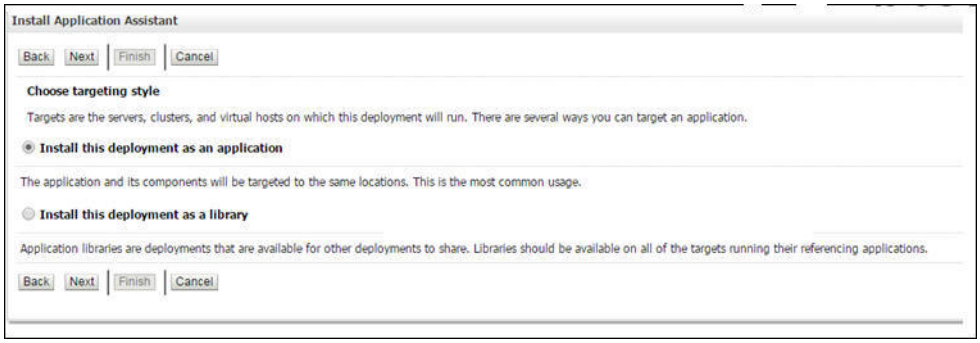
13. Create the **boot.properties** file.
14. Start the Admin and Managed server.
15. Log into Weblogic console and click on **Lock & Edit**.



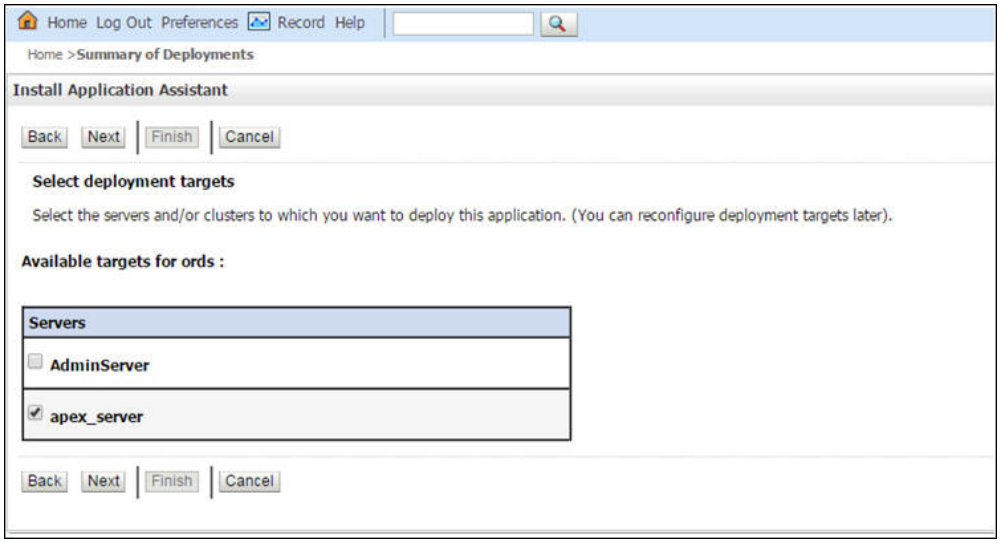
16. Click on **Install**.
17. Provide Path as: /scratch/bi_oradata_01/Softwares/apex_listner and select the **ords.war** file



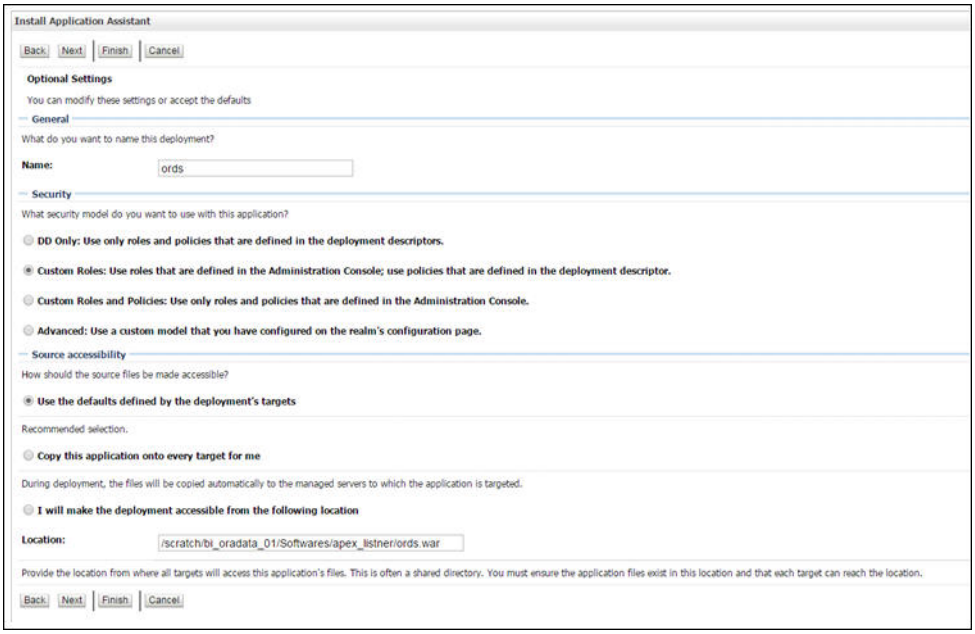
18. Click **Next.**



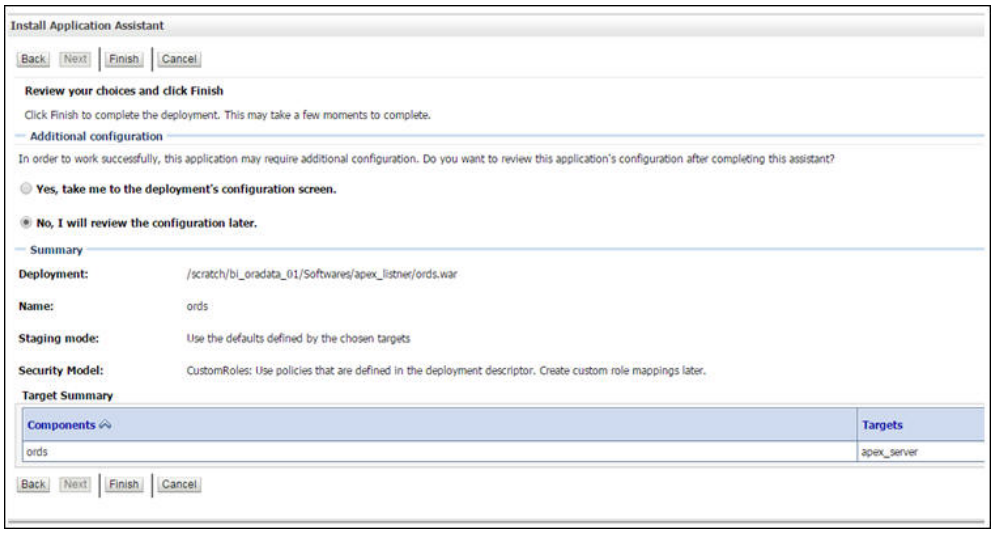
19. Select the **Apex Server** option and click **Next**.



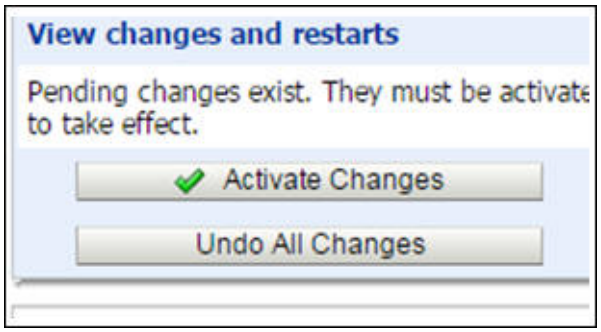
20. Select the options as shown below:



21. Select the options as shown below:

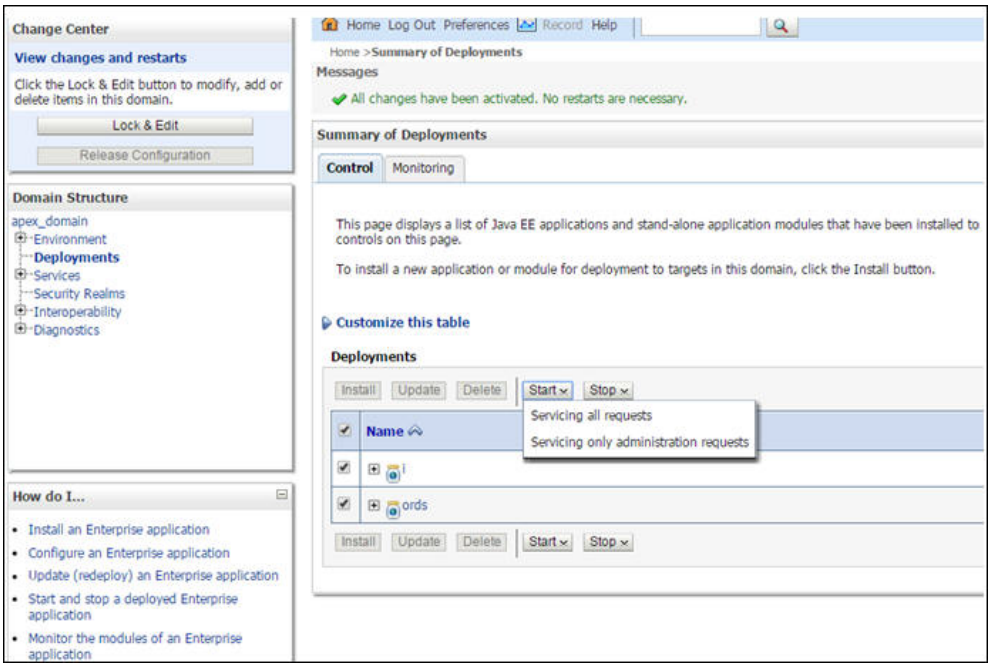


22. Click **Activate Changes**.

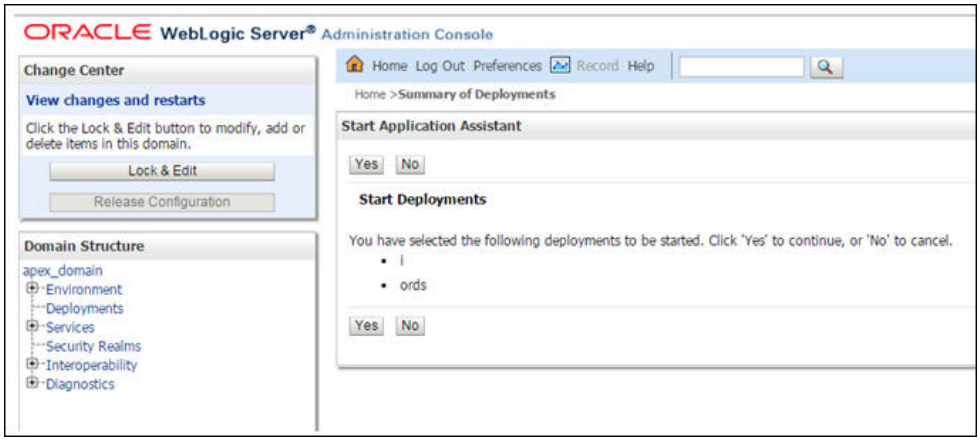


23. **Repeat the steps from 13 to 20 to** *deploy i.war* **file**.

24. Login to Weblogic console and click on **Deployment> Monitoring**. Select **i** and **ords**. And then, click on **Start** and select **Servicing All Requests** option.



25. Click **Yes**.



26. Restart the Admin and Managed servers.

27. Go to the following URL to access the Administration Tool:
http://<hostname>:<managed server port no>/ords/f?p=104

28. Credentials to access the Administration Tool:
User ID: Admin
Password: Admin_123

Changing the Default Password of the Admin User

The following APEX API can be used to change the password of the 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 the 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 change the default password after logging in.

Installing Oracle Utilities Analytics Dashboards Component

Note: Ensure that the same Operating System (OS) user is used to install the Oracle Utilities Analytics Dashboards component that is used to install all the prerequisite software.

Note: Verify that the prerequisite software products mentioned in the section Prerequisite Software for Oracle Utilities Analytics Dashboards Component are installed.

Note: Install the Oracle Utilities Analytics Dashboards component on the Oracle Utilities Analytics application server (refer to the section Deployment for the details on deploying Oracle Utilities Analytics).

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

- Copying and Decompressing the Install Media
- Starting the Installer
- Installation Steps
- Deploying the Repository (RPD) File
- Deploying the Web Catalog
- Configuring and Deploying the MapViewer
- Post-deploying the Custom MapViewer
- Enabling WriteBack
- Enabling the Analytics Help

- Enabling the Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1

Copying and Decompressing the Install Media

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

1. Download the Oracle Utilities Analytics Dashboards component v2.5.2 (**Oracle Utilities Analytics V2.5.2 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 <TEMPDIR> below). 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 V2.5.2 Multiplatform.zip** to <TEMPDIR>.

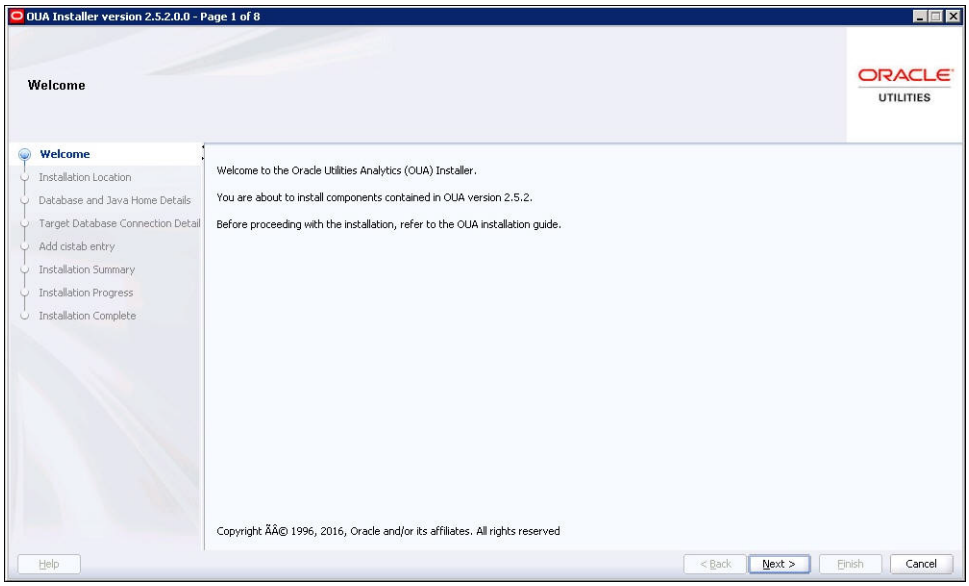
Starting the Installer

Go to the temporary folder where you have downloaded the install and run the following command from this folder:

```
java -jar <TEMPDIR>/OUA_2.5.2.0.0_generic.jar -logLevel finest
```

> **Note**: The minimum JDK required for running the Oracle Utilities Analytics installer is JDK 1.7.

The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.



A navigation pane on the left that summarizes the tasks the installer will help you complete. Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.

Installation Steps

To install the Dashboards, perform the following steps:

1. Run the Oracle Utilities Analytics Installer. The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.

2. The **Installation Location** page appears. Define the **Installation Location** here and click **Next.**

   Note: The specified Oracle home directory must be an empty directory.

3. The **Select Installation Type** page appears. In the **Select Installation Type** page, select **Dashboards** and click **Next**.

   Note: Based on the selected installation type, the options on the left navigation panel changes. When you select **Dashboard** as an **Installation Type**, you need to define **Database and Java Home Details**, **Target Database Connection Details** and **OBIEE Home Details**.

4. The **Database and Java Home Details** page appears. Enter the following details in the respective fields and click **Next**.

Field Name	Description	Value
Database Client Home	This is the database client home location.	Example: /u01/app/product/12.1.0/dbhome_1
Java Home	This is the JDK home location.	Provide location of JDK 1.6 (1.6.0_35+) Example: /u01/jdk_1.6.0_35

5. The **Target Database Connection Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
Host	The host name of the server where the database resides.	Oracle Utilities Analytics Database Server
Port	The database port number on the database server used for connecting to the database.	Oracle Utilities Analytics Database Port. The default value is 1521.
Service Name	The service name for the database	
Target Schema Password	The password for the target schema (DWADM).	
Confirm Target Schema Password	Confirm the password for the target schema (DWADM) here.	
Metadata Schema Password	The password for the metadata schema (MDADM).	
Confirm Metadata Schema Password	Confirm the password for the metadata (MDADM) schema here.	

6. The **OBIEE Home Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
BI Home	The location on the disk where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/ Middleware/ Oracle_BI1
BI Instance Home	This is the instance home location under the location where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/Middleware/ instances/instance1
BI Domain Home	This is the domain home location under the location where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/ Middleware/ user_projects/domains/ bifoundation_domain
Weblogic Host	The hostname on which weblogic server for Oracle Business Intelligence Enterprise Edition is running.	
Weblogic Port Number	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: 7001
Weblogic User	WebLogic domain login user name.	

Note: You will be prompted for the Weblogic user's password after installation, when configuring Oracle Utilities Analytics.

7. The **Add Cistab Entry** page appears.
8. Register the installed Oracle Utilities Analytics environment in the /etc/cistab file for Unix based Operating systems and in the C:\spl\etc\cistab file for Windows Operating system. The **cistab** file needs to be created in the specified location if it does not already exist. Copy the text shown, add the text in a new line in the **cistab** file and save the file. Click **Next**.
9. The **Installation Summary** page appears. Verify the installation options here.
10. Click **Install** to begin the installation.

    If you want to make any changes to the configuration before starting the installation, use the navigation pane and select the topic you want to edit.
11. The **Installation Progress** page appears which allows you to see the progress of the installation. Operations being performed as part of the installation are logged to the terminal from which the installer was run. Detailed logs of the installation are also available in the logs/system directory under the installation location.

If you want to quit before the installation is completed, click **Cancel**. Doing so will result in a partial installation; the portion of the software that was installed on your system before you click **Cancel** will remain on your system, and you will have to remove it manually.

12. In the **Installation Completed** page, click **Finish** to dismiss the installer.

The Dashboards component is now installed.

Deploying the Repository (RPD) File

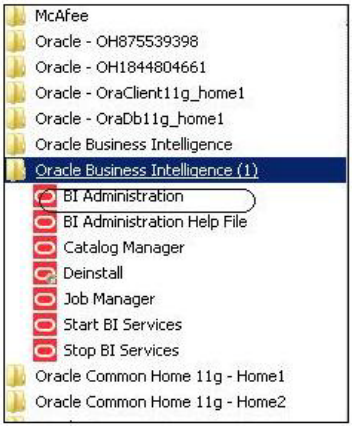
If you have not made any changes to the deployed RPD, then take the RPD file from the following location: <install_dir>/Reports/rpd/ UtilitiesBusinessAnalytics.rpd, where <install_dir> is the Oracle Utilities Analytics Dashboard Component installation directory.

If you have done merging, then take the merged RPD and make the required database changes.

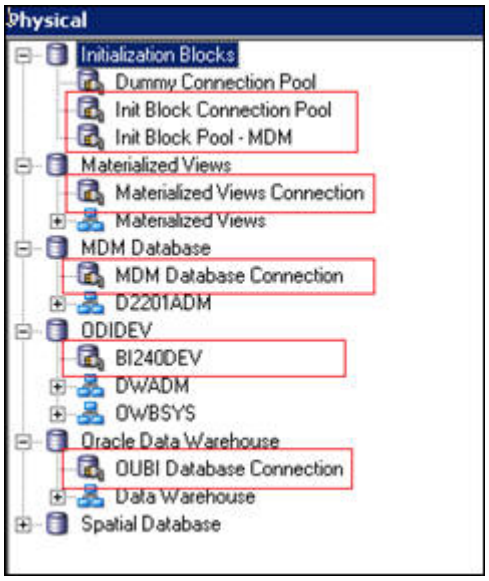
This RPD file should be copied to the windows machine on which Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 (Install Oracle Business Intelligence Enterprise Edition 11.1.1.7.0 and apply the patch 18818588) is installed.

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 Oracle Utilities Meter Data Management):

   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 Oracle Utilities Meter Data Management):

   Datasource name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

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

    Datasource name = BI database name

    User name = DWUSER

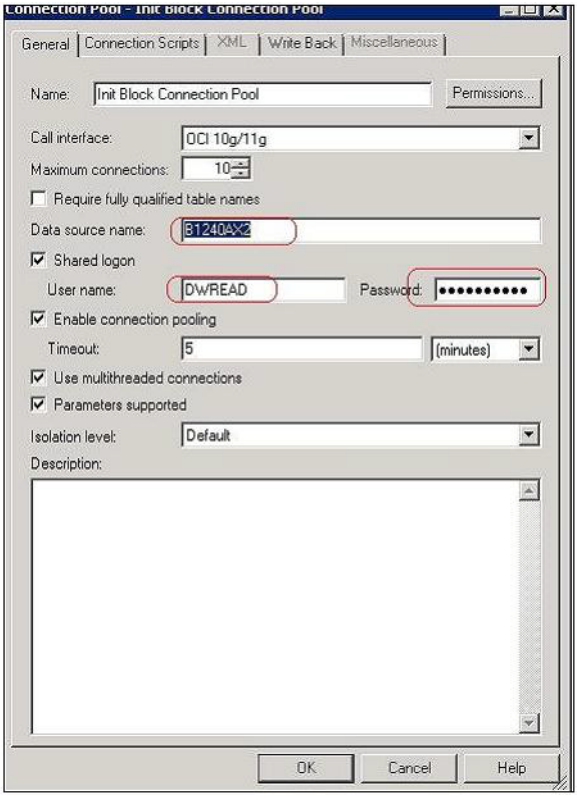
    Password = DWUSER User password

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

    Datasource 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-mentioned database sets of 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 web catalogs, follow these steps:

1. Go to the <Catalog location>/root/shared and delete the existing catalogs that were delivered out-of-box with the Oracle Utilities Analytics product in the previous release. Any catalog added by you can be retained. If Oracle Utilities Network Management System BI publisher reports were deployed, they should be retained.
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:

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 ./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 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 the MapViewer

Configuring and deploying the MapViewer involves the following:

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

Configuring the 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 = *Oracle's Driver (Thin) for Service connections; Versions 9.0.1 and later
8. Click **Next**.

9. Do not change any values on the next page and click **Next**.
10. Enter the following connection properties:
    - Database Name: BI Database Name
    - Host Name: Database host
    - Port: Database port
    - Database User Name: dwadm
    - Password: dwadm password
11. Click **Next**.
12. On the next page, click **Test Configuration** button. After the successful test, click **Next** again.
13. The **Select Target** page opens. Now select AdminServer under **Servers** and bi_cluster under **Clusters**. Click **Finish**.
14. Click **Activate Changes**.
15. Update the mapViewerConfig file with the below-mentioned tags:

    File location: <OBIEE_INSTALL_DIR>/Oracle_BI1/bifoundation/jee/

    mapviewer.ear/web.war/WEB-INF/conf/

    File: mapViewerConfig.xml
16. 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
</proxy_enabled_hosts>
```

17. Add the following ns_data_provider node:

```
<ns_data_provider id="obieeNsdp"
class="com.oracle.utilities.birdseye.BirdseyeNSDP" />
```

18. 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 the 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 the 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 the Custom MapViewer

Note: The custom MapViewer is required to integrate weather information into Outage Analytics.

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.

Post-deploying the Custom MapViewer

Perform the following steps after deploying the custom MapViewer:

1. Log into the MapViewer: http://<Server>:<port>/mapviewer.
2. Update the MapViewer configuration by navigating to MapViewer > Administration > Configuration. Login to the Mapviewer at this location: http://<HOST>:<MANAGERPORT>/mapviewer
3. Add the below content in the mapViewerConfig.xml with the appropriate values:

```
<map_data_source name="MAPCONN"
jdbc_host="<DB server name>"
jdbc_sid="//<DB Service name>"
jdbc_port="1521"
jdbc_user="DWADM"
jdbc_password="!<DWADM user password>"
jdbc_mode="thin"
number_of_mappers="32"
allow_jdbc_theme_based_foi="true"
/>
```

   Note: The exclamatory mark in the front of the password ensures that the password is encrypted.

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

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

Enabling WriteBack

For enabling the Write Back, perform the following steps:

1. Log into Analytics and navigate to **Administration>Manage Privileges>WriteBack>Write Back to Database**.
2. Click **Denied:Authenticated User** and select the permission **Granted.**

Enabling the Analytics Help

To enable the **Analytics' Help**, perform these steps:

1. Download *Oracle Utilities Analytics v2.5.2 Getting Started Guide* from Oracle Software Delivery Cloud (https:// edelivery.oracle.com).
2. After downloading *Oracle Utilities Analytics v2.5.2 Getting Started Guide,* change the name of the OUA_Getting_Started_Guide_2.5.2.pdf file to **OUASA Help.pdf**.
3. Place the **Help** file in <install_dir>/Skin/res, where <install_dir> is the Oracle Utilities Analytics Dashboard Component installation directory.
4. Run the following commands:

   For UNIX:
   Perform the following steps:

   a. Navigate to <Install_Dir>/bin directory.
   b. Initialize the environment with the ./splenviron.sh -e <envname> command.
   c. cd $SPLEBASE/bin.
   d. Run ksh ./deployanalyticsear.sh.
   e. Enter the WebLogic Domain Console password. For example, weblogic123.

For Windows:

Perform the following steps:

a. Navigate to <Install_Dir>/bin directory.

b. Initialize the environment with the ./splenviron.cmd -e <envname> command.

c. cd %SPLEBASE%/bin.

d. deployanalyticsear.cmd.

e. Enter the WebLogic Domain Console password. For example, weblogic123.

f. Restart the Oracle Utilities Analytics core services.

g. Restart WebLogic and all Oracle Utilities Analytics services after the Oracle Business Intelligence Enterprise Edition deployment is completed.

Enabling the 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 the 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**.

Chapter 4

Upgrading Oracle Utilities Analytics

This chapter provides an overview of upgrading Oracle Utilities Analytics v2.5.2 from an earlier version:

- Supported Upgrade Paths
- Upgrading Oracle Utilities Analytics

Supported Upgrade Paths

The direct upgrade to Oracle Utilities Analytics v2.5.2 is supported from Oracle Utilities Analytics v2.5.0.0.4.

> **Important Note:** For upgrading from a version not supported by direct upgrade path, the product must be first upgraded to Oracle Utilities Analytics v2.5.0.0.4, and then upgraded to Oracle Utilities Analytics v2.5.2.

Upgrading Oracle Utilities Analytics

> **Note**: Ensure to install jdk_1.6.0_35, Weblogic 10.3.6 and Oracle Data Integrator 11.1.1.7.0 softwares on Oracle Utilities Analytics Application server if planning to register source application for the first time with Oracle Data Integrator based ETL.

To upgrade to Oracle Utilities Analytics v2.5.2, users must upgrade to Oracle Utilities Analytics v2.5.0.0.4 if it is on earlier version of product.

This section describes the procedure to upgrade to Oracle Utilities Analytics v2.5.2:

- Prerequisites
- Upgrading Oracle Utilities Analytics Database Component
- Upgrading Oracle Utilities Analytics Based ELT Component
- Upgrading Oracle Utilities Analytics Administration Tool Component
- Upgrading Oracle Utilities Analytics Dashboards Components

Prerequisites

The required prerequisites are based on the source applications you are using:

- Oracle Data Integrator Based Source Applications
  (Oracle Utilities Customer Care and Billing, Oracle Utilities Operational Device Management)

- Oracle Warehouse Builder Based Source Applications
  (Oracle Utilities Mobile Workforce Management, Oracle Utilities Meter Data Management, Oracle Utilities Network Management System)

Oracle Data Integrator Based Source Applications

Note: Ensure to copy jdk_1.6.0_35 on Oracle Data Integrator server and Oracle Data Integrator 11.1.1.7.0 softwares on the Oracle Data Integrator server.

Note: Make sure that source applications are down and no one is accessing the source database. However, the source database must be up and running.

Perform the following steps as a part of prerequisites:

1. Connect to the MDADM schema of the Oracle Utilities Analytics database and execute the SQL mentioned below to get all the context codes.
2. Select **CONTEXT_CD** from the b1_prod_instance where CONTEXT_CD<>'B1';.
3. For each context returned by the query, perform the following steps:
   a. Connect to the source database corresponding to context code with sys user and execute the following command:

      ```
      alter system switch logfile
      select SEQUENCE# from v$Log where STATUS='CURRENT';
      ```

   b. Note down the result of the query mentioned above.
   c. Connect to the MDADM schema of the Oracle Utilities Analytics database and execute the SQL mentioned below:

      ```
      Select DB_HOST,GG_HOME from b1_gg_cfg where
      GG_CFG_CD='<Context_code>' to get source GoldenGate server and
      Oracle GoldenGate home on source server.
      ```

   d. Connect to the source GoldenGate server and log into the source Oracle GoldenGate prompt.

      ```
      cd <GG_Home>
      ./ggsci
      ```

   e. Execute the following command:

      ```
      info extract <Context_codeXXX>,showch
      For example, info extract CCB1AAX,showch
      ```

      In the **Recovery Checkpoint** section, sequence should be equal or greater than one returned by "select SEQUENCE# from v$Log where STATUS='CURRENT'"query.

      For example,

      ```
      GGSCI (slc03qmb) 2> info extract CCB1AAX,showch


      Recovery Checkpoint (position of oldest unprocessed transaction in the data source):
        Thread #: 1
        Sequence #: 187
        RBA: 24701968
        Timestamp: 2015-06-17 22:13:59.000000
        SCN: 0.6108751 (6108751)
        Redo File: /scratch/app/gbuora/oradata/CCBI32DM/redo01.log
      ```

      Repeat the check mentioned in the **step e** for each extract process.

   f. Also make sure that the pump processes transfer all the changes to the target server. Lag at the **Chkpt** and **Time Since Chkpt** should look as shown below.

For example,

```
GGSCI (slc03qmb) 6> info all

Program     Status      Group       Lag at Chkpt  Time Since Chkpt

MANAGER     RUNNING
EXTRACT     RUNNING     CCB1AAP     00:00:00      00:00:01
EXTRACT     RUNNING     CCB1AAX     00:00:00      00:00:08
EXTRACT     RUNNING     CCB1ABP     00:00:00      00:00:09
EXTRACT     RUNNING     CCB1ABX     00:00:00      00:00:08
EXTRACT     RUNNING     CCB1ACP     00:00:00      00:00:06
EXTRACT     RUNNING     CCB1ACX     00:00:00      00:00:02
EXTRACT     RUNNING     CCB1ADP     00:00:00      00:00:02
EXTRACT     RUNNING     CCB1ADX     00:00:00      00:00:02
```

g. On the source database server, drop all the GoldenGate processes by following these steps:

   Connect to the MDADM schema of the Oracle Utilities Analytics database and execute the following query to get GoldenGate Owner name in the source database.

   select SCHEMA_NAME

   from MDADM.B1_CONTEXT_CFG_VW

   where LSCHEMA_NAME = 'Journal'

   and CONTEXT_CD = '<Context_code>';

   Login to source GoldenGate prompt.

   cd <GG_Home>

   ./ggsci

   Execute the following commands:

   dblogin userid < GoldenGate Owner >,PASSWORD < GoldenGate Owner password>

   stop <Context_code>*

   For example:

   stop CCB1*

   delete <Context_code>*

   For example:

   delete CCB1*

   Stop mgr

h. Connect to the sys user of the source database server and execute the following command:

```
<GG_Home>/ddl_disable.sql
```

i. Rename the existing source GG Home on the source server. Remember to note down **the GoldenGate manager port number** and **source GoldenGate home** before renaming it.

   For example, mv <GG_Home> <GG_Home>.bkp

j. On the Oracle Utilities Analytics database server, make sure the replicate processes apply all changes for the context code.

   - Connect to the MDADM schema of the Oracle Utilities Analytics database and execute below to get target server and GoldenGate Home on the target server.

     ```
     select DB_HOST,GG_HOME from b1_gg_cfg where GG_CFG_CD='B1';
     ```

   - Connect to the target server and login to the GoldenGate prompt.

Execute the following commands:

cd <GG_Home >

```
./ggsci
Dblogin userid MDADM,password <MDADM user password>
Send replicat <Context_codeXX>,status
```

The current status will be at EOF as shown below in the screenshot.

```
GGSCI (slc07heq) 2> SEND REPLICAT CCB1AA ,status

Sending STATUS request to REPLICAT CCB1AA ...
  Current status: At EOF
  Sequence #: 11
  RBA: 14889
  0 records in current transaction
```

- Check this for each replicat process for the context code.
- After checking the current status, each replicat process for the context code, execute the following commands:

  Stop <Context_code>*

  For example:

  stop CCB1*

  Delete <Context_code>*

  For example:

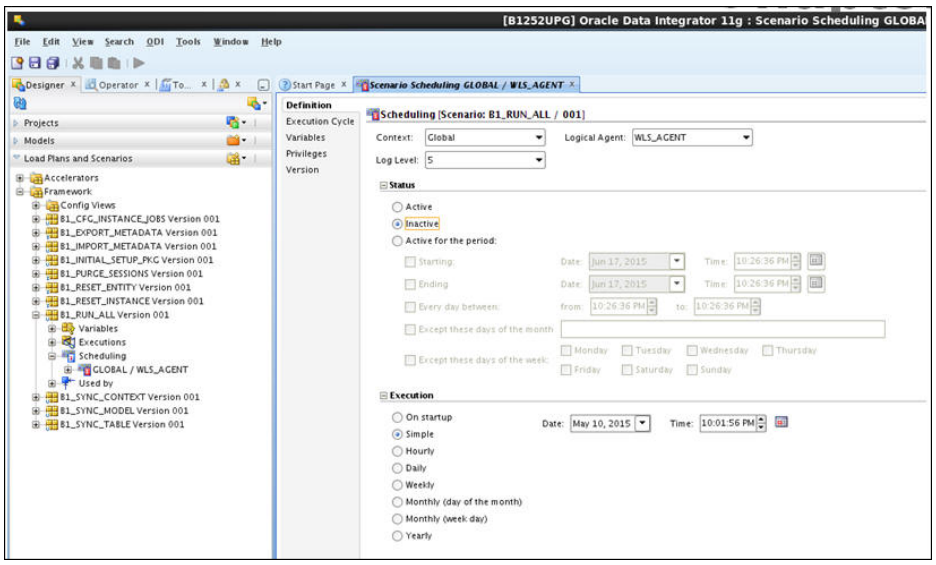
  delete CCB1*

4. After all source applications changes have been synced in the Oracle Utilities Analytics database, execute the following command after connecting to the target GoldenGate Home prompt.

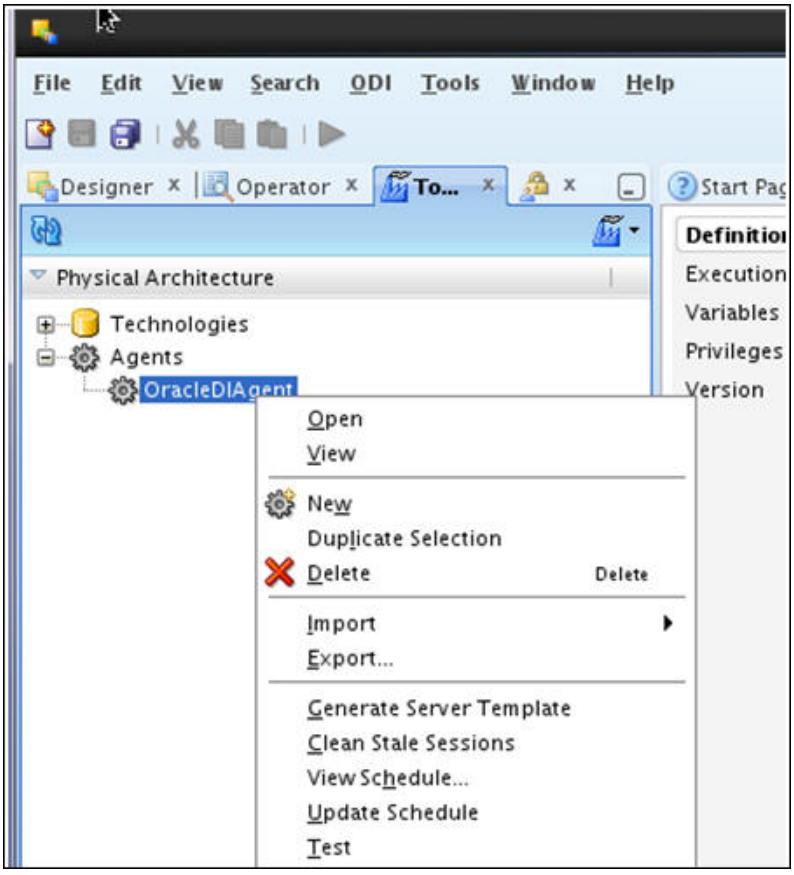
   ```
   ./ggsci
   Stop mgr
   ```

5. Rename the existing target GoldenGate Home directory and remember to note down **the GoldenGate manager port number** and **target GoldenGate home** before renaming it.

6. Stop BI_RUN_ALL by performing the steps mentioned below:
Login to **Oracle Database Integrator Studio**. Double click on **Global/WLS_AGENT** and select **Inactive Radio** button and save the changes.



Go to the **Topology** tab. Right -click on the **OracleDIAgent** and select the **Upgrade Schedule** option.



7. Check all the jobs are completed by executing the following query after connecting the Oracle Utilities Analytics database. Note that this is applicable if the source system is Oracle Utilities Customer Care Billing / Oracle Utilities Operational Device Management.

```
SELECT
  *
FROM mdadm.bl_jobs_vw
WHERE status_flg NOT IN ('D', 'E', 'RP');
```

   Note: No rows should be returned from the query mentioned above. If any rows are returned, that means jobs are not yet completed.

8. **Stop the Oracle Data Integrator admin and managed servers**.

9. Upgrade Oracle Data Integrator software on Oracle Data Integrator server.

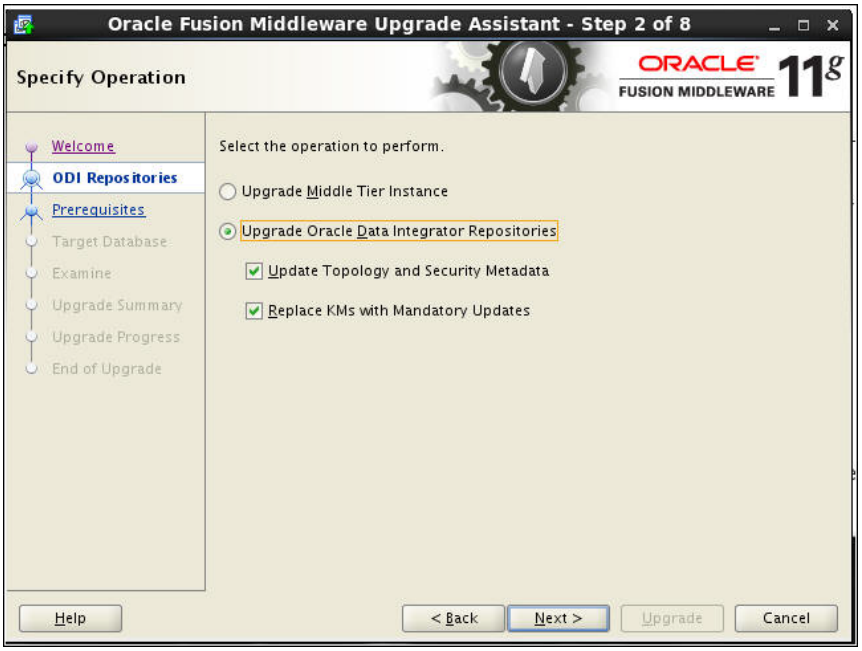
   a. Take a backup of existing Oracle Data Integrator 11.1.1.6.0 Middleware home.

   b. Install Oracle Data Integrator 11.1.1.7.0 and provide JDK as jdk_1.6.0_35 and Middleware home as Middleware home, which was used by Oracle Data Integrator 11.1.1.6.0. Also, skip the repository creation step while installing Oracle Data Integrator 11.1.1.7.0.

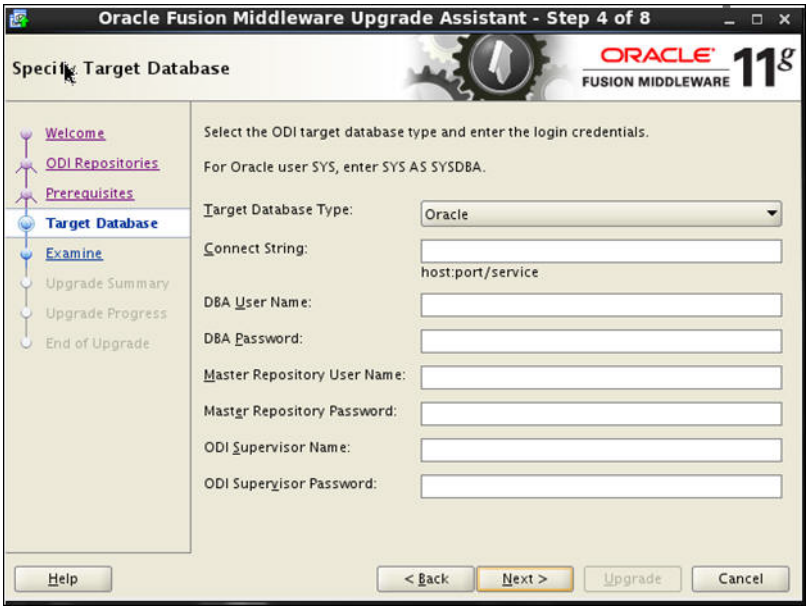
   c. Navigate to $ORACLE_ODI_HOME/bin and execute the following command:

      ./ua

   d. Oracle Fusion Middleware Upgrade Assistant tool opens up. Go to **Oracle Data Integrator Repository** page, select the **Upgrade Oracle Data Integrator Repositories** option and click **Next**.



e. Enter all the required details and click **Next**.



Oracle Warehouse Builder Based Source Applications

If you have Oracle Warehouse Builder based source application (Oracle Utilities Mobile Workforce Management, Oracle Utilities Network Management System and Oracle Utilities MDM), bring them down to make sure no one is accessing the application(s).

> **Note**: **You must upgrade Oracle Warehouse Builder based source applications to a version, which support Oracle Utilities Analytics v2.5.2. And, you must upgrade the source database to v12.1.0.2**.

Here are the steps to be followed:

1. Generate final extract from the source application and upload to the warehouse.
2. Complete all the source side configurations.

   > **Note**: For more information on the Source Side Configuration details, refer to the **Chapter 5: Configuring Oracle Utilities Analytics** in *Oracle Utilities Analytics Administration Guide*.

3. Install Oracle GoldenGate on the source GoldenGate server. Make sure that the database location is as per requirement at the time of GoldenGate installation.

   > **Note: Ensure that you remember the GoldenGate Home and GoldenGate Manager Process Port Number.**

4. Go to the GoldenGate home location and execute the following command:

   ```
   cd <GG_Home>
   mkdir diroby
   ```

5. Keep the source database is in the **archivelog** mode.
6. Connect to source database with sys user and execute the following command.

   ```
   alter database add supplemental log data (primary key) columns
   ```

7. Set **enable_goldengate_replication** parameter in database to true.
8. Create the new tablespace in the source database.
9. Create a database user in the source database, which will be the GoldenGate Owner in the source database and assign the created tablespace as a default tablespace to this user.

10. Connect to the source database with sys user and execute the following commands:

    Note: Make sure to change GoldenGate owner placeholder with actual name of database user as created in previous step.

    ```
    grant CREATE SESSION,CONNECT,RESOURCE,ALTER SYSTEM to <GoldenGate
    Owner>;
    grant unlimited tablespace to <GoldenGate owner> with admin option;
    EXECUTE dbms_goldengate_auth.grant_admin_privilege('<GoldenGate
    Owner>','capture');
    grant unlimited tablespace to <GoldenGate Owner> with admin option;
    Revoke dba from <GoldenGate Owner>;
    grant create any view to <GoldenGate Owner>;
    grant select any dictionary to <GoldenGate Owner>;
    GRANT CREATE ANY DIRECTORY TO <GoldenGate Owner>;
    GRANT DROP ANY DIRECTORY TO <GoldenGate Owner>;
    GRANT EXP_FULL_DATABASE TO <GoldenGate Owner>;
    GRANT IMP_FULL_DATABASE TO <GoldenGate Owner>;
    ```

    If the source application Oracle Utilities Meter Data Management, then execute the query mentioned below:

    ```
    Grant select on <application ADM Schema>.F1_MST_CONFIG to
    <GoldenGate Owner>;
    Grant select on <application ADM Schema>.F1_EXT_LOOKUP_VAL to
    <GoldenGate Owner>;
    ```

11. Execute Oracle GoldenGate scripts.

    ```
    cd <GG_Home>
    ./ggsci
    create subdirs
    ```

12. Connect to sys user and execute the following commands.

    ```
    cd <GG_Home>
    @marker_setup.sql
    @ddl_setup.sql
    @role_setup.sql
    grant GGS_GGSUSER_ROLE to <GoldenGate owner>;
    ```

Upgrading Oracle Utilities Analytics Database Component

Note: **Upgrade the Oracle Utilities Analytics database to 12.1.0.2 version, ignore if the Oracle Utilities Analytics database is already on 12c version.**

Note: Upgrade the Oracle Utilities Analytics Database component on the Oracle Utilities Analytics database server.

Note: Install 12.1.2.1 version of Oracle GoldenGate on the Oracle Utilities Analytics database server under the same directory where the older version of Oracle GoldenGate was installed and start the manager process on the same port. Remember the step 5 of the section Prerequisites**.** This is applicable only if the source application is using Oracle Data Integrator based ELT.

This section describes how to upgrade the database component of Oracle Utilities Analytics v2.5.2. It includes the following topics:

- Copying and Decompressing the Install Media
- Creating the Users and the Tablespaces
- Installing the RELADM Schema

- Installing the MDADM Schema
- Installing the DWADM Schema
- Configuring the Spatial Data

Copying and Decompressing the Install Media

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

1. Download Oracle Utilities Analytics version 2.5.2 Oracle Database part (**Oracle Utilities Analytics V2.5.2 Oracle Database Multiplatform.zip**) from the Oracle Software Delivery Cloud (https:// edelivery.oracle.com).
2. Create a temporary directory, such as c:\OUA\temp for a Windows machine or /OUA/temp for a Linux machine. This directory (referred as <TEMPDIR> below) 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 V2.5.2 Oracle Database Multiplatform.zip** to <TEMPDIR> using any zip utility.

Creating the Users and the Tablespaces

1. Ensure to create users in the database with the following names without giving specific roles if these do not exist already:
DWADM, DWUSER, DWREAD, MDADM, RELADM, MASTER_REPO, WORK_REPO and DWSTAGE
2. Connect to the sys user and revoke the DBA privilege from the following users if the DBA privilege has been granted to them:
DWADM,MDADM,RELADM,MASTER_REPO,WORK_REPO AND DWSTAGE
3. Ensure to create roles with the following names if these do not exist already:
DW_USER, DW_READ, DW_REPLICATE and DW_PRIVS_ROLE.
4. Connect to the sys user, execute the **Usersgrants.sql** in /Scripts/Usersgrants.sql. This SQL provides the required grants to the created users.
5. Copy the **DuplicateRecordCheck.sql** file from the BI252\DWADM\Pre-Installation directory to the database server under ../<Temp> directory.
6. Connect to the DWADM schema and execute the ../<Temp>/DuplicateRecordCheck.sql.

   Note: If it displays no rows selected, it is good to proceed. If it displays some data, then contact support team and do not proceed with the installation. It is recommended to wait until you get the data fix script.

Installing the RELADM Schema

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

This section describes initial installation of the RELADM schema, including:

- Reviewing the Storage.par file
- Installation Steps
- Generating the Database Statistics

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.
- The location for jar files (the Jar files are bundled with the database package in BI252\RELADM\Jarfiles).
- Java Home (for example: C:\Java\jdk1.6.0_20).

Reviewing the Storage.par file

The **storage.par** file (that comes with the product and is in location ..\BI252\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 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 the RELADM user does not have quota on CISTS_01 tablespace, you must edit the Storage.par file to indicate the correct tablespace name on which RELADM has quota.**

Installation Steps

> **Note**: Ensure to run the **CDXDBI.exe** (in the step below) from a Windows desktop that has the Oracle 12c 32 bit client and the 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 the target database to connect to the target database.

Perform the following steps to install the RELADM schema:

1. Run the **CDXDBI.exe** from ..\BI252\RELADM\Install-Upgrade. Run the utility from the command prompt. The utility prompts you to enter values for the following parameters:
   - The name of the target database: <DB NAME>.
   - The password for the system user account in the database (in silent mode).
   - The name of the owner of the database schema: RELADM.
   - The location of Java Home: <..\jdk1.6.0_20>.
   - The location of TUGBU Jar files: <..\BI252\RELADM\Jarfiles>.
   - The password for the user (in silent mode): <RELADM user password>.
   - The Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.

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

2. The utility creates the RELADM 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 the 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');
```

Installing the MDADM Schema

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

This section describes initial installation of the MDADM schema, including:

- Reviewing the Storage.par file
- Installation Steps
- Generating the Database Statistics

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.
- The location for jar files (the Jar files are bundled with the database package in BI252\MDADM\Jarfiles).
- Java Home (for example: C:\Java\jdk1.6.0_20).

Reviewing the Storage.par file

The **storage.par** file (that comes with the product and is in location ..\BI252\MDADM\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 the MDADM user does not have quota on CISTS_01 tablespace, you must edit the Storage.par file to indicate the correct tablespace name on which MDADM has quota.

Installation Steps

Perform the following steps to install the MDADM schema:

> **Note**: Ensure to run the **CDXDBI.exe** (in the step below) from a Windows desktop that has the Oracle 12c 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 the target database to connect to the target database.

1. Run the **CDXDBI.exe** from ..\BI252\MDADM\Install-Upgrade. Run the utility from the **Command Prompt**. The utility prompts you to enter values for the following parameters:
   - The name of the target database:<DB NAME>.
   - The password for the system user account in the database (in silent mode).
   - The name of the owner of the Database Schema: MDADM.
   - The location of Java Home: <..\jdk1.6.0_20>.
   - The location of TUGBU Jar files: <..\BI252\MDADM\Jarfiles>.
   - The password for the user (in silent mode).
   - The Oracle user with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle user with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle database role with the read-write privileges to the database schema: No input needed. Press **Enter** and continue.
   - The Oracle database role with the read-only privileges to the database schema: No input needed. Press **Enter** and continue.
2. The utility creates the MDADM 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 the 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');
```

Installing the DWADM Schema

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 initial installation of the DWADM schema, including:

- Executing Pre-installation SQL
- Connect to the DWADM schema and execute the PreIndexCreation.sql.
- Installation Steps
- Installation Steps

- Generating the Database Statistics

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.
- The location for jar files (the Jar files are bundled with the database package in BI252\DWADM\Jarfiles).
- Java Home (for example: C:\Java\jdk1.6.0_20).

Executing Pre-installation SQL

Copy the …\Pre-Installation\PreInstallAddColumns.sql and …\Pre-Installation \PreIndexCreation.sql scripts to the database server under ../<Temp> directory.

- Change the current directory to ../<Temp>.
- Connect to the DWADM schema and execute the PreInstallAddColumns.sql.
- Connect to the DWADM schema and execute the PreIndexCreation.sql.

Reviewing the Storage.par file

The **storage.par** file (that comes with the product and is in location ..\BI252\DWADM\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 the DWADM user does not have quota on CISTS_01 tablespace, you must edit the Storage.par file to indicate the correct tablespace name on which DWADM has quota.**

Installation Steps

Perform the following steps to install the DWADM schema:

> **Note**: Ensure to run the **CDXDBI.exe** (in the step below) from a Windows desktop that has the Oracle 12c 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 the target database to connect to the target database.

1. Run the **CDXDBI.exe** from ..\BI252\DWADM\Install-Upgrade. Run the utility from the **Command Prompt**. The utility prompts you to enter values for the following parameters:
   - The name of the target database: <DB NAME>.
   - The password for the system user account in the database (in silent mode).
   - The name of the owner of the Database Schema: DWADM.
   - The location of Java Home: <..\jdk1.6.0_20>.
   - The location of TUGBU Jar files: <..\BI252\DWADM\Jarfiles>.
   - The password for the user (in silent mode).
   - The Oracle user with the read-write privileges to the database schema: DWUSER.
   - The Oracle user with the read-only privileges to the database schema: DWREAD.
   - The Oracle database role with the read-write privileges to the database schema: DW_USER.
   - The Oracle database role with the read-only privileges to the database schema: DW_READ.
2. If you choose to continue, the 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 installing 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.

Postinstallation Steps

Connect to the DWADM schema of the Oracle Utilities Analytics database and execute the following:

```
...\BI252\DWADM\Post-Upgrade\ControlZoneUpdate.sql
```

Connect to the Oracle Utilities Analytics database with the system user and execute the script mentioned below:

```
…/BI252\DWADM\Post-Upgrade\DataCorrection2511.sql
```

Generating the 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('DWADM');
```

Configuring the Spatial Data

Refer to the Chapter 6: Spatial Configuration for the details regarding the spatial configuration.

Upgrading Oracle Utilities Analytics Based ELT Component

Note: Upgrade the Oracle Utilities Analytics Based ELT component on the Oracle Utilities Analytics application server.

This section describes how to upgrade the ELT component of Oracle Utilities Analytics v2.5.2. It includes the following topics:

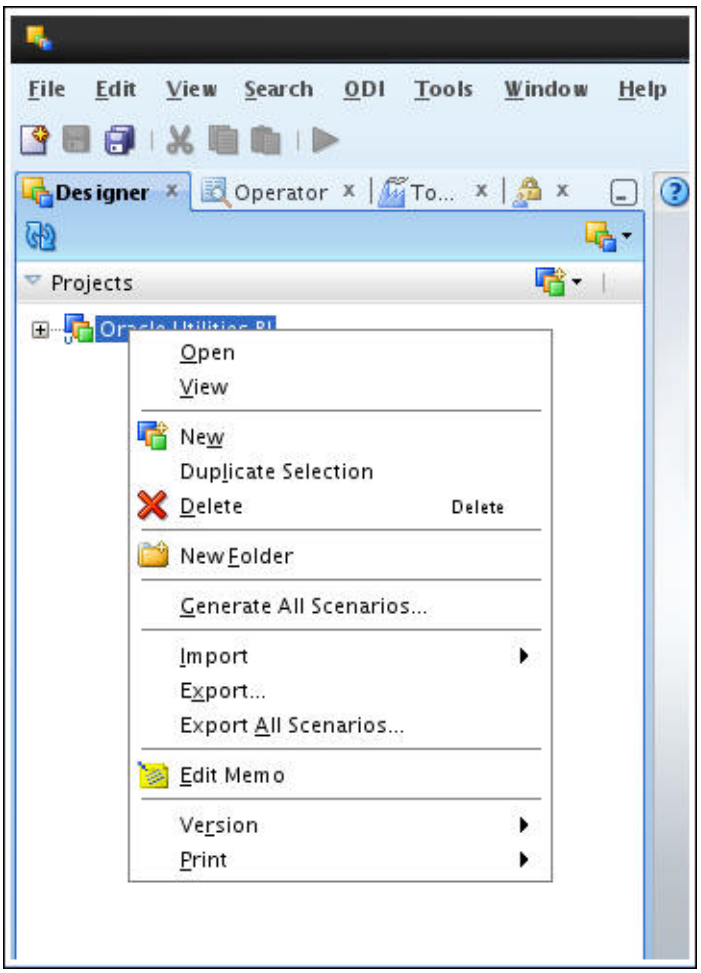
- Prerequisites
- Copying and Decompressing the Install Media
- Starting the Installer
- Upgrade Steps
- Post-Upgrade Tasks
- Configuring Source Applications

Prerequisites

Perform these steps before upgrading Oracle Utilities Analytics:

1. Connect to the MDADM schema and execute "select max(global_cfg_id) from b1_global_cfg;" to get the maximum value
2. Advance the B1_GLOBAL_CFG_SEQ sequence in the MDADM schema to value returned by the previous query.
3. Login to Oracle Data Integrator Studio. Go to **Designer** tab. Go to **Load Plans and Scenarios**. Select all the scenarios, except **Accelerators and Framework** folder. Right-click and click on **Delete**.

4. Go to **Designer** tab > **Projects**. Right-click on **Oracle Utilities BI Project** and click **Delete** option.



Copying and Decompressing the Install Media

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

1. Download the Oracle Utilities Analytics version 2.5.2 Multiplatform part (**Oracle Utilities Analytics V2.5.2 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 <TEMPDIR> below). 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 V2.5.2 Multiplatform.zip** to <TEMPDIR>.

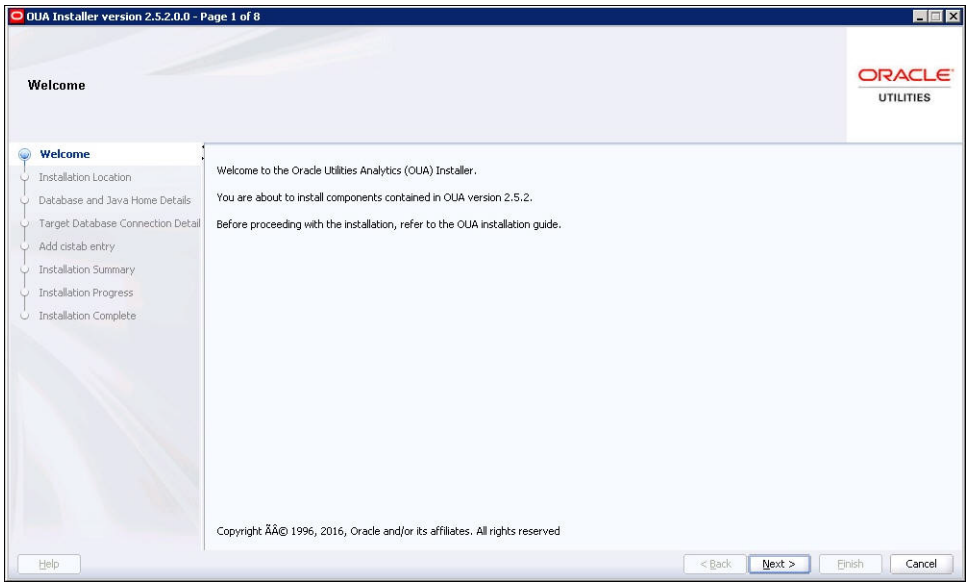
Starting the Installer

Go to the temporary folder where you have downloaded the installer and run the following command from this folder:

```
java -jar <TEMPDIR>/OUA_2.5.2.0.0_generic.jar -logLevel finest
```

Note: The minimum JDK required for running the Oracle Utilities Analytics installer is JDK 1.7.

The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.



A navigation pane on the left that summarizes the tasks the installer will help you complete. Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.

Upgrade Steps

To install Oracle Data Integrator Based ETL, perform the following steps

1. Run the Oracle Utilities Analytics Installer. The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.
2. The **Installation Location** page appears. Define the **Installation Location** and click **Next.**
3. The **Select Installation Type** page appears. In the **Select Installation Type** page, select **ODI Based ETL** and click **Next**.

   Note: Based on the selected installation type, the options on the left navigation panel changes. When you select **Oracle Data Integrator Based ETL** as an **Installation Type**, you need to define **Database and Java Home Details**, **Target Database Connection Details**, **Oracle Data Integrator Home and Schema Details**, **Oracle Data Integrator Agent and Repository Details** and **Target GoldenGate Details**.
4. The **Database and Java Home Details** page appears. Enter the following details in the respective fields and click **Next**.

Field Name	Description	Value
Database Client Home	This is the database client home location.	Example: /u01/app/product/12.1.0/dbhome_1
Java Home	This is the JDK home location.	Provide location of JDK 1.6 (1.6.0_35+) Example: /u01/jdk_1.6.0_35

5. The **Target Database Connection Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
Host	The host name of the server where the database resides.	Oracle Utilities Analytics Database Server
Port	The database port number on the database server used for connecting to the database.	Oracle Utilities Analytics Database Port. The default value is 1521.
Service Name	The service name for the database	
Target Schema Password	The password for the target schema (DWADM).	
Confirm Target Schema Password	Confirm the password for the target schema (DWADM) here.	
Metadata Schema Password	The password for the metadata schema (MDADM).	
Confirm Metadata Schema Password	Confirm the password for the metadata (MDADM) schema here.	

6. The **ODI Home and Schema Details** page. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
Weblogic Home	The directory where WebLogic to be used for Oracle Data Integrator has been installed.	Example: /u01/Middleware/wlserver_10.3
ODI Home	The directory where Oracle Data Integrator (ODI) has been installed.	Example: /u01/Middleware/Oracle_ODI1
Supervisor User	The name of the Oracle Data Integrator Supervisor.	SUPERVISOR
Supervisor Password	The password of the Oracle Data Integrator Supervisor.	SUPERVISOR user password
Confirm Supervisor Password	Confirm the password of the Supervisor here.	
Master Repository Schema Name	Oracle Data Integrator master repository schema name.	MASTER_REPO
Master Repository Schema Password	The password of the master repository schema.	MASTER_REPO user's password
Confirm Master Repository Schema Password	Confirm the password of the Oracle Data Integrator master repository schema here.	

Field Name	Description	Value
Work Repository Schema Name	Oracle Data Integrator work repository schema name.	WORK_REPO
Work Repository Schema Password	The password of the work repository schema.	WORK_REPO user's password
Confirm Work Repository Schema Password	Confirm the password of the Oracle Data Integrator work repository schema here.	

7. The **ODI Agent and Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
ODI Agent Host	The host on which Oracle Data Integrator WebLogic Domain is created.	It is Oracle Data Integrator Server host name.
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.
Master Repository ID	Oracle Data Integrator Master Repository ID.	The default value is 601.
Work Repository ID	Oracle Data Integrator work Repository ID.	The default value is 602.

8. The **Target GoldenGate Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
GoldenGate Host	The host on the Oracle GoldenGate Manager.	
GoldenGate Home	This is the Oracle GoldenGate installed location.	Example: /opt/local/ggs_12.1.2.0.0
Target Database Home	This is the database home installed location on the target database server. In case GoldenGate for target is not installed on the OUA database server, provide oracle client home location on the server on which GoldenGate is installed.	Example: /u00/oracle/app/oracle/product/11.2.0/dbhome_1

Field Name	Description	Value
GoldenGate Manager Port	The port number on which Oracle GoldenGate Manager is running on the GoldenGate host.	The default value is 7830
GoldenGate Dynamic Min Port	This is the dynamic minimum port configured in Oracle GoldenGate.	Provide the start range value set for the target GoldenGate manager process. The default value is 7830.
GoldenGate Dynamic Max Port	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. The default value is 7880.
GoldenGate Algorithm	This is the algorithm configured in Oracle GoldenGate on the target database server.	The default value is 1.
GoldenGate Encryptkey	This is the Encrypt Key configured in Oracle GoldenGate on the target database server.	The default value is "DEFAULT".
GoldenGate Shared Secret	This is shared secret key configured in Oracle GoldenGate on the target database server. The default value is"DEFAULT".	Go to the Oracle GoldenGate prompt and run the command: *encrypt password <password of MDADM user>, encryptkey DEFAULT* Provide the result of above command as the value.

9. The **Add Cistab Entry** page appears.
10. Register the installed Oracle Utilities Analytics environment in the /etc/cistab file for Unix based Operating systems and in the C:\spl\etc\cistab file for Windows Operating system. The **cistab** file needs to be created in the specified location if it does not already exist. Copy the text shown, add the text in a new line in the **cistab** file and save the file. Click **Next**.
11. The **Installation Summary** page appears. Verify the installation options you selected.
12. Click **Install** to begin the installation.

    If you want to make any changes to the configuration before starting the installation, use the navigation pane and select the topic you want to edit.
13. The **Installation Progress** page appears which allows you to see the progress of the installation. Operations being performed as a part of the installation are logged to the terminal from which the installer was run. The Detailed logs of the installation are also available in the logs/system directory under the installation location.

    If you want to quit before the installation is completed, click **Cancel**. Doing so will result in a partial installation; the portion of the software that was installed on your system before you click **Cancel** will remain on your system, and you will have to remove it manually.
14. In the **Installation Completed** page, click **Finish** to dismiss the installer.

The Oracle Data Integrator based ETL is now installed.

Post-Upgrade Tasks

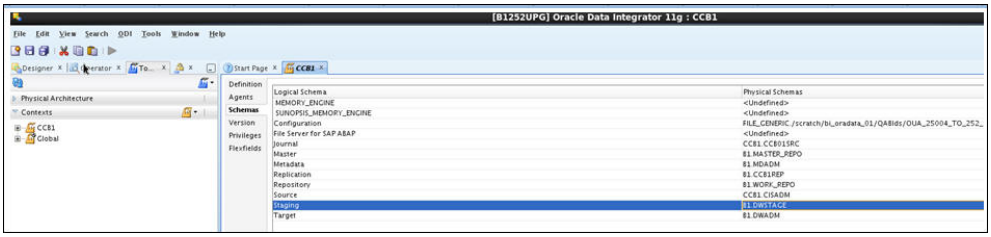
Perform the following steps:

1. Login to Oracle Data Integrator Client.

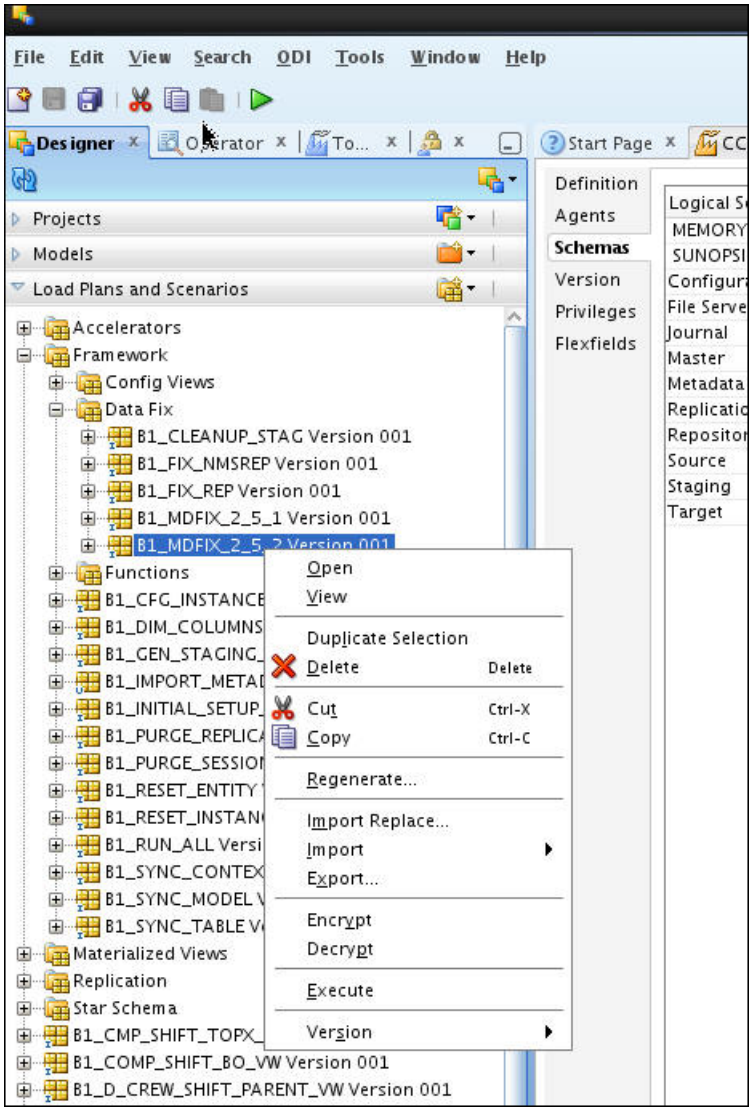
1. Navigate to **Topology** > **Contexts.**

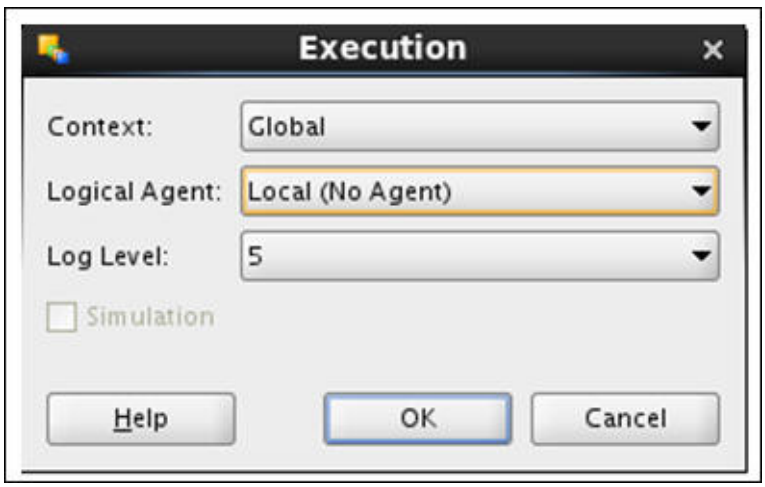
2. Double-click on each context, except **Global.**

3. Navigate to **Schemas** tab.
   Check if the staging logical schema is mapped to the B1.DWSTAGE physical schema.
   If staging logical schema is not mapped, then map it to the B1.DWSTAGE, and click on some other mapping and click **Save**.
   Close and reopen to verify that the mapping has been saved.

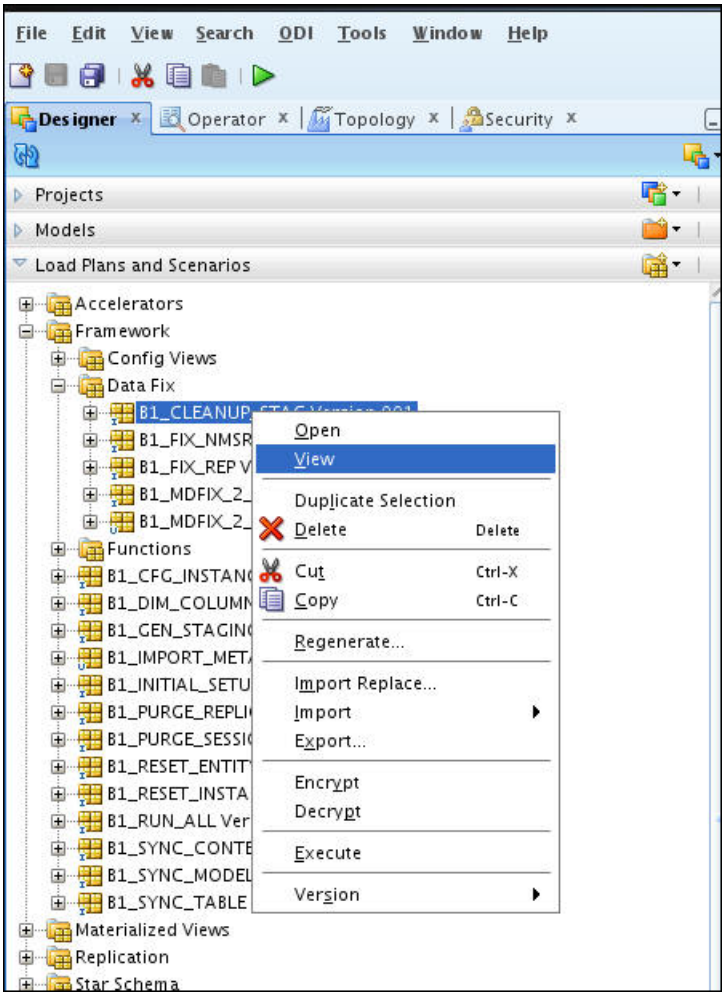


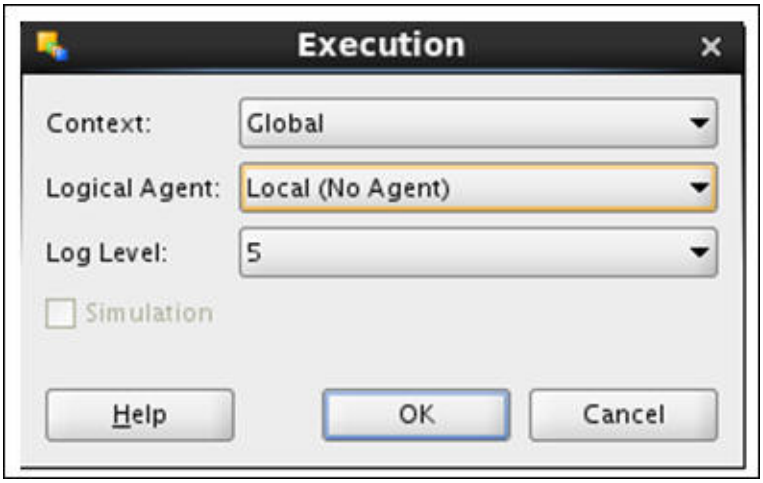
4. Login to Oracle Data Integrator Studio. Go to **Designer** tab. Navigate to **Load Plans and Scenarios** > **Framework** > **Data Fix.** Right click on **B1_MDFIX_2_5_2** and select **Execute.**





5. Login to Oracle Data Integrator Studio. Go to Designer tab. Navigate to **Load Plans and Scenarios** > **Framework** > **Data Fix**. Right-click on **B1_CLEANUP_STAG** and select **Execute** option.





6. Connect to the DWSATGE schema of the Oracle Utilities Analytics database and drop the tables mentioned below if these exist:

```
ERR_CF_PAY_PLAN
ERR_CF_PA_SNAP
ERR_CF_FT_GL
ERR_CF_PAY_PLAN_SNAP
ERR_CF_SA_BILLING
ERR_CF_PA
ERR_CF_CASE
ERR_CF_CASE_LOG
ERR_CF_FT
ERR_CF_COLL_EVT
ERR_CF_TD_ENTRY
ERR_CF_RECENT_TD_ENTRY
```

Configuring Source Applications

To configure source applications such as Oracle Utilities Meter Data Management, Oracle Utilities Mobile Workforce Management, Oracle Utilities Network Management System, which were earlier configured with Oracle Warehouse Builder, refer to section **Configuring Source** in the **Chapter 5: Configuring Oracle Utilities Analytics** in *Oracle Utilities Analytics Administration Guide.*

For the other source applications, such as Oracle Utilities Customer Care Billing, Oracle Utilities Operational Device Management, which were earlier configured with Oracle Data Integrator, perform the following steps mentioned in the below sections:

- Prerequisites
- Configuration Steps

Prerequisites

1. Install the minimum database supported version as required.

   Note: For Oracle Utilities Customer Care Billing source application, the minimum database supported version is 11.2.0.3 +14551959 database patch.

   Note: For Oracle Utilities Operational Device Management source application, the minimum database supported version is 12.1.0.2.

2. Install 12.1.2.1 version of Oracle GoldenGate on the source database server under the same directory where older version of Oracle GoldenGate was installed and make sure to start manager process at same port number. Remember the step **i** of the section Prerequisites.

   Go to GG_Home directory and perform the steps mentioned below:

   ```
   mkdir diroby
   ```

   Login to GoldenGate prompt and execute the command mentioned below:

   ```
   create subdirs
   ```

   Execute the following commands after connecting to source database with sys user:

   ```
   @marker_setup.sql
   @ddl_setup.sql
   @role_setup.sql
   grant GGS_GGSUSER_ROLE to <GoldenGate Owner>

   grant CREATE SESSION,CONNECT,RESOURCE,ALTER SYSTEM to <GoldenGate
   Owner>;
   grant unlimited tablespace to <GoldenGate Owner> with admin option;
   EXECUTE dbms_goldengate_auth.grant_admin_privilege('<GoldenGate
   Owner>','capture');
   ```

```
grant unlimited tablespace to <GoldenGate Owner> with admin option;
Revoke dba from <GoldenGate Owner>;
grant create any view to <GoldenGate Owner>;
grant select any dictionary to <GoldenGate Owner>;
GRANT CREATE ANY DIRECTORY TO <GoldenGate Owner>;
GRANT DROP ANY DIRECTORY TO <GoldenGate Owner>;
GRANT  EXP_FULL_DATABASE TO <GoldenGate Owner>;
GRANT IMP_FULL_DATABASE TO <GoldenGate Owner>;
```

Configuration Steps

To configure the source applications, perform the following steps:

1. Perform the steps for registering a source as described in the **Registering a Source** section in the **Chapter 5: Configuring Oracle Utilities Analytics** in *Oracle Utilities Analytics Administration Guide*.
2. Stop the replicat processes of the source application(s) configured in the above steps on the target server.
3. Upgrade Oracle Utilities Customer Care Billing application to 2.4.0.2 level if the source application is Oracle Utilities Customer Care Billing.
4. Start the replicat process again which was stopped in the previous step and make sure that all the changes got applied to the Oracle Utilities Analytics database.

   Note: Oracle Utilities Customer Care Billing replicat process gets stopped because of the DDL operation that is expected and you have to manually start Oracle Utilities Customer Care Billing replicat process multiple time to sync all the changes.

   Execute the following commands:

   cd <GG_Home >

   ```
   ./ggsci
   Dblogin userid MDADM,password <MDADM user password>
   Send replicat <Context_codeXX>,status
   ```

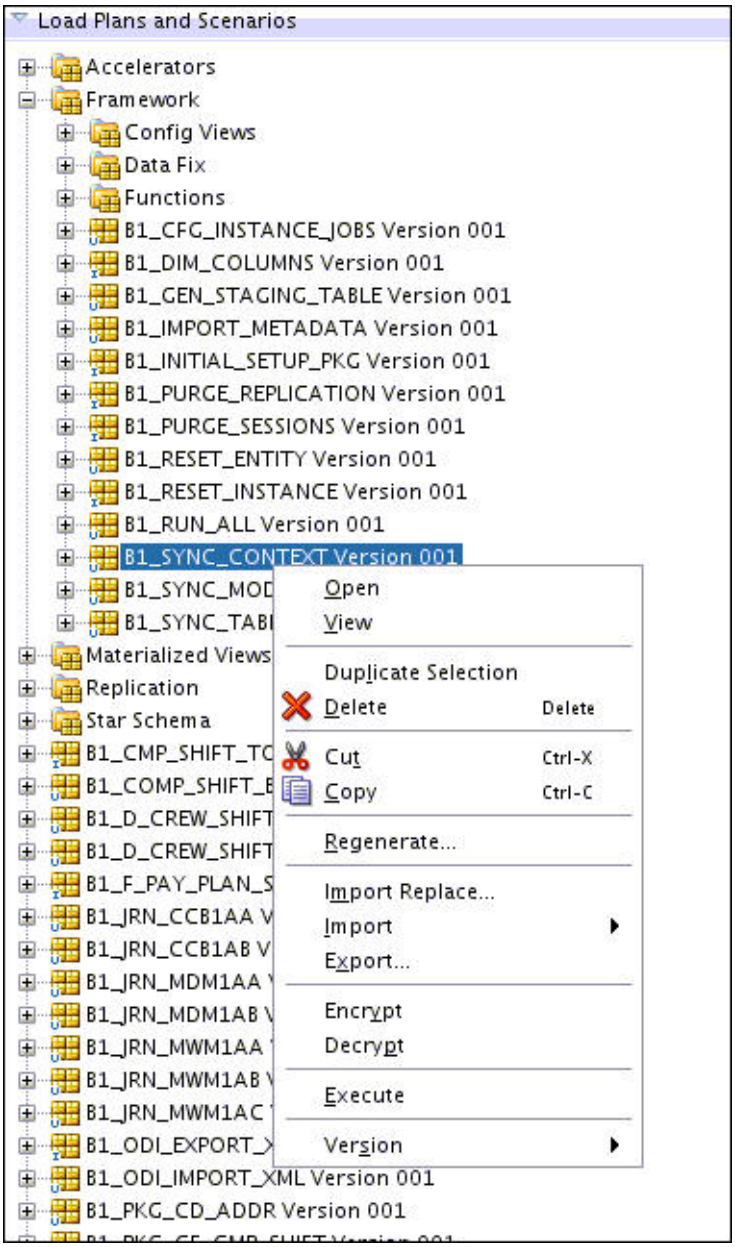
   The current status will be at EOF as shown below in the screenshot.

   ```
   GGSCI (slc07heq) 2> SEND REPLICAT CCB1AA ,status

   Sending STATUS request to REPLICAT CCB1AA ...
     Current status: At EOF
     Sequence #: 11
     RBA: 14889
     0 records in current transaction
   ```

   Check this for each replicat process.

5. After replicat, apply all the changes, execute the sync context package for Oracle Utilities Customer Care Billing.
   To execute **B1_SYNC_CONTEXT** package, login to Oracle Data Integrator Studio. Go to **Designer**. Navigate to **Load Plans and Scenarios> Framework.** Right-click on **B1_SYNC_CONTEXT** and select **Execute** option.



6. Select the context related to the source application, <no agent> as logical agent, and then click **OK**.

7. Set the Oracle Data Integrator environment and generate view for the source application by executing the following commands:

   a. Connect to the RELADM schema and execute the following query :
      select server_name,env_dir from B1_INSTALL_COMPONENTS where comp_cd='BI_ODI'; to get the server and ODI environment directory details where ODI environment is set up.

b. cd <ODI environment directory>/etc and open the ENVIRON.INI file.
Value of the SPLENVIRON variable is the Oracle Data Integrator environment name.
Note down the Oracle Data Integrator environment name.

c. cd <ODI environment directory>/bin and execute the command: ksh ./splenviron.sh -e <ODI environment name>

d. cd $SPLEBASE/bin

e. ksh ./runviewGenerator.sh -c <Context code>
Where context code is the source specific.

Upgrading Oracle Utilities Analytics Administration Tool Component

Oracle Utilities Analytics Administration Tool is an Oracle Application Express (APEX) based configuration tool that can be used to configure Oracle Utilities Analytics.

Note: Upgrade the Oracle Utilities Analytics Administration component on the Oracle Utilities Analytics database server.

This section describes how to install the Administration Tool for Oracle Utilities Analytics (OUA) configuration and change the default password of the Admin user, including:

- Upgrade Steps
- Changing the Default Password of the Admin User

Upgrade Steps

Perform the following step:

1. Download the patch 19595896 from My Oracle Support and copy to database server under the /temp directory.
Unzip the file as shown below:

```
-rw-r--r-- 1 gbuora dba 69140511 Jun 22 00:12 p19595896_426_Generic.zip
bash-4.1$ unzip p19595896_426_Generic.zip
```

```
cd /temp
```

Connect to the Oracle Utilities Analytics database with the sys user and execute the following command

a. EXEC DBMS_XDB.SETHTTPPORT(0);

b. SELECT DBMS_XDB.GETHTTPPORT FROM DUAL;

:This query should result value as zero(0) as shown in the screenshot given below:

```
SQL> EXEC DBMS_XDB.SETHTTPPORT(0);

PL/SQL procedure successfully completed.

SQL> SELECT DBMS_XDB.GETHTTPPORT FROM DUAL;

GETHTTPPORT
-----------
          0
```

c. ALTER USER APEX_PUBLIC_USER ACCOUNT UNLOCK;

d. ALTER USER APEX_PUBLIC_USER IDENTIFIED BY APEX_PUBLIC_USER;

e. @apxpatch.sql

f. @apxldimg.sql /temp/patch

g. @apex_rest_config.sql

You must remember the password for these two users, APEX_LISTENER user and APEX_REST_PUBLIC_USER

```
SQL> @apex_rest_config.sql
Enter a password for the APEX_LISTENER user              []
Enter a password for the APEX_REST_PUBLIC_USER user              []
```

2. Import the Admin Tool for Oracle Data Integrator configuration:

   a. Unzip the **Oracle Utilities Analytics V2.5.2 Oracle Database Multiplatform.zip** file. This file has a folder called AdminTool.

   b. Create the ../AdminTool directory on the database server and copy the contents of the AdminTool directory (from the zip file) to this directory.

   c. Go to the ../AdminTool directory, i.e., cd ../AdminTool.

   d. Connect as the system user and execute the following scripts:

      - Import application:
        @DeployAdminApp.sql
      - Deploy supporting objects:
        @DeploySupportingObjects.sql

3. Download Apex 4.2.6 and copy to the server where you want to set up the Administration Tool under /scratch/bi_oradata_01/Softwares/apex_4.2.6 directory.

   Note: Create /scratch/bi_oradata_01/Softwares/apex_4.2.6 directory if it does not exist.

4. Download Oracle Rest Data service and copy to the server where you want to set up the Administration Tool under /scratch/bi_oradata_01/Softwares/apex_listner directory.

   Note: Create /scratch/bi_oradata_01/Softwares/apex_listner directory if it does not exist.

5. Navigate to the scratch/bi_oradata_01/Softwares/apex_listner directory and unzip the file ords.3.0.0.121.10.23.zip.

   ```
   cd /scratch/bi_oradata_01/Softwares/apex_listner
   ```

6. Navigate to the cd /scratch/bi_oradata_01/Softwares/apex_4.2.6 directory and unzip the file apex_4.2.6_en.zip.

   ```
   cd /scratch/bi_oradata_01/Softwares/apex_4.2.6
   ```

7. Create a directory on the server for the Apex configuration.
   For example, mkdir/scratch/bi_oradata_01/apex_configuration

8. Navigate to the /scratch/bi_oradata_01/Softwares/apex_listner directory:

   ```
   cd /scratch/bi_oradata_01/Softwares/apex_listner
   ```

9. Execute the following command:

   ```
   java -jar ords.war install advanced
   ```

   Note: Use JDK1.7 or later to execute.

Note: You need to provide the required inputs as shown below:

```
bash-4.1$ java -jar ords.war install advanced
This Oracle REST Data Services instance has not yet been configured.
Please complete the following prompts

Enter the location to store configuration data:/scratch/bi oradata 01/apex_configuration
Enter the name of the database server [localhost]:
Enter the database listen port [1521]:
Enter 1 to specify the database service name, or 2 to specify the database SID [1]:
Enter the database service name:
Enter 1 if you want to verify/install Oracle REST Data Services schema or 2 to skip this step [1]:
Enter the database password for ORDS_PUBLIC_USER:
Confirm password:

Please login with SYSDBA privileges to verify Oracle REST Data Services schema. Installation may be required.


Enter the username with SYSDBA privileges to verify the installation [SYS]:sys
Enter the database password for sys:
Confirm password:
Jun 22, 2015 2:08:51 AM oracle.dbtools.rt.config.setup.SchemaSetup addSchemaParams
INFO:
Oracle REST Data Services schema does not exist and will be created.


Enter the default tablespace for ORDS_METADATA [SYSAUX]:
Enter the temporary tablespace for ORDS_METADATA [TEMP]:
Enter the default tablespace for ORDS_PUBLIC_USER [USERS]:
Enter the temporary tablespace for ORDS_PUBLIC_USER [TEMP]:
Enter 1 if you want to use PL/SQL Gateway or 2 to skip this step [1]:
Enter the PL/SQL Gateway database user name [APEX_PUBLIC_USER]:
Enter the database password for APEX_PUBLIC_USER:
Confirm password:
```

```
Enter 1 to specify passwords for Application Express RESTful Services database users (APEX_LISTENER, APEX_REST_PUBLIC_USER) or 2 to skip
 this step [1]:
Enter the database password for APEX_LISTENER:
Confirm password:
Enter the database password for APEX_REST_PUBLIC_USER:
Confirm password:
Jun 22, 2015 2:09:36 AM oracle.dbtools.common.config.file.ConfigurationFilesBase update
INFO: Updated configurations: defaults, apex_pu, apex, apex_al, apex_rt
Jun 22, 2015 2:09:36 AM oracle.dbtools.installer.Installer installORDS
INFO:
Installing Oracle REST Data Services version 3.0.0.121.10.23
... Log file written to /scratch/bi_oradata_01/Softwares/apex_listner/logs/ordsinstall_2015-06-22_020936_00353.log
... Verified database prerequisites
... Created Oracle REST Data Services schema
... Granted privileges to Oracle REST Data Services
... Created Oracle REST Data Services database objects
... Created Oracle REST Data Services proxy user
Jun 22, 2015 2:09:48 AM oracle.dbtools.installer.Installer installORDS
INFO: Completed installation for Oracle REST Data Services version 3.0.0.121.10.23. Elapsed time: 00:00:12.203

Enter 1 if you wish to start in standalone mode or 2 to exit [1]:2
```

10. Navigate to the **/scratch/bi_oradata_01/Softwares/apex_listner** directory:

    ```
    cd /scratch/bi_oradata_01/Softwares/apex_listner
    ```

    Execute the following command:

    ```
    java -jar ords.war static /scratch/bi_oradata_01/Softwares/
apex_4.2.6/apex/images
    ```

    Note: It creates i.war file.

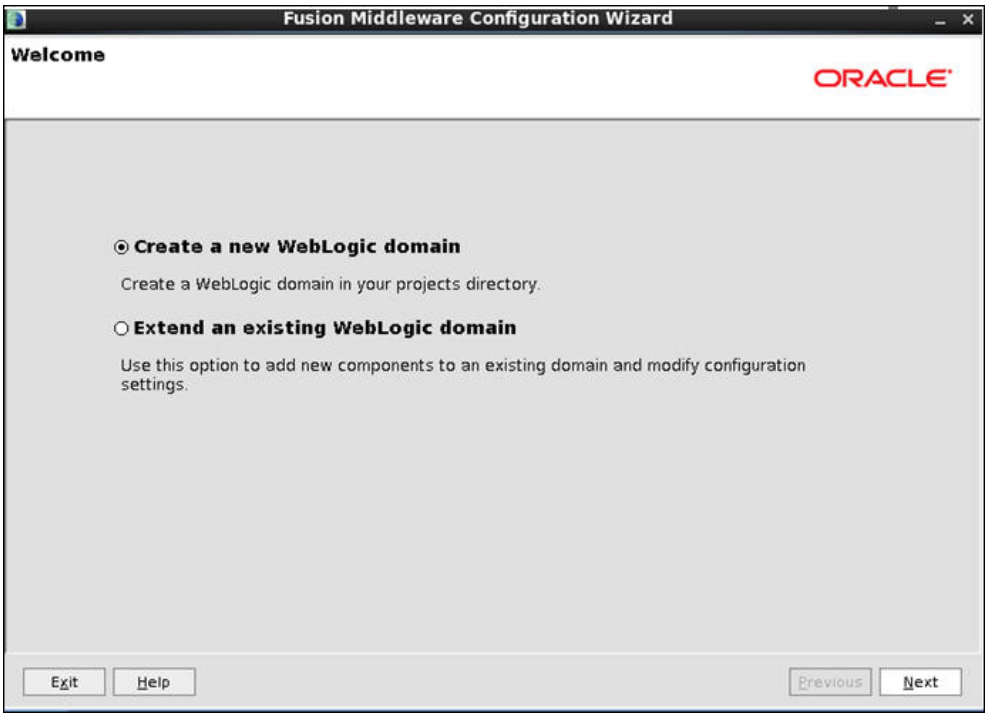
11. Install Weblogic 10.3.6 with jdk 1.7.0+.

12. Create Weblogic domain.

    Navigate to the <Middleware Home>/wlserver_10.3/commin/bin
    cd <Middleware Home>/wlserver_10.3/commin/bin

    Execute the following:
    ./config.sh

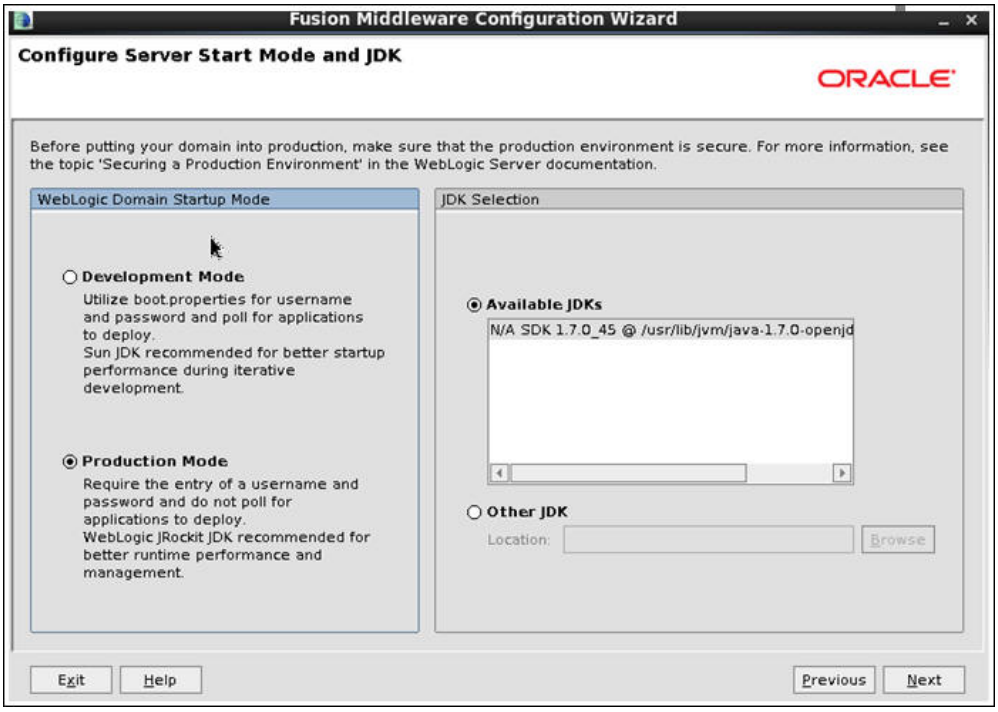
a. Click **Next**.



b. Provide the domain name and do not change the domain location. Click **Next**.

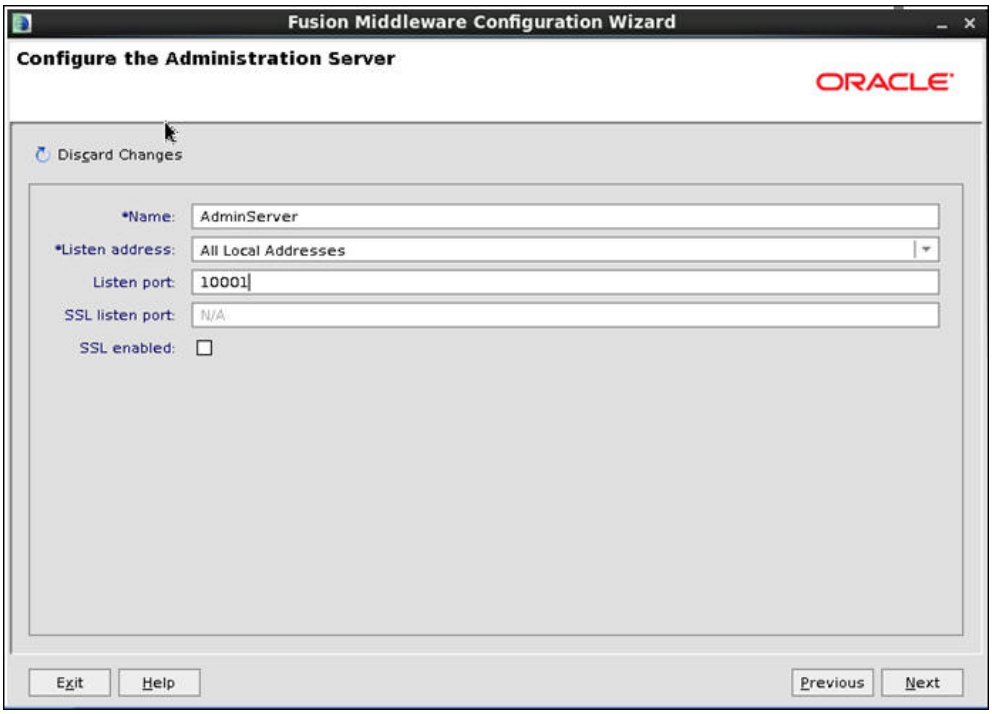
c. Provide **Weblogic User Password** and make sure to remember it.

d. Select jdk1.7 and click **Next**.

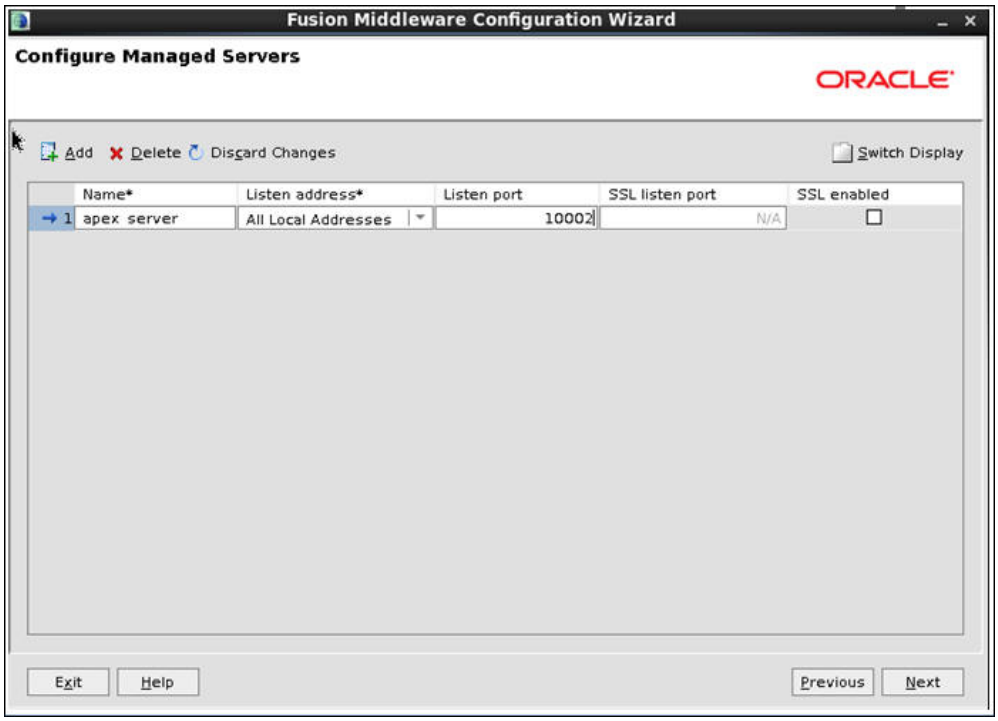


e. Select the **Administration Server**, **Managed Servers**, **Clusters and Machines** options as shown below:

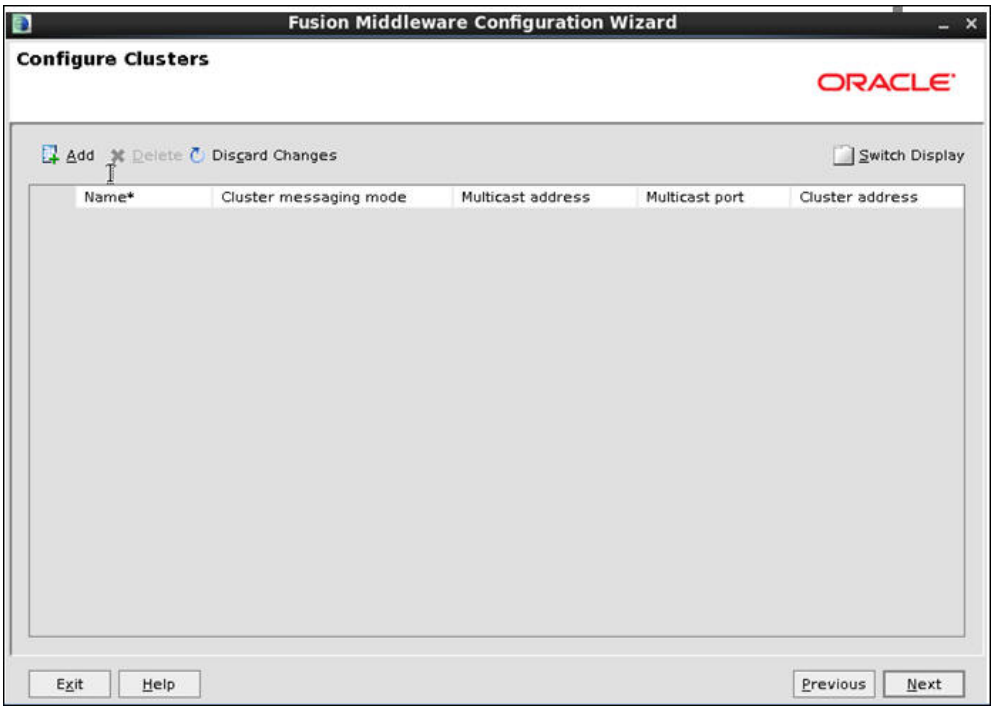
f. Provide Listen Port as available port and remember this port number. Click **Next**:



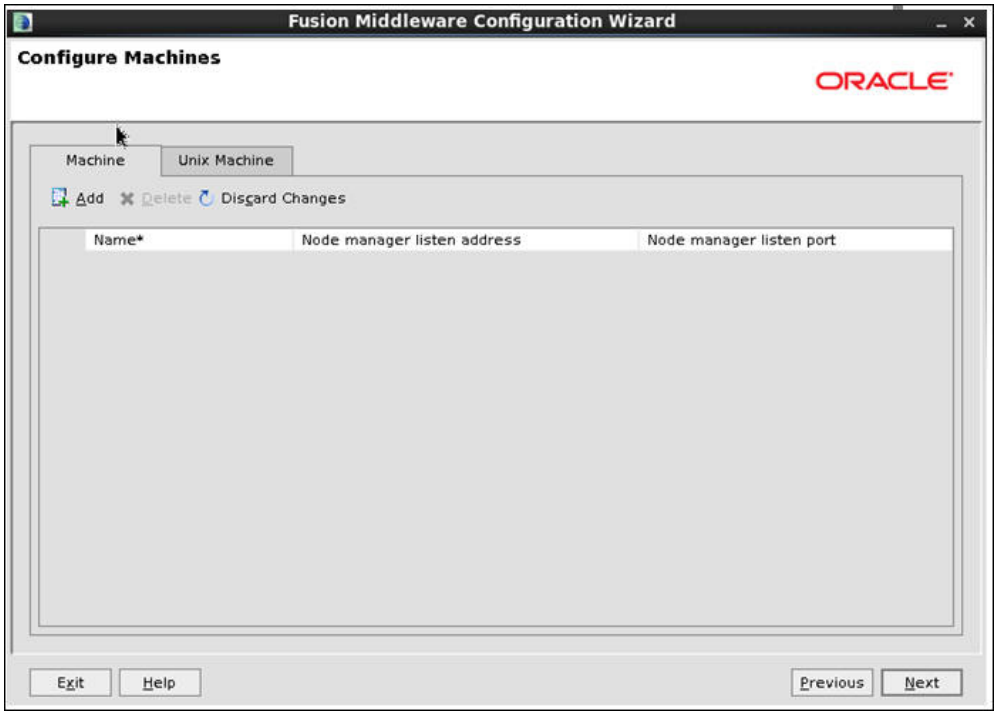
g. Click **Add** and provide values as shown below:



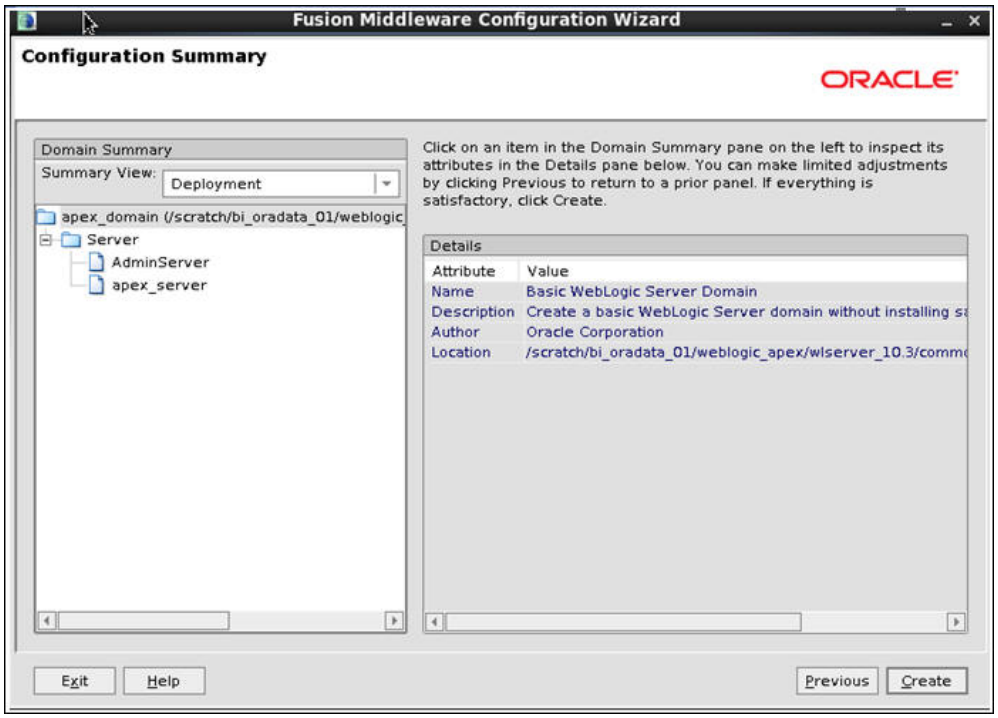
h. Click **Next**.



i. Click **Next**.

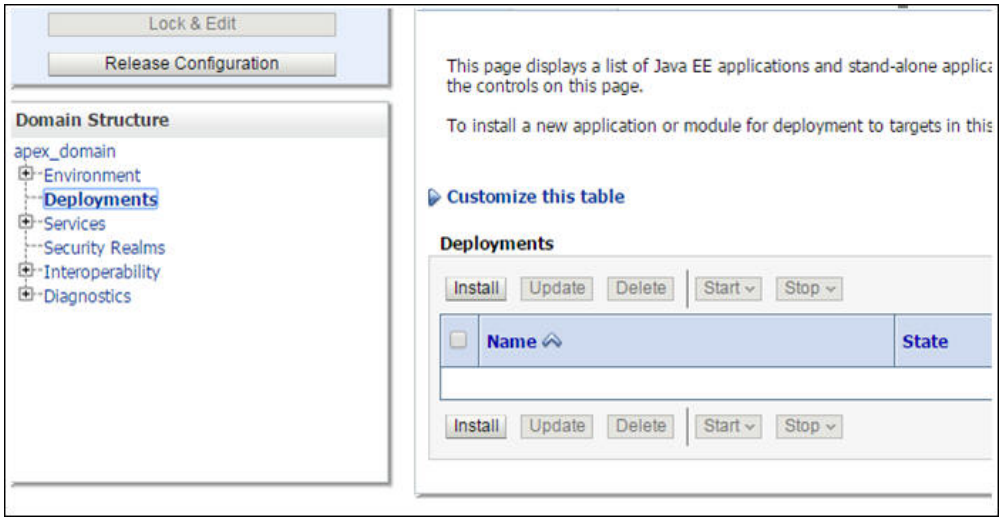


j. Click **Next**.



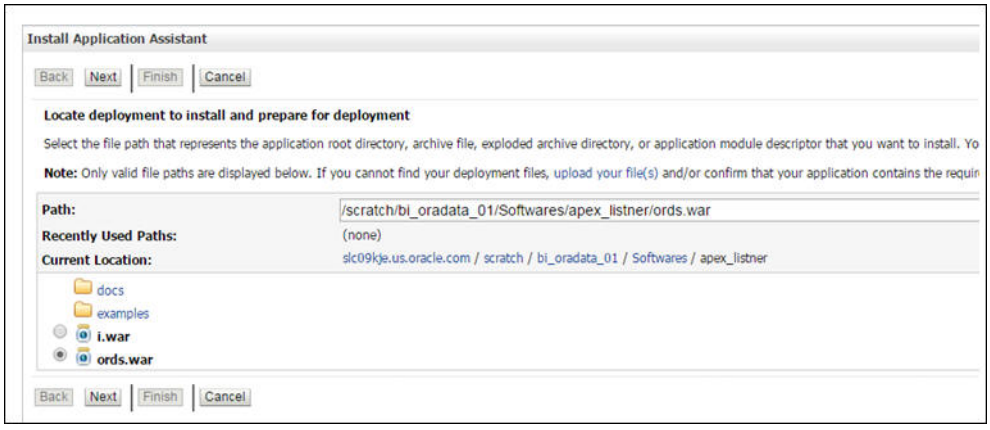
13. Create the **boot.properties** file.
14. Start the Admin and Managed server.

15. Log into Weblogic console and click on **Lock & Edit**.

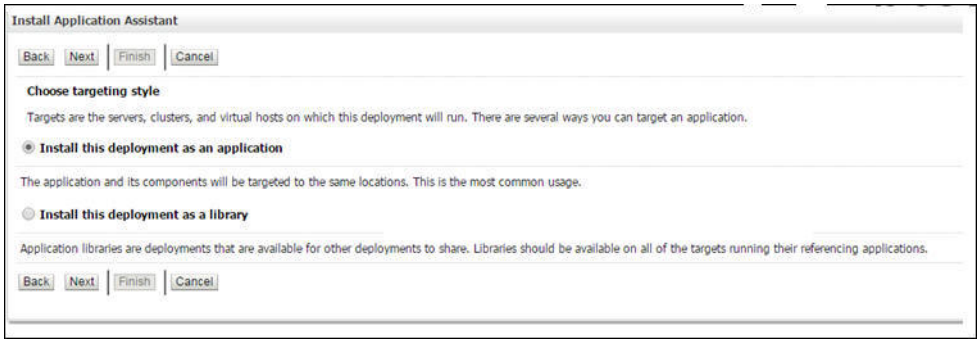


16. Click on **Install**.

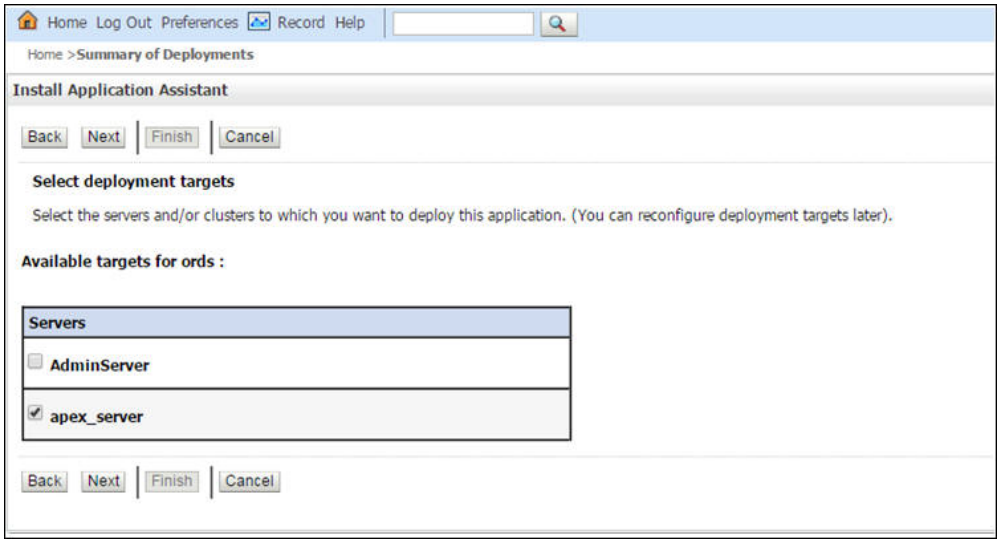
17. Provide Path as: /scratch/bi_oradata_01/Softwares/apex_listner and select the **ords.war** file.



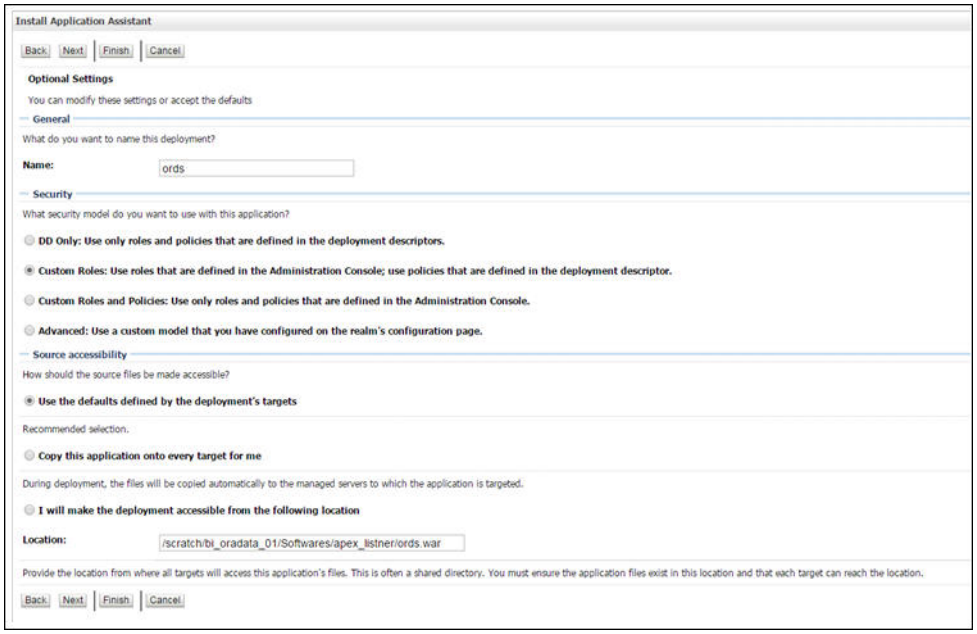
18. Click **Next**.



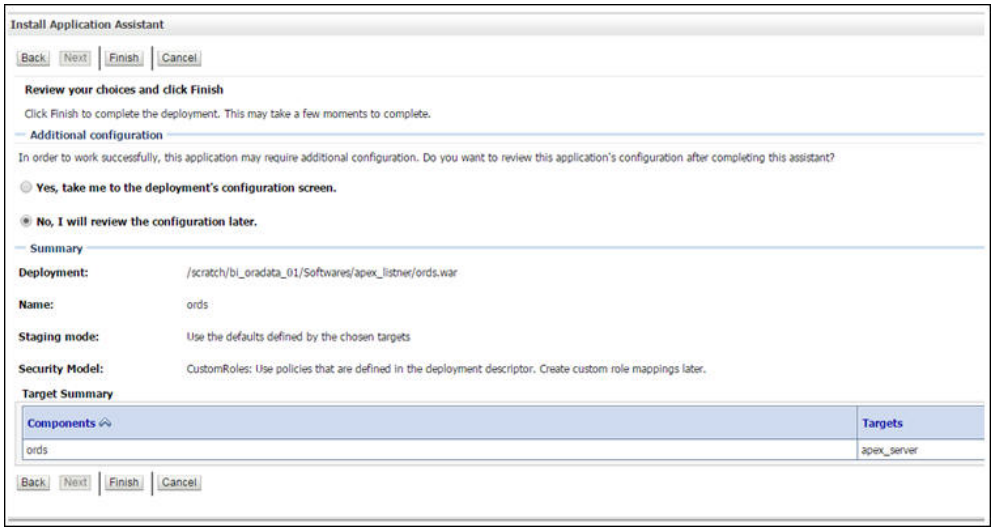
19. Select the **Apex Server** option and click **Next**.



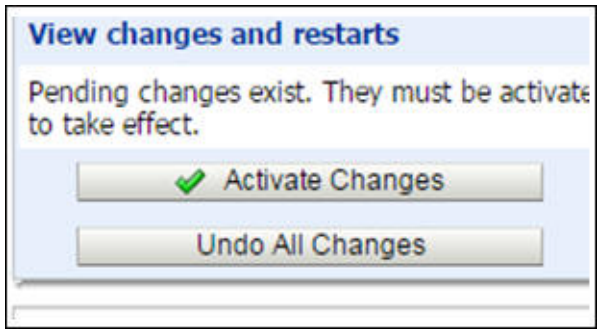
20. Select the options as shown below:



21. Select the options as shown below:

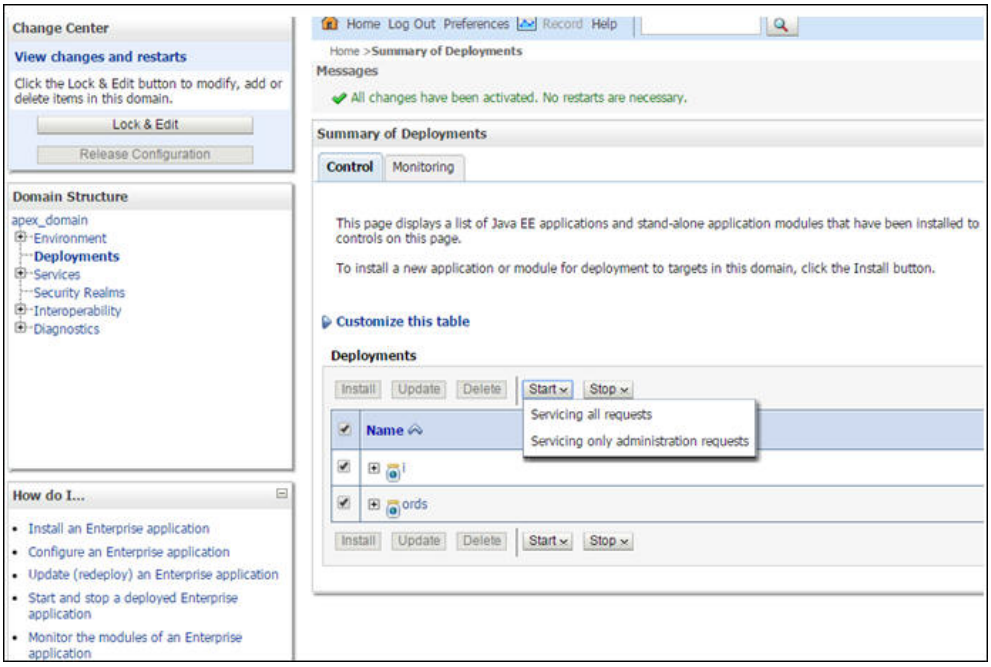


22. Click **Activate Changes**.

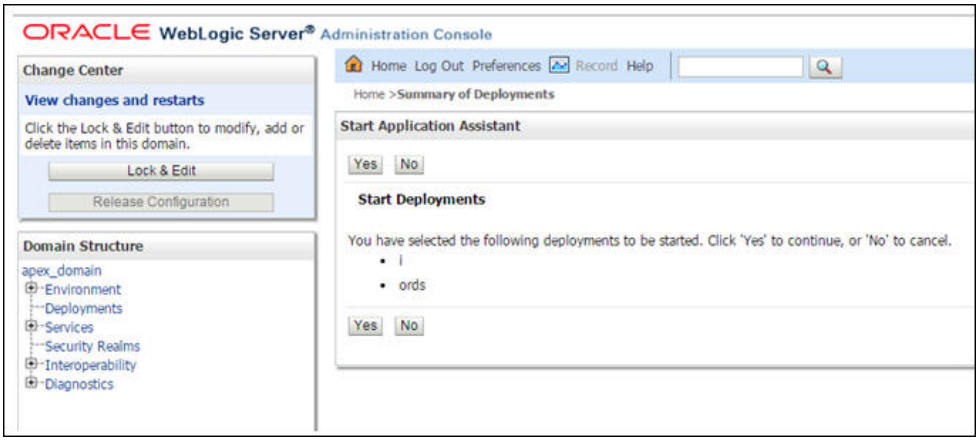


23. **Repeat the steps from 13 to 20 to** *deploy i.war* **file**.

24. Login to Weblogic console and click on **Deployment> Monitoring**. Select **i** and **ords**. And then, click on **Start** and select **Servicing All Requests** option.



25. Click **Yes**.



26. Restart the Admin and Managed servers.
27. Go to the following URL to access the Administration Tool:
    http://<hostname>:<managed server port no>/ords/f?p=104
28. Credentials to access the Administration Tool:
    User ID: Admin
    Password: Admin_123

Changing the Default Password of the Admin User

The following APEX API can be used to change the password of the 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 the 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 change the default password after logging in.

Upgrading Oracle Utilities Analytics Dashboards Components

Note: Upgrade the Oracle Utilities Analytics Dashboards component on the Oracle Utilities Analytics application server.

Note: The patch 18818588 must be applied to Oracle Business Intelligence Enterprise Edition before installing the Oracle Utilities Analytics Dashboards.

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

- Copying and Decompressing the Install Media
- Starting the Installer
- Upgrade Steps
- Deploying the Repository (RPD) File
- Deploying the Web Catalog
- Configuring and Deploying the MapViewer
- Post-deploying the Custom MapViewer
- Enabling WriteBack
- Enabling the Analytics Help
- Enabling the Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1

Copying and Decompressing the Install Media

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

1. Download the Oracle Utilities Analytics Dashboards component v2.5.2 (**Oracle Utilities Analytics V2.5.2 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 <TEMPDIR> below). 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 V2.5.2 Multiplatform.zip** to <TEMPDIR>.

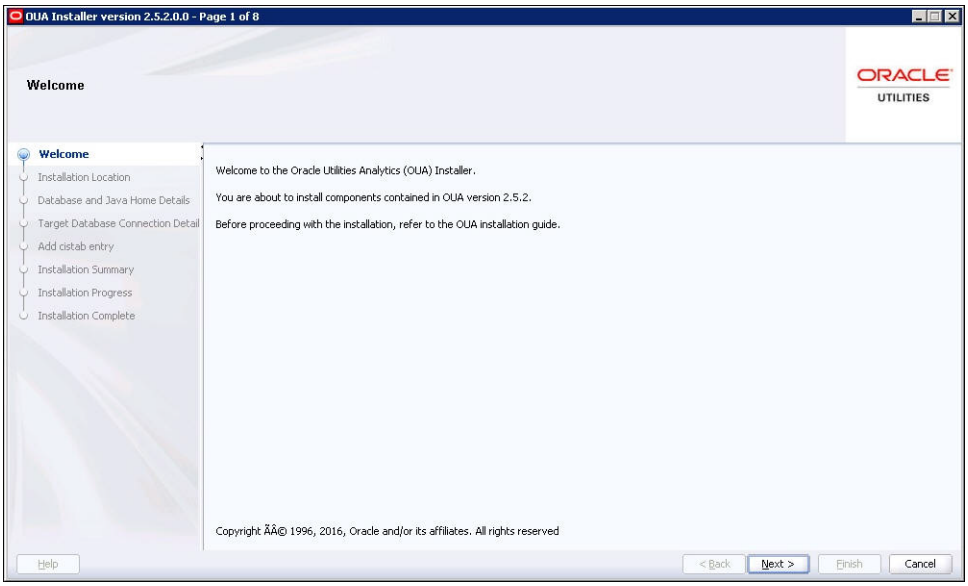
Starting the Installer

Go to the temporary folder where you have downloaded the install and run the following command from this folder:

```
java -jar <TEMPDIR>/OUA_2.5.2.0.0_generic.jar -logLevel finest
```

Note: The minimum JDK required for running the Oracle Utilities Analytics installer is JDK 1.7.

The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.



A navigation pane on the left that summarizes the tasks the installer will help you complete. Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.

Upgrade Steps

To install the Dashboards, perform the following steps:

1. Run the Oracle Utilities Analytics Installer. The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.
2. The **Installation Location** page appears. Define the **Installation Location** here and click **Next.**
3. The **Select Installation Type** page appears. In the **Select Installation Type** page, select **Dashboards** and click **Next**.
4. The **Database and Java Home Details** page appears.Enter the following details in the respective fields and click **Next**.

Field Name	Description	Value
Database Client Home	This is the database client home location.	Example: /u01/app/product/12.1.0/dbhome_1
Java Home	This is the JDK home location.	Provide location of JDK 1.6 (1.6.0_35+) Example: /u01/jdk_1.6.0_35

5. The **Target Database Connection Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
Host	The host name of the server where the database resides.	Oracle Utilities Analytics Database Server

Field Name	Description	Value
Port	The database port number on the database server used for connecting to the database.	Oracle Utilities Analytics Database Port. The default value is 1521.
Service Name	The service name for the database	
Target Schema Password	The password for the target schema (DWADM).	
Confirm Target Schema Password	Confirm the password for the target schema (DWADM) here.	
Metadata Schema Password	The password for the metadata schema (MDADM).	
Confirm Metadata Schema Password	Confirm the password for the metadata (MDADM) schema here.	

6. The **OBIEE Home Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
BI Home	The location on the disk where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/ Middleware/ Oracle_BI1
BI Instance Home	This is the instance home location under the location where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/Middleware/ instances/instance1
BI Domain Home	This is the domain home location under the location where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/ Middleware/ user_projects/domains/ bifoundation_domain
Weblogic Host	The hostname on which weblogic server for Oracle Business Intelligence Enterprise Edition is running.	
Weblogic Port Number	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: 7001

Field Name	Description	Value
Weblogic User	WebLogic domain login user name.	

Note: You will be prompted for the Weblogic user's password after installation, when configuring Oracle Utilities Analytics.

7. The **Add Cistab Entry** page appears.
8. Register the installed Oracle Utilities Analytics environment in the /etc/cistab file for Unix based Operating systems and in the C:\spl\etc\cistab file for Windows Operating system. The **cistab** file needs to be created in the specified location if it does not already exist. Copy the text shown, add the text in a new line in the **cistab** file and save the file. Click **Next**.
9. The **Installation Summary** page appears. Verify the installation options here.
10. Click **Install** to begin the installation.

    If you want to make any changes to the configuration before starting the installation, use the navigation pane and select the topic you want to edit.
11. The **Installation Progress** page appears which allows you to see the progress of the installation. Operations being performed as part of the installation are logged to the terminal from which the installer was run. Detailed logs of the installation are also available in the logs/system directory under the installation location.

    If you want to quit before the installation is completed, click **Cancel**. Doing so will result in a partial installation; the portion of the software that was installed on your system before you click **Cancel** will remain on your system, and you will have to remove it manually.
12. In the **Installation Completed** page, click **Finish** to dismiss the installer.

The Dashboards component is now installed.

Deploying the Repository (RPD) File

If you have not made any changes to the deployed RPD, then take the RPD file from the following location: <install_dir>/Reports/rpd/ UtilitiesBusinessAnalytics.rpd, where <install_dir> is the Oracle Utilities Analytics Dashboard Component installation directory.

If you have done merging, then take the merged RPD and make the required database changes.

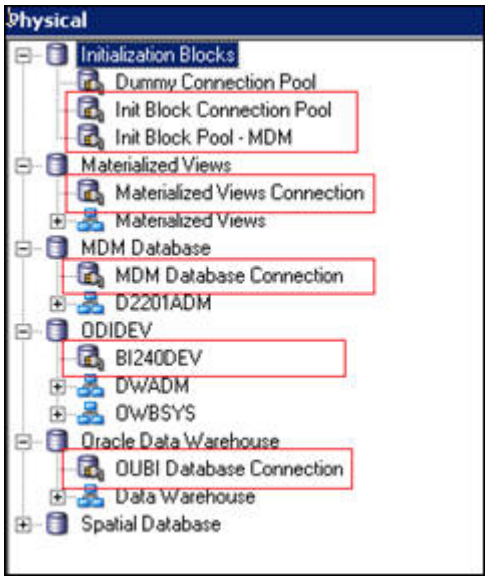
This RPD file should be copied to the windows machine on which Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 is installed.

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):

   Datasource name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

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

    Datasource name = BI database name

    User name = DWUSER

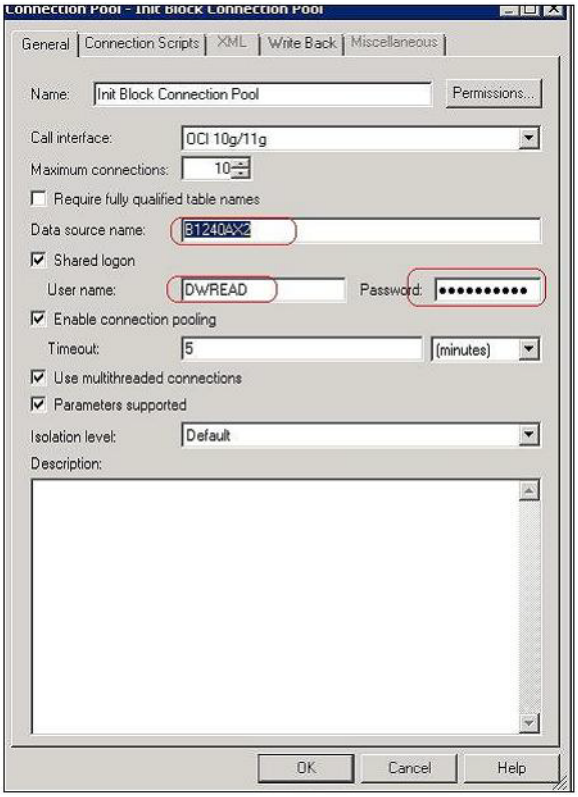
    Password = DWUSER User password

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

    Datasource 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-mentioned database sets of 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 web catalogs, follow these steps:

1. Go to the <Catalog location>/root/shared and delete the existing catalogs that were delivered out-of-box with the Oracle Utilities Analytics product in the previous release. Any catalog added by you can be retained. If Oracle Utilities Network Management System BI publisher reports were deployed, they should be retained.
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:

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 ./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 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 the MapViewer

Configuring and deploying the MapViewer involves the following:

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

Configuring the 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 = *Oracle's Driver (Thin) for Service connections; Versions 9.0.1 and later
8. Click **Next**.
9. Do not change any values on the next page and click **Next**.
10. Enter the following connection properties:
    - Database Name: BI Database Name
    - Host Name: Database host
    - Port: Database port
    - Database User Name: dwadm
    - Password: dwadm password
11. Click **Next**.
12. On the next page, click **Test Configuration** button. After the successful test, click **Next** again.
13. The **Select Target** page opens. Now select AdminServer under **Servers** and bi_cluster under **Clusters**. Click **Finish**.
14. Click **Activate Changes**.
15. Update the mapViewerConfig file with the below-mentioned tags:

    File location: <OBIEE_INSTALL_DIR>/Oracle_BI1/bifoundation/jee/

    mapviewer.ear/web.war/WEB-INF/conf/

    File: mapViewerConfig.xml
16. 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
    </proxy_enabled_hosts>
    ```

17. Add the following ns_data_provider node:

    ```
    <ns_data_provider id="obieeNsdp"
    class="com.oracle.utilities.birdseye.BirdseyeNSDP" />
    ```

18. 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 the 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 the 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 the Custom MapViewer

Note: The custom MapViewer is required to integrate weather information into Outage Analytics.

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.

Post-deploying the Custom MapViewer

Perform the following steps after deploying the custom MapViewer:

1. Log into the MapViewer: http://<Server>:<port>/mapviewer.
2. Update the MapViewer configuration by navigating to MapViewer > Administration > Configuration. Login to the Mapviewer at this location: http://<HOST>:<MANAGERPORT>/mapviewer
3. Add the below content in the mapViewerConfig.xml with the appropriate values:

```
<map_data_source name="MAPCONN"
jdbc_host="<DB server name>"
jdbc_sid="//<DB Service name>"
jdbc_port="1521"
jdbc_user="DWADM"
jdbc_password="!<DWADM user password>"
jdbc_mode="thin"
number_of_mappers="32"
allow_jdbc_theme_based_foi="true"
/>
```

   Note: The exclamatory mark in the front of the password ensures that the password is encrypted.

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

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

Enabling WriteBack

For enabling the Write Back, perform the following steps:

1. Log into Analytics and navigate to **Administration>Manage Privileges>WriteBack>Write Back to Database**.
2. Click **Denied:Authenticated User** and select the permission **Granted.**

Enabling the Analytics Help

To enable the **Analytics' Help**, perform these steps:

1. Download *Oracle Utilities Analytics v2.5.2 Getting Started Guide* from Oracle Software Delivery Cloud (https:// edelivery.oracle.com).
2. After downloading *Oracle Utilities Analytics v2.5.2 Getting Started Guide,* change the name of the OUA_Getting_Started_Guide_2.5.2.pdf file to **OUASA Help.pdf**.
3. Place the **Help** file in <install_dir>/Skin/res, where <install_dir> is the Oracle Utilities Analytics Dashboard Component installation directory.
4. Run the following commands:

For UNIX:
Perform the following steps:

a. Navigate to <Install_Dir>/bin directory.

b. Initialize the environment with the ./splenviron.sh -e <envname> command.

c. cd $SPLEBASE/bin.

d. Run ksh ./deployanalyticsear.sh.

e. Enter the WebLogic Domain Console password. For example, weblogic123.

For Windows:

Perform the following steps:

a. Navigate to <Install_Dir>/bin directory.

b. Initialize the environment with the ./splenviron.cmd -e <envname> command.

c. cd %SPLEBASE%/bin.

d. deployanalyticsear.cmd.

e. Enter the WebLogic Domain Console password. For example, weblogic123.

f. Restart the Oracle Utilities Analytics core services.

g. Restart WebLogic and all Oracle Utilities Analytics services after the Oracle Business Intelligence Enterprise Edition deployment is completed.

Enabling the 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 the 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**.

Chapter 5

Installing Demo Database

This chapter provides instructions for installing the demo database.

> **Note**: The demo installation does not support ETL functionality. The **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:

- Installing Oracle Utilities Analytics Demo Database Component
- Installing Oracle Utilities Analytics Dashboards Component

Installing Oracle Utilities Analytics Demo Database Component

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

- Copying and Decompressing the Install Media
- Creating the Database and Importing the Dump File
- Configuring the Security
- Configuring the Spatial Data

Copying and Decompressing the Install Media

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

1. Download the Oracle Utilities Analytics V2.5.2 Demo Data part (**Oracle Utilities Analytics V2.5.2 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 <TEMPDIR> below). 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 V2.5.2 Demo Data.zip** to <TEMPDIR>.

Creating the Database and Importing the Dump File

This section describes how to create the demo database with AL32UTF8 character set using the database creation tool (cdxdba.plx for UNIX or CDXDBA.exe for Windows), including:

- UNIX Database Creation Utility
- Windows Database Creation Utility
- Importing Demo Data Manually
- Post-Import Tasks

Note: Ensure that Oracle Database Server Enterprise Edition 12.1.0.2.0 is already installed on the machine in order to create the database.

Note: The UNIX and Windows database creation utilities creates an empty database with AL32UTF8 character set and at least one tablespace for storing the application objects before running the installation. The default name of the application tablespace is CISTS_01.

Note: If you get the following error messages while importing demo data, 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)
```

UNIX Database Creation Utility

The files are located in BI252/DatabaseCreation/Unix to create the database.

1. FTP the contents of the **Database Creation** folder to a temporary directory on the UNIX server.
2. To create the database, set the ORACLE_HOME and the ORACLE_BASE variables.
3. Execute the **utility cdxdba.plx** by executing the following command:
   perl cdxdba.plx
4. Provide the following parameter values when the script prompts:

   Instance name (DEMO): DEMO

   ORACLE_BASE: The directory where the setup files for the database will be created (/orasw/app/oracle):

   ORACLE_HOME: The folder where the current version of Oracle software is installed (/orasw/app/oracle/product/):

   ORACLE_DATA: The directory where the data files for the database will be created (/db05/oradata):

   Character set for the database (AL32UTF8):

5. Enter the values based on the settings of your database server. You can also accept the default values displayed if they match your database server settings. You will be prompted to confirm the settings and select Y or N to create the database.

   ORACLE_SID: DEMO

   ORACLE_HOME: /orasw/app/oracle/product/

   ORACLE_BASE: /orasw/app/oracle

   ORACLE_DATA: /db05/oradata

   Character Set: AL32UTF8

   Do you want to continue (Y/N)?

6. When the database has been created, you will be prompted with the following questions:

   Do you want to import a demo database dump into this database (Y/N)?

   Select Y to import the Demo Install data.

   For the demo installation use the dump file exp_demo.dmp.

   Do you want to import a demo database dump into this database (Y/N)? Y

   Enter the name of the dump file (exp_demo.dmp):

   Enter the name of the dump file directory (data_pump_dir):

   Enter the name of the log file (exp_demo.log):

   Note: The **`dump_dir`** must exist in the created database before continuing with the import. 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 ..\BI252\Demo directory.

   Update the **oratab** file for the new database, and then check the connectivity to this database from another server and from your desktop after updating local **tnsnames.ora** file.

Windows Database Creation Utility

The files are located in ..\BI252\DatabaseCreation\Windows. You should be logged in as a user who is a member of local ORA_DBA group on that server. The ORA_DBA group should have "Administrator" privileges assigned to it.

1. To create a database, run the utility **CDXDBA.exe** located in the Windows folder from command prompt. The utility displays the following options:

   E - Export a schema from the database

   R - Refresh a schema with a database dump

   C - Create/Recreate a local database

   H - See help for the command line options

   Q - Quit

2. Select the option C to create an empty database on your machine and provide the below inputs:

   - Provide the instance name (DEMO): <DB Name> For example, BIDEMO.
   - Enter the character set of the database (AL32UTF8): AL32UTF8.
   - Enter ORACLE_BASE: The directory where the setup files for the database will be created (c:\oracle) : <Oracle_Base> For example, C:\app\oracle.

- Enter ORACLE_HOME: The folder where the current version of Oracle software is installed (c:\oracle\product\11.1.0.6\Db_1):<Oracle_Home> For example, c:\app\oracle\db_home.
- Enter ORACLE_DATA: The directory where the data files for the database will be created (C:\app\oracle\oradata):<Directory where data files will be created>.

3. Once the database has been created, select the R - Refresh a schema option with a database dump file to load the demo install data.
   - Select an option: R
   - Enter the instance name (DEMO): <DB name>.
   - Is it a LOCAL database (exists on the same machine) (Y/N): < provide Y or N>.
   - Enter the name of the Oracle account that owns that application schema (spladm): DWADM.
   - Enter the password for DWADM (spladm): DWADM.
   - Enter the character set of the database (AL32UTF8): AL32UTF8.
   - Enter the name of data pump directory (DATA_PUMP_DIR): DATA_PUMP_DIR.
   - Enter the name of the dump file (expDWADM.dmp):exp_demo.dmp.
   - Enter the name of the log file (impDWADM.log):exp_demo.log.

   The option R causes the utility to drop all the objects from the schema and import the schema from a database dump file.

   For the demo installation, use the **exp_demo.dmp** dump file.

   > **Note**: The **`dump_dir`** must exist in the database created above before continuing with the import. You should also copy the **exp_demo.dmp** file to the **`dump_dir`**. Uncompress the **exp_demo.dmp.gz** file to extract the **exp_demo.dmp** file. This file is in the ..\BI252\Demo directory.

   Check the connectivity to this database from another server and from your desktop after updating the local **tnsnames.ora** file.

Importing Demo Data Manually

The demo data can also be imported by using the below command after successful database creation.

> **Note**: Run this command from the 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.

1. Set the correct ORACLE_SID and ORACLE_HOME first, and then run 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>
```

2. Provide the system as the user and system user's password when prompted.

Post-Import Tasks

Connect to MDADM schema, and execute the 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;
```

Configuring the Security

For configuring the security, perform the following steps:

1. Navigate to the ..\BI252\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 12c 32 bit client installed. Your database should already be listed in the local file **tnsnames.ora**.

   The script executes as the 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.

Configuring the Spatial Data

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 ../BI252/Spatial-Metadata folder to that location.
2. Import the 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 are imported successfully.
4. After importing the tables, run the following SQL scripts from the ../BI252/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.

Installing Oracle Utilities Analytics Dashboards Component

Note: Ensure that the same Operating System (OS) user is used to install the Oracle Utilities Analytics Dashboards component that is used to install all the prerequisite software.

Note: Verify that the prerequisite software products mentioned in the section Prerequisite Software for Oracle Utilities Analytics Dashboards Component are installed.

Note: Install the Oracle Utilities Analytics Dashboards component on the Oracle Utilities Analytics application server.

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

- Copying and Decompressing the Install Media
- Starting the Installer
- Installation Steps
- Deploying the Repository (RPD) File
- Deploying the Web Catalog
- Configuring and Deploying the MapViewer
- Post-deploying the Custom MapViewer
- Enabling WriteBack
- Enabling the Analytics Help
- Enabling the Auto Complete Feature on Oracle Business Intelligence Enterprise Edition 11.1.1.7.1

Copying and Decompressing the Install Media

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

1. Download the Oracle Utilities Analytics version 2.5.2 ELT component based on Oracle Data Integrator part (**Oracle Utilities Analytics V2.5.2 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 <TEMPDIR> below). 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 V2.5.2 Oracle Database Multiplatform.zip** to <TEMPDIR>.

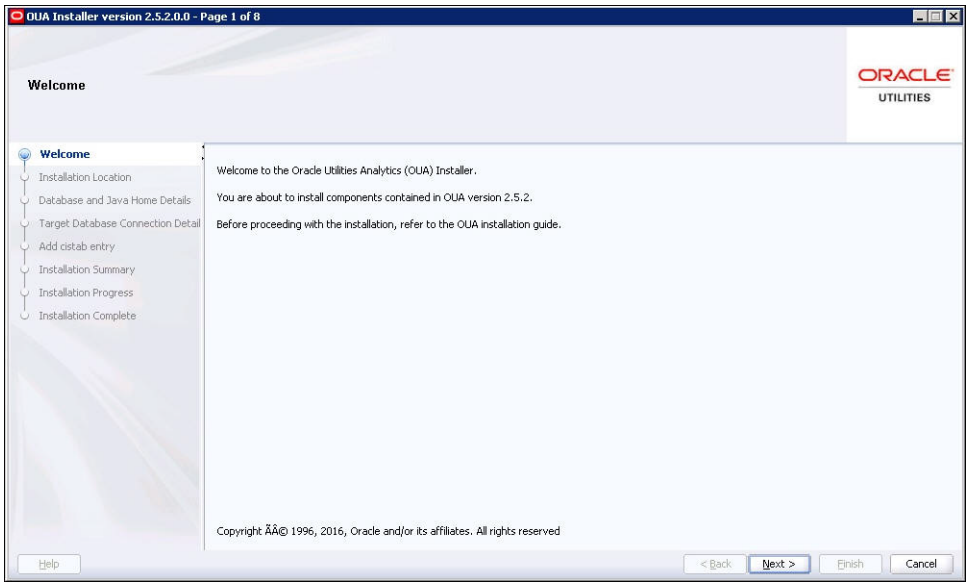
Starting the Installer

Go to the temporary folder where you have downloaded the install and run the following command from this folder:

```
java -jar <TEMPDIR>/OUA_2.5.2.0.0_generic.jar -logLevel finest
```

Note: The minimum JDK required for running the Oracle Utilities Analytics installer is JDK 1.7.

The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.



A navigation pane on the left that summarizes the tasks the installer will help you complete. Each item in the navigation pane represents a specific installer screen that will prompt you for information required to install the software.

Installation Steps

To install the Dashboards, perform the following steps:

1. Run the Oracle Utilities Analytics Installer. The **Welcome** page appears. Review this information before you begin the installation and click **Next** to continue with the installation.
2. The **Installation Location** page appears. Define the **Installation Location** here and click **Next.**

   Note: The specified Oracle home directory must be an empty directory.
3. The **Select Installation Type** page appears. In the **Select Installation Type** page, select **Dashboards** and click **Next**.

   Note: Based on the selected installation type, the options on the left navigation panel changes. When you select **Dashboard** as an **Installation Type**, you need to define **Database and Java Home Details**, **Target Database Connection Details** and **OBIEE Home Details**.
4. The **Database and Java Home Details** page appears. Enter the following details in the respective fields and click **Next**.

Field Name	Description	Value
Database Client Home	This is the database client home location.	Example: /u01/app/product/12.1.0/dbhome_1
Java Home	This is the JDK home location.	Provide location of JDK 1.6 (1.6.0_35+) Example: /u01/jdk_1.6.0_35

5. The **Target Database Connection Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
Host	The host name of the server where the database resides.	Oracle Utilities Analytics Database Server
Port	The database port number on the database server used for connecting to the database.	Oracle Utilities Analytics Database Port. The default value is 1521.
Service Name	The service name for the database	
Target Schema Password	The password for the target schema (DWADM).	
Confirm Target Schema Password	Confirm the password for the target schema (DWADM) here.	
Metadata Schema Password	The password for the metadata schema (MDADM).	
Confirm Metadata Schema Password	Confirm the password for the metadata (MDADM) schema here.	

6. The **OBIEE Home Details** page appears. Enter the following details in the respective fields and click **Next**:

Field Name	Description	Value
BI Home	The location on the disk where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/ Middleware/ Oracle_BI1
BI Instance Home	This is the instance home location under the location where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/Middleware/ instances/instance1
BI Domain Home	This is the domain home location under the location where Oracle Business Intelligence Enterprise Edition software is installed.	Example: /u01/ Middleware/ user_projects/domains/ bifoundation_domain
Weblogic Host	The hostname on which weblogic server for Oracle Business Intelligence Enterprise Edition is running.	

Field Name	Description	Value
Weblogic Port Number	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: 7001
Weblogic User	WebLogic domain login user name.	

Note: You will be prompted for the Weblogic user's password after installation, when configuring Oracle Utilities Analytics.

7. The **Add Cistab Entry** page appears.
8. Register the installed Oracle Utilities Analytics environment in the /etc/cistab file for Unix based Operating systems and in the C:\spl\etc\cistab file for Windows Operating system. The **cistab** file needs to be created in the specified location if it does not already exist. Copy the text shown, add the text in a new line in the **cistab** file and save the file. Click **Next**.
9. The **Installation Summary** page appears. Verify the installation options here.
10. Click **Install** to begin the installation.

    If you want to make any changes to the configuration before starting the installation, use the navigation pane and select the topic you want to edit.
11. The **Installation Progress** page appears which allows you to see the progress of the installation. Operations being performed as part of the installation are logged to the terminal from which the installer was run. Detailed logs of the installation are also available in the logs/system directory under the installation location.

    If you want to quit before the installation is completed, click **Cancel**. Doing so will result in a partial installation; the portion of the software that was installed on your system before you click **Cancel** will remain on your system, and you will have to remove it manually.
12. In the **Installation Completed** page, click **Finish** to dismiss the installer.

The Dashboards component is now installed.

Deploying the Repository (RPD) File

If you have not made any changes to the deployed RPD, then take the RPD file from the following location: <install_dir>/Reports/rpd/ UtilitiesBusinessAnalytics.rpd, where <install_dir> is the Oracle Utilities Analytics Dashboard component installation directory.

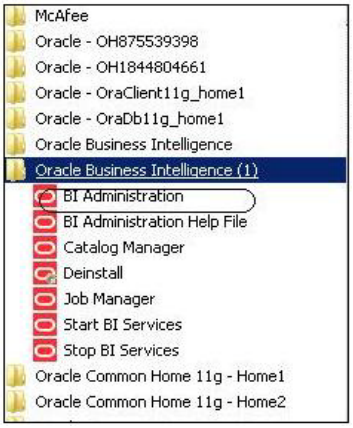
If you have done merging, then take the merged RPD and make the required database changes.

This RPD file should be copied to the windows machine on which Oracle Business Intelligence Enterprise Edition 11.1.1.7.1 (Install Oracle Business Intelligence Enterprise Edition 11.1.1.7.0 and apply the patch 18818588) is installed.

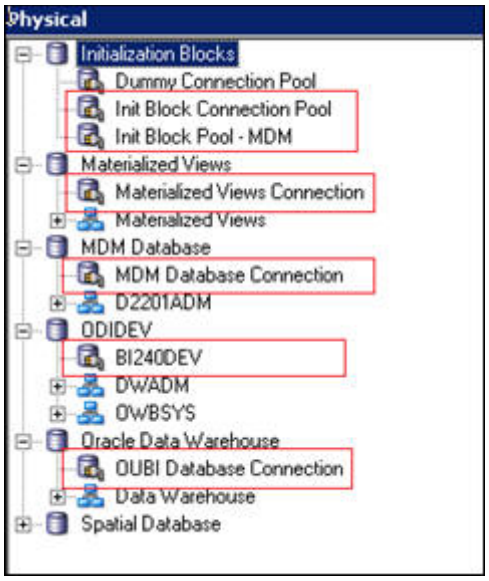
Follow these steps to deploy the RPD file:

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):

   Datasource name = MDM database name

   User name = CISUSER

   Password = CISUSER User password

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

    Datasource name = BI database name

    User name = DWUSER

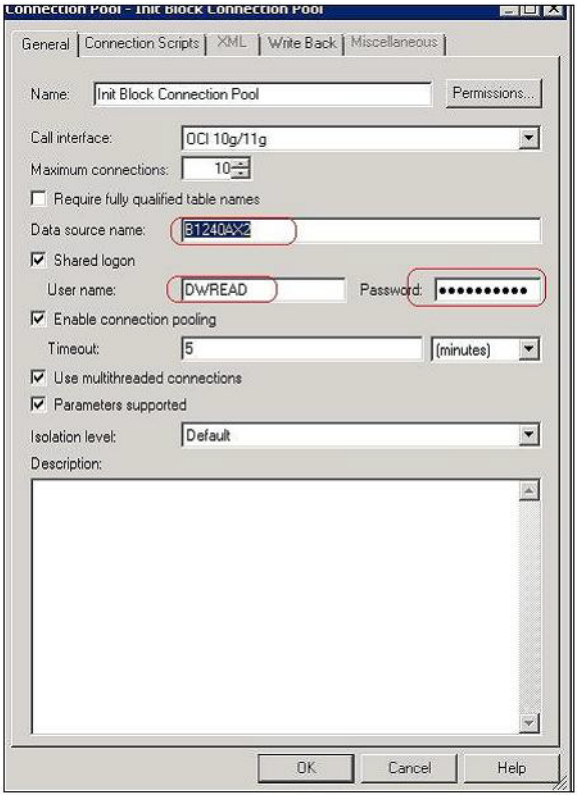
    Password = DWUSER User password

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

    Datasource 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-mentioned database sets of 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 web catalogs, follow these steps:

1. Go to the <Catalog location>/root/shared and delete the existing catalogs that were delivered out-of-box with the Oracle Utilities Analytics product in the previous release. Any catalog added by you can be retained. If Oracle Utilities Network Management System BI publisher reports were deployed, they should be retained.
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:

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 ./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 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 the MapViewer

Configuring and deploying the MapViewer involves the following:

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

Configuring the 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 = *Oracle's Driver (Thin) for Service connections; Versions 9.0.1 and later
8. Click **Next**.
9. Do not change any values on the next page and click **Next**.
10. Enter the following connection properties:
    - Database Name: BI Database Name
    - Host Name: Database host
    - Port: Database port
    - Database User Name: dwadm
    - Password: dwadm password
11. Click **Next**.
12. On the next page, click **Test Configuration** button. After the successful test, click **Next** again.
13. The **Select Target** page opens. Now select AdminServer under **Servers** and bi_cluster under **Clusters**. Click **Finish**.
14. Click **Activate Changes**.
15. Update the mapViewerConfig file with the below-mentioned tags:

    File location: <OBIEE_INSTALL_DIR>/Oracle_BI1/bifoundation/jee/

    mapviewer.ear/web.war/WEB-INF/conf/

    File: mapViewerConfig.xml
16. 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
    </proxy_enabled_hosts>
    ```

17. Add the following ns_data_provider node:

    ```
    <ns_data_provider id="obieeNsdp"
    class="com.oracle.utilities.birdseye.BirdseyeNSDP" />
    ```

18. 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 the 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 the 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 the Custom MapViewer

> **Note**: The custom MapViewer is required to integrate weather information into Outage Analytics.

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.

Post-deploying the Custom MapViewer

Perform the following steps after deploying the custom MapViewer:

1. Log into the MapViewer: http://<Server>:<port>/mapviewer.
2. Update the MapViewer configuration by navigating to MapViewer > Administration > Configuration. Login to the Mapviewer at this location: http://<HOST>:<MANAGERPORT>/mapviewer
3. Add the below content in the mapViewerConfig.xml with the appropriate values:

```
<map_data_source name="MAPCONN"
jdbc_host="<DB server name>"
jdbc_sid="//<DB Service name>"
jdbc_port="1521"
jdbc_user="DWADM"
jdbc_password="!<DWADM user password>"
jdbc_mode="thin"
number_of_mappers="32"
allow_jdbc_theme_based_foi="true"
/>
```

   Note: The exclamatory mark in the front of the password ensures that the password is encrypted.

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

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

Enabling WriteBack

For enabling the WriteBack, perform the following steps:

1. Log into Analytics and navigate to **Administration>Manage Privileges>WriteBack>Write Back to Database**.
2. Click **Denied:Authenticated User** and select the permission **Granted.**

Enabling the Analytics Help

To enable the **Analytics' Help**, perform these steps:

1. Download *Oracle Utilities Analytics v2.5.2 Getting Started Guide* from Oracle Software Delivery Cloud (https:// edelivery.oracle.com).
2. After downloading *Oracle Utilities Analytics v2.5.2 Getting Started Guide,* change the name of the OUA_Getting_Started_Guide_2.5.2.pdf file to **OUASA Help.pdf**.
3. 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:

   a. Navigate to <Install_Dir>/bin directory.

   b. Initialize the environment with the ./splenviron.sh -e <envname> command.

   c. cd $SPLEBASE/bin.

   d. Run ksh ./deployanalyticsear.sh.

   e. Enter the WebLogic Domain Console password. For example, weblogic123.

   For Windows:

   Perform the following steps:

   a. Navigate to <Install_Dir>/bin directory.

   b. Initialize the environment with the ./splenviron.cmd -e <envname> command.

   c. cd %SPLEBASE%/bin.

   d. deployanalyticsear.cmd.

   e. Enter the WebLogic Domain Console password. For example, weblogic123.

   f. Restart the Oracle Utilities Analytics core services.

   g. Restart WebLogic and all Oracle Utilities Analytics services after the Oracle Business Intelligence Enterprise Edition deployment is completed.

Enabling the 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 the 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**.

Chapter 6

Spatial Configuration

This chapter contains information on how to setup spatial data for the Oracle Business Intelligence Enterprise Edition dashboards in Oracle Utilities Analytics and how to set up the spatial data. The mapping between the spatial columns and the dimensional columns, such as City, State from the Address dimension is defined in the spatial metadata catalog, which is available as a part of the Web Catalog component in Oracle Utilities Analytics. Using the spatial data and the map metadata, users can view the star schema data in on the map reports delivered out-of-the-box as part of Oracle Utilities Analytics.

This chapter has the following sections:

- Acquiring the Spatial Data
- Installing Spatial Data
- Importing the Spatial Data into Oracle Utilities Analytics Spatial Data Tables
- Loading the Oracle Utilities Specific Themes

Acquiring the Spatial Data

Oracle Utilities Analytics does not include any spatial data. The spatial data can be loaded from the various third party vendors. Some of the spatial data vendors who partner with Oracle can be found in the below Oracle Technology Network page:

http://www.oracle.com/technetwork/database/options/spatialandgraph/community/partners/spatial-partners-095101.html

Some of these vendors might require you to purchase a separate license for the spatial data. You need to get in touch with the vendor directly for the same. After this, you would be able to download a spatial data dump from the spatial data vendor.

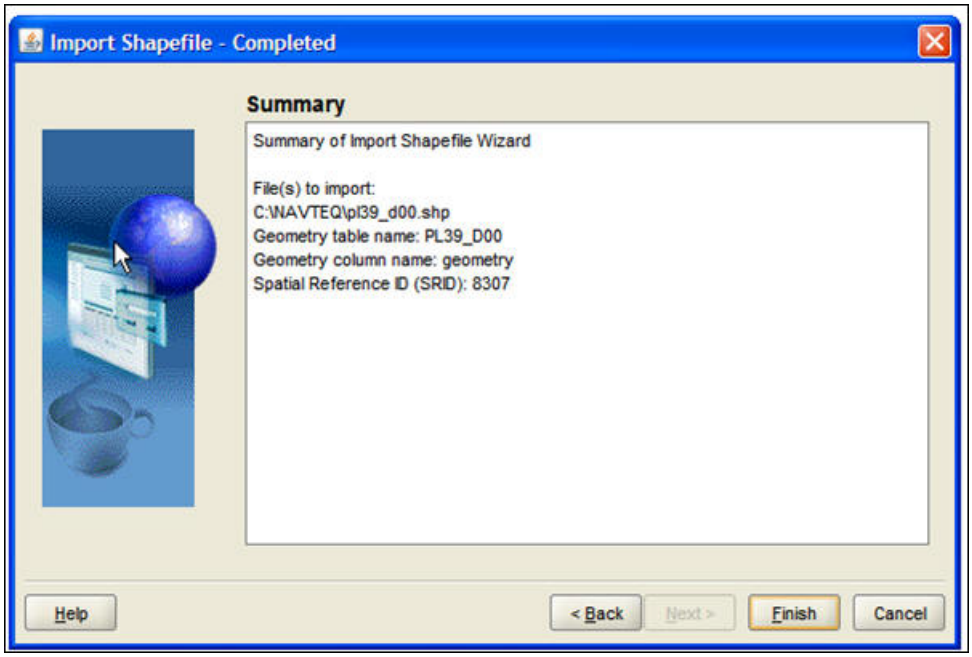
Installing Spatial Data

The spatial data acquired from a third party vendor can be in various formats. Typical vendors provide shape files (.shp) or a database dump for download. The exact spatial data model varies from vary to vendor and there is no generic format to this. Hence, the documentation that comes along with the spatial data is of utmost importance. This is required to identify what type of spatial data is available in which table.

The first task is to import the data in the shape file into the DWADM schema. A database dump can be imported by the standard oracle impdp command. A shape file can also contain the spatial data tables along with the data that can be imported by Oracle MapBuilder. Follow the steps mentioned below for this:

1. Unzip or decompress the .zip file (Typically, the shape file is zipped for data compression) to a temp directory. For example, C:\Spatial
2. Download the standalone MapBuilder application from this site: http://www.oracle.com/technetwork/middleware/mapviewer/downloads/index-100641.html
3. Start the **MapBuilder.** On windows, run this to start: **java -jar mapbuilder.jar**

   Note: Refer to the MapViewer documentation for detailed instructions on installing and running MapBuilder from this site: http://www.oracle.com/technetwork/middleware/mapviewer/documentation/index.html
4. Create a connection to the DWADM schema in the Oracle Utilities Analytics Data Warehouse database by navigating to **File** > **New Connection**.
5. Navigate to **Tools** > **Import Shapefile**, and click Next.
6. Click the **Shapefile**.
7. Browse to the **C:\Spatial** directory, select the **.shp** file, and click **Open**.
8. Click **Next**.
9. Ensure the **Create Predefined Theme** box is unchecked, and click **Next**.
10. Review the summary information and click **Finish**. A sample screenshot is shown below.



Importing the Spatial Data into Oracle Utilities Analytics Spatial Data Tables

Once the spatial data tables from an third party vendor have been imported into the DWADM schema, the next step is to import the spatial data needed by Oracle Utilities Analytics into certain specific tables. This step to import a certain subset of the data into a standardized set of Oracle Utilities Analytics tables is for decoupling. This decoupling helps the Oracle Business Intelligence Enterprise Edition map reports and other Oracle Business Intelligence Enterprise Edition map configuration to remain oblivious to the variations in the spatial data schema coming from various vendors. This way you need not touch any of the spatial metadata catalog or modify any of the map reports being delivered out-of-the-box.

Oracle Utilities Analytics needs the administrative boundary type of spatial data at four levels - State, City, County and Postal Code. All map reports in Oracle Utilities Analytics are using one of these levels. Since the spatial data model varies from vendor to vendor, further details provided in this section is based on a sample spatial data from a specific vendor.

The following sections describe how the import the data based on a sample spatial data dump provided by HERE maps (formerly NAVTEQ).This sample data set contains administrative boundary data for the OHIO city in the US country. The sample data set from the Oracle partner can be downloaded from the Oracle Utilities Analytic's OTN (Oracle Technology Network) page:

http://www.oracle.com/technetwork/database/options/spatialandgraph/downloads/spatial-partners-data-087203.html

However, the steps can be used with a little variation to setup the spatial data for Oracle Utilities Analytics for any city from any country. The extent of the changes need to be done varies based on the vendor used to purchase the spatial data. Read through the documentation of the spatial data model provided by the vendor to understand what type of data lies in what table.

Below table provides a simple mapping based on the HERE maps sample data.

Spatial Data Level	Table in Navteq Sample Data	Additional Filters	Oracle Utilities Analytics Spatial Data Table
State	WOM_AREA	Feature Type = 90996 ISO Country Code = 'USA'	Q1_STATES54004
City	PL39_d00	Q1_CITY54004	lsad_trans = 'city', 'village'
County	CO39_D00		Q1_COUNTY54004
Postal Code	ZT39_D00		Q1_USZIP54004

Apart from these four levels, there are also some standard themes and styles that need to be imported.

Below sub-sections contain the SQL statements to create and populate the various spatial data tables for Oracle Utilities Analytics. The prerequisite is that spatial data has been purchased by you and the spatial data dump has been imported into the DWADM schema. It is assumed that the eLocation website is being used as the base map in the Oracle Business Intelligence Enterprise Edition mapviewer setup, for which the SRID (Spatial Reference System Identifier) is 54004. The SRID is a unique value used to identify the coordinate system used in a Geographic Information System (GIS) application. If some other base map is used, then the transform parameter in the insert statements should specify the SRID of the base map being used.

Importing Theme Related Spatial Data into Oracle Utilities Analytics

The sdo_ tables are standard tables expected to be present in the spatial data from any vendor.

```
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;
```

Importing State Spatial Data into Oracle Utilities Analytics

In Oracle Utilities Analytics, the table Q1_STATES54004 is used to store the state related administrative boundary. Create the table based on the DDL below and insert the values from one of the spatial data tables obtained from the vendor.

```
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_SDX
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 =
'ISO';
```

Note: Customize the table name WOM_AREA, the feature type value and the ISO country code as per the spatial data model obtained by you. The below insert statement is to define the Q1_ table as a spatial table and update the spatial metadata view to reflect the dimensional information for the areas. The parameters for the insert statement are table name, geometry column name, and X and Y boundaries (the latitude and the longitude) based on the data and the tolerance value.

```
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;
```

Importing City Spatial Data into Oracle Utilities Analytics

In Oracle Utilities Analytics, the table Q1_CITY54004 is used to store the city related administrative boundary. Create the table based on the DDL below and insert the values from one of the spatial data tables obtained from the vendor.

```
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');
```

Note: Customize the table name pl39_d00 and additional filters as per the spatial data model obtained by you. Map the state name dynamically for the current city record in the spatial data. The below insert statement is to define the Q1_ table as a spatial table and update the spatial metadata view to reflect the dimensional information for the areas. The parameters for the insert statement are table name, geometry column name, and X and Y boundaries (the latitude and the longitude) based on the data and the tolerance value.

```
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);
```

Importing County Spatial Data into Oracle Utilities Analytics

In Oracle Utilities Analytics, the table Q1_COUNTY54004 is used to store the county related administrative boundary. Create the table based on the DDL below and insert the values from one of the spatial data tables obtained from the vendor.

```
CREATE TABLE Q1_COUNTY54004 AS
SELECT name FEATURE_NAME,  sdo_cs.transform(geometry, 54004)
geometry, 'OHIO' state FROM CO39_D00;
```

Note: Customize the table name CO39_D00 as per the available spatial data model. The below insert statement is to define the Q1_ table as a spatial table and update the spatial metadata view to reflect the dimensional information for the areas. The parameters for the insert statement are table name, geometry column name, and X and Y boundaries (the latitude and the longitude) based on the data and the tolerance value.

```
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);
```

Importing Postal Code Spatial Data into Oracle Utilities Analytics

In Oracle Utilities Analytics, the table Q1_USZIP54004 is used to store the county related administrative boundary. Create the table based on the DDL below and insert the values from one of the spatial data tables obtained from the vendor.

```
CREATE TABLE Q1_USZIP54004 AS
SELECT zcta ZCTA5CE, sdo_cs.transform(geometry, 54004) geom. FROM
ZT39_D00;
```

Note: Customize the table name ZT39_D00 as per the available spatial data model. The below insert statement is to define the Q1_ table as a spatial table and update the spatial metadata view to reflect the dimensional information for the areas. The parameters for the insert statement are table name, geometry column name, and X and Y boundaries (the latitude and the longitude) based on the data and the tolerance value.

```
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);
```

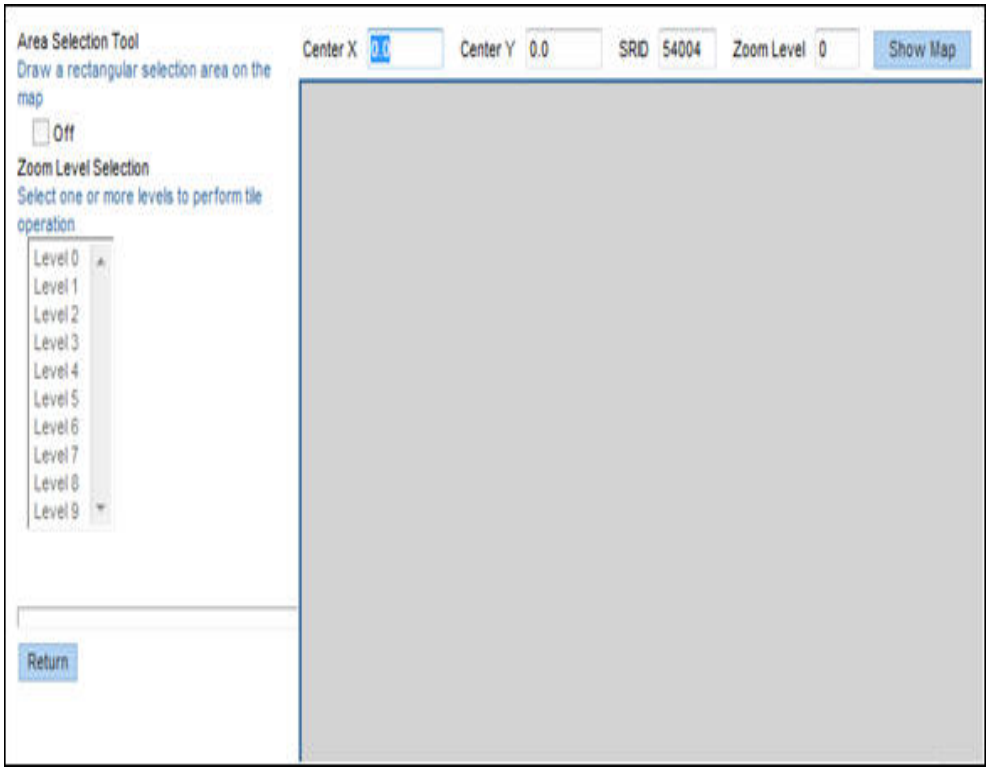
Improving Performance by Prefetching the Map Tiles

Rendering map tiles dynamically can affect system performance. To avoid this, you may 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. These instructions are for MapViewer 11.1.1.7.1 version. If you are using a different version, refer to the MapViewer documentation for instructions.

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 **Management** > **Manage Map Tile Layers**.
3. Select the required online map tile and click **View map/Manage Tiles**.

   The **Prefetching** wizard opens:



4. 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 X and Y axis used in the following example is for Ohio:

5. 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.
6. Select one or more zoom-levels for which you want to prefetch the tiles.

Loading the Oracle Utilities Specific Themes

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 ../BI252/Spatial-Metadata folder to that location.
2. Import the 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 are imported successfully.
4. After importing the tables, run the following SQL scripts from the ../BI252/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.

Additional Setup for Oracle Utilities Outage Analytics

The Outage Analytics product within Oracle Utilities Analytics needs some additional spatial data setup. The reason is that Outage Analytics alone uses point information from spatial data for plotting outage event related information on maps. This section should be skipped if NMS is not one of the source systems for Oracle Utilities Analytics.

The very first step is to replicate the DIAGRAM_OBJECTS table into the Oracle Utilities Analytics database. However, a suitable mechanism needs to be built to refresh this table with the latest data from Oracle Utilities Network Management System whenever there are changes in the source system.

Once this is done, then after replicating the DIAGRAM_OBJECTS table, the following steps set the Oracle Utilities Analytics dashboards up 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 works without changes with the eLocation base map:

```
create index Q1_DIAGRAM_OBJECTS_SDX
on diagram_objects (ll_geometry)
indextype is mdsys.spatial_index;
```

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 the following:

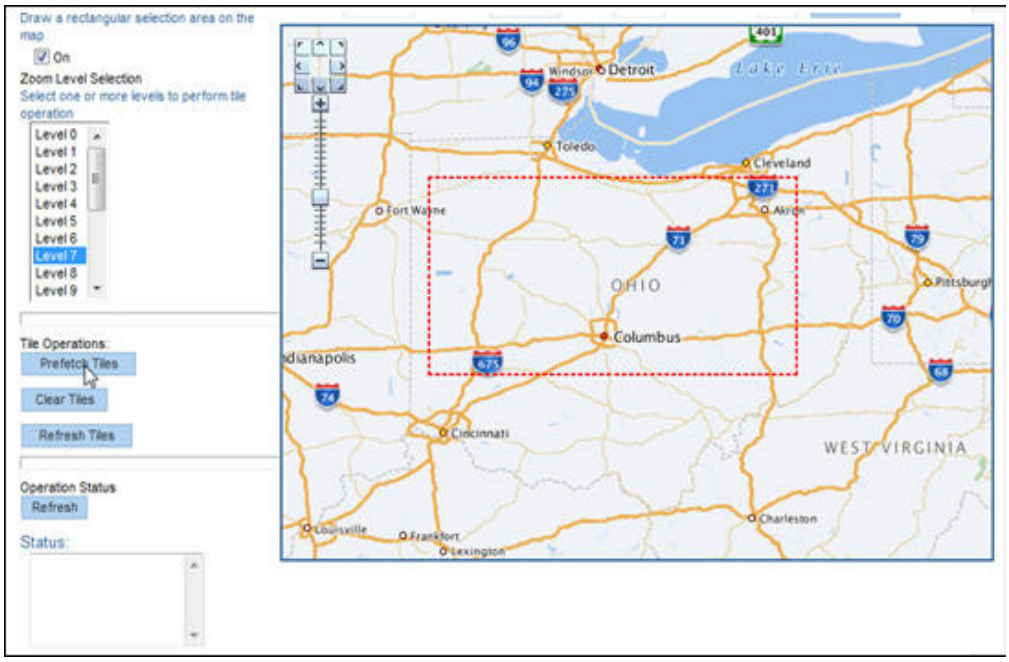
```
CREATE TABLE Q1_DIAGRAM_OBJECTS_54004 as select * from
DIAGRAM_OBJECTS;
```

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;.

4. Under **Tile Operations**, click on **Prefetch Tiles**. Here is a snapshot of the area selection and the tile operation.



This process takes 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.

Chapter 7

Installing the NMS Business Intelligence Publisher Reports

This section describes the steps to be performed while installing the Oracle Utilities Analytics NMS IEEE outage reports:

1. Unzip the IEEE outage reports contained in **OUA NMS BI Publisher reports.zip** from the installation media to a temporary directory (ex. TEMPDIR) on the server where Oracle BI Publiser is installed.
2. Log into Oracle BI Publisher (http://<BI Publisher server name>:9704/xmlpserver/) as the Administrator from a browser that has access to the TEMPDIR folder from the step 1.
3. Set up a database connection as follows:
   a. Navigate to **Oracle BI Publisher Administration** > **Data Sources** > **JDBC Connection**.
   b. Click **Add Data Source**.
   c. In the **Data Source Name** field, enter *NMS BI Publisher* or a name of your choice.
   d. Set the **Driver Type** to Oracle 9i/10g/11g.
   e. Set the **Database Driver Class** to oracle.jdbc.OracleDriver.
   f. Set the **Connection string** to:jdbc:oracle:thin:@<*your machine*>:<Port>:<the ORACLE_SID>
   g. Set the **username** and **password** to match your Oracle Utilities Analytics database login values.
   h. Click **Test Connection** and verify that it is properly configured.
   i. Click **Apply.**
4. From the **BI Publisher Catalog** page, select **Shared Folders** from the folders tree.
5. On top of the folders section, click the **New** drop-down list and select **Folder** from the list.
6. Enter *NMS IEEE* Reports as the folder name (or a name of your choice), then click **Create**. The new folder is added. You may have to click **Refresh** button to update the Folders list.
7. Select the *NMS IEEE* Reports folder in the folder list.
   Under the **NMS IEEE Reports** folder, create another new folder named **NMS IEEE Data Models.**
8. Select the **NMS IEEE Data Models** directory, and then click **Upload** in the **Tasks** section on the bottom left.

a. Browse to the directory where the NMS IEEE BI Publisher reports exist (TEMPDIR from step 1).

b. Locate all of the data model files and upload them to the **NMS IEEE Data Models** directory. These files contain an extension of .xdmz and include the following files:

- CriticalCustomerOutages.xdmz
- DailyTroubleReport.xdmz
- DeviceOutageHistory.xdmz
- IEEEIndiceCalculations.xdmz
- IndicesByCity.xdmz
- OutageSummary.dxmz
- RecurringDeviceOutages.xdmz
- SustainedOutagesByCauseSummary.xdmz
- SustainedOutageSummary.xdmz

9. Select the **NMS IEEE Reports** directory, and then click **Upload** in the **Tasks** section on the bottom left

a. Browse to the directory where the OUA NMS IEEE BI Publisher reports exist (TEMPDIR from step 1).

b. Locate all of the report files and upload them to the **NMS IEEE Reports** directory. These files contain an extension of .xdoz and include the following files:

- CriticalCustomerOutages.xdoz
- DailyTroubleReport.xdoz
- DeviceOutageHistory.xdoz
- IEEEIndiceCalculations.xdoz
- IndicesByCity.xdoz
- OutageSummary.xdoz
- RecurringDeviceOutages.xdoz
- SustainedOutagesByCauseSummary.xdoz
- SustainedOutageSummary.xdoz

10. Assign the appropriate JDBC connection to the imported data models.

a. Click **Catalog**.

b. Select the **NMS IEEE Data Models** directory, and then select the CriticalCustomerOutages.xdmz data model.

c. Click **Data Model** on the top left.

d. In the **Properties** frame on the right, make sure that **Default Data Source** points to the data source you created earlier. This defaults to **NMS BI Publisher**.

e. You must perform this step for all of the data models under the NMS IEEE Data Models directory.

11. Assign the appropriate data model to all the NMS IEEE Reports.

a. Click on **Catalog**.

b. Select the **NMS IEEE Reports** directory. Click **Edit** for the **CriticalCustomerOutages** report.

c. At the top left of the page, click **Search**.

d. Browse and select the appropriate data model file (will match the name of the report with an extension of .xdmz).

e. Save the current report by clicking **Save** on the top-right of the page.

You should now be able view the standard IEEE indices reports from BI Publisher by simply selecting the desired report from the **NMS IEEE Reports** directory under the **Catalog**.