

The Oracle logo, consisting of the word "ORACLE" in a bold, red, sans-serif font, is centered within a thin black rectangular border.

# **Oracle Product Lifecycle Analytics**

Installation and Setup Guide

v3.3

Part Number E20564-04

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# Preface

Oracle's Agile PLM documentation set includes Adobe® Acrobat PDF files. The [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technetwork/documentation/agile-085940.html) <http://www.oracle.com/technetwork/documentation/agile-085940.html> contains the latest versions of the Agile PLM PDF files. You can view or download these manuals from the Web site, or you can ask your Agile administrator if there is an Agile PLM Documentation folder available on your network from which you can access the Agile PLM documentation (PDF) files.

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**Note** To read the PDF files, you must use the free Adobe Acrobat Reader version 9.0 or later. This program can be downloaded from the [Adobe Web site](http://www.adobe.com) <http://www.adobe.com>.

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The [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technetwork/documentation/agile-085940.html) <http://www.oracle.com/technetwork/documentation/agile-085940.html> can be accessed through **Help > Manuals** in both Agile Web Client and Agile Java Client. If you need additional assistance or information, please contact My Oracle Support (<https://support.oracle.com>) for assistance.

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**Note** Before calling Oracle Support about a problem with an Agile PLM manual, please have the full part number, which is located on the title page.

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## Readme

Any last-minute information about Agile PLM can be found in the Readme file on the [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technetwork/documentation/agile-085940.html) <http://www.oracle.com/technetwork/documentation/agile-085940.html>.

## Agile Training Aids

Go to the [Oracle University Web page](http://www.oracle.com/education/chooser/selectcountry_new.html) [http://www.oracle.com/education/chooser/selectcountry\\_new.html](http://www.oracle.com/education/chooser/selectcountry_new.html) for more information on Agile Training offerings.

## Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

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# Overview of Oracle Product Lifecycle Analytics Installation

**This chapter includes the following:**

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- Tasks Overview ..... 1
- Obtaining Software ..... 1
- Acronyms ..... 2

This guide provides instructions and guidelines to successfully install or upgrade to Oracle Product Lifecycle Analytics 3.3. You should be familiar with or have working knowledge of Oracle Data Integrator, Oracle Business Intelligence Enterprise Edition, Agile Product Lifecycle Management (PLM), Agile PLM for Process, and the Oracle Database Server to work with Oracle Product Lifecycle Analytics.

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**Note** This document does not explain the basics of Oracle Databases, Oracle Data Integrator (ODI), and Oracle Business Intelligence (OBI). Refer to the [Oracle Technology Network](http://www.oracle.com/technology/documentation/index.html) <http://www.oracle.com/technology/documentation/index.html> for documentation related to these products.

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This chapter outlines the tasks for installation of the Oracle Product Lifecycle Analytics software. In addition, it provides the information required to access the necessary software.

## Tasks Overview

The Oracle Product Lifecycle Analytics installation requires you to:

1. Verify hardware and software requirements. For information, see [System Requirements](#) on page 11 in this guide.
2. Download Oracle Product Lifecycle Analytics. For information, see [Obtaining Software from Oracle E-Delivery](#) on page 1 in this guide.
3. Install the Oracle Product Lifecycle Analytics application. For information, see [Installation](#) on page 19 in this guide.

## Obtaining Software

Oracle products are distributed as "Product Packs". A Product Pack is an electronic version of the software. Refer to the Media Pack description or the list of products that you purchased on your Oracle ordering document. Then, view the Quick Install Guide License List to help you decide which Product Pack you need. Prior to downloading, verify that the product you are looking for is in the License and Options section of the Product Pack Readme. Oracle recommends that you print the Readme for reference.

There will be an itemized part list within each of the packs and you will need to download all items in order to have the complete download for the desired Oracle Agile release.

All Oracle Software Delivery Cloud files have been archived using Info-ZIP's highly portable Zip utility. After downloading one or more of the archives, you will need the UnZip utility or the Winzip utility to extract the files. You must unzip the archive on the platform for which it was intended. Verify that the file size of your downloaded file matches the file size displayed on Oracle Software Delivery Cloud. Unzip each Zip file to its own temporary directory.

**To download the Oracle Product Lifecycle Analytics Software from Oracle Software Delivery Cloud (<http://edelivery.oracle.com>):**

1. On the Oracle Software Delivery Cloud Welcome page, click **Sign In / Register**.
2. Read the Terms & Restrictions. If you agree with the License Terms and Export Restrictions, select the check boxes and click **Continue**.
3. On the Media Pack Search screen, select **Oracle Agile Applications** in the **Select a Product Pack** drop-down list box. Select a **Platform value**. Click **Go** to view the applicable Agile release downloads.
4. Select the appropriate link. Click **Continue**.
5. The Download page displays downloadable release parts, including customer guides. Click **Download** for the appropriate media pack.
6. Extract the contents of the media pack, unzip the contents, and navigate to the product folder. The installers for all platforms are available within the product folder, regardless of the operating system on which you have chosen to install the software.

## Acronyms

Common acronyms used in this document are listed below:

<b>Acronym</b>	<b>Meaning</b>
BI	Business Intelligence
DM	Data Mart
ETL	Extract Transform Load
OBI	Oracle Business Intelligence
OBIEE	Oracle Business Intelligence Enterprise Edition
ODI	Oracle Data Integrator
PC	Product Collaboration
PLM	Product Lifecycle Management
PPM	Product Portfolio Management
PQM	Product Quality Management



# Oracle Product Lifecycle Analytics Overview

**This chapter includes the following:**

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▪ Introduction .....	5
▪ Oracle Product Lifecycle Analytics Architecture .....	6
▪ Architecture Components .....	7

## Introduction

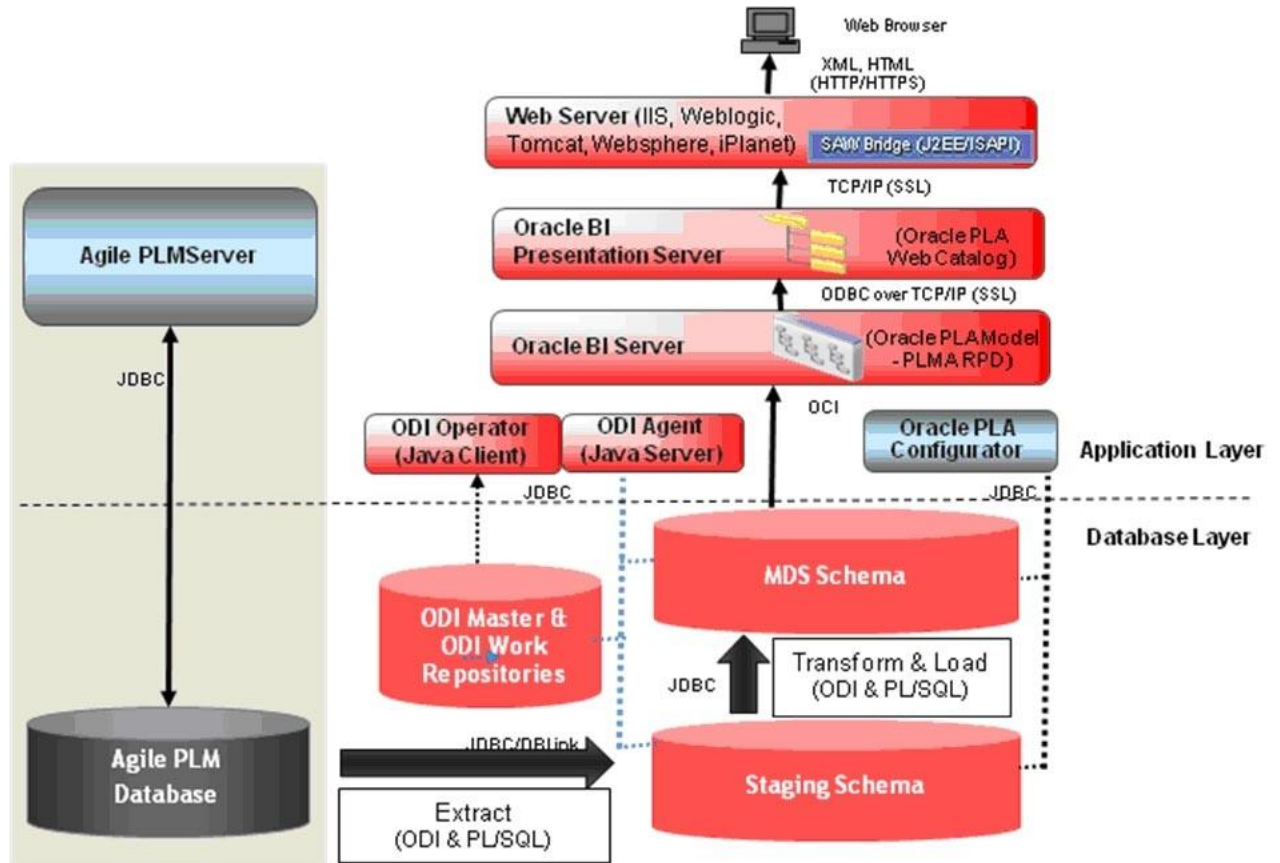
Oracle Product Lifecycle Analytics (PLA) is a comprehensive, pre-built Business Intelligence solution that delivers pervasive intelligence and provides key insights into your Product Lifecycle Management (PLM) data. The Oracle Product Lifecycle Analytics Application provides an integrated view of the product to enable greater alignment of information across product organizations. It is built on Oracle Data Integrator (ODI) ETL and Oracle Business Intelligence Enterprise Edition (OBIEE) platforms.

Oracle Product Lifecycle Analytics addresses the business use cases specific to Product Quality Management (PQM), Product Collaboration (PC), and Product Portfolio Management (PPM), Agile PLM for Process: New Product Development (NPD) and Global Specification Management (GSM).

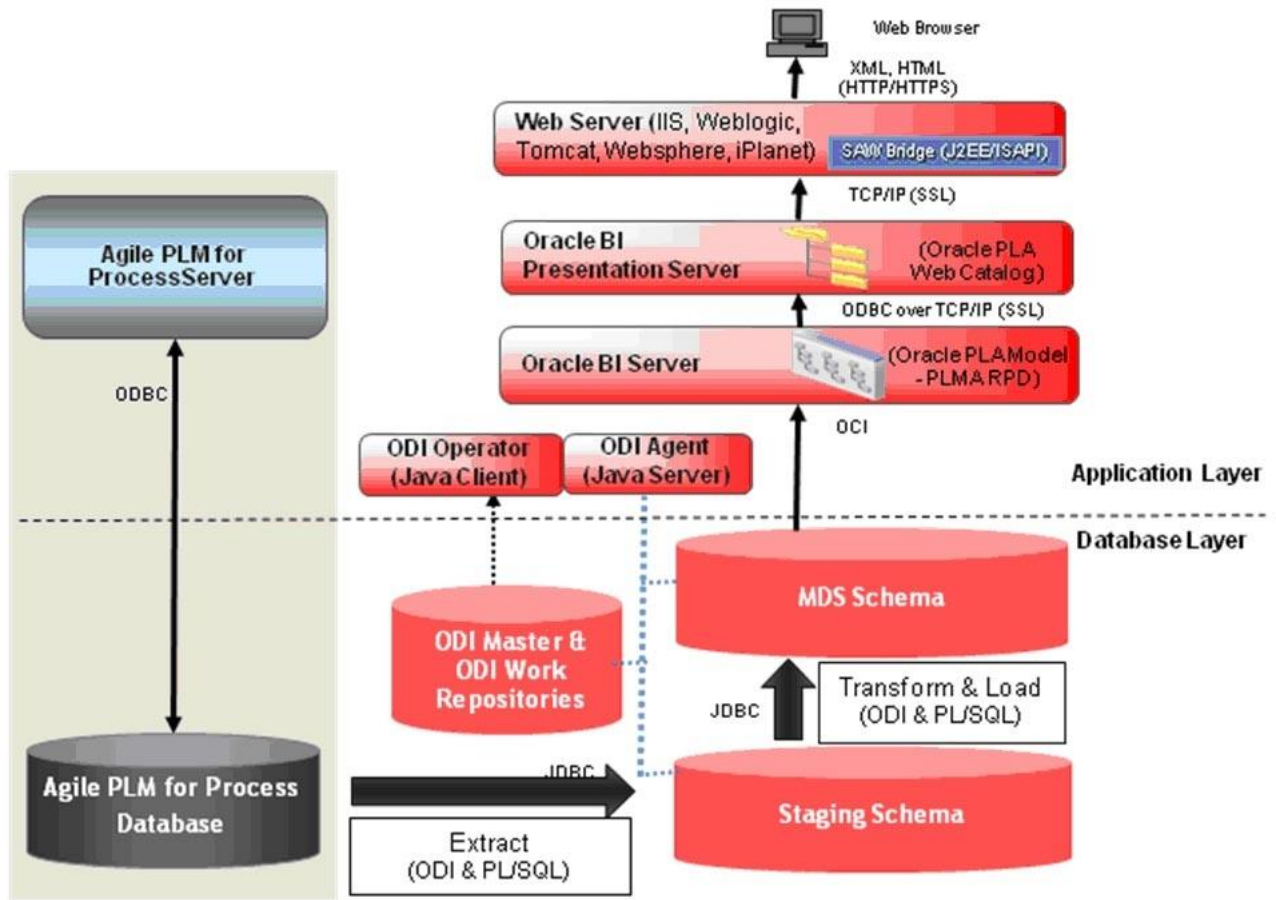
Oracle Product Lifecycle Analytics provides you with the ability to use different source systems. Data is transferred from the source systems to the Oracle PLA target analytical data store. In Oracle PLA Release 3.3, the transactional data sources are either Agile PLM 9.x or Agile PLM for Process.

# Oracle Product Lifecycle Analytics Architecture

## Oracle Product Lifecycle Analytics with Agile PLM



Oracle Product Lifecycle Analytics with Agile PLM for Process



## Architecture Components

The following table describes the major components in the Oracle Product Lifecycle Analytics architecture:

Component	Description
Oracle Data Integrator (ODI) Agent	ODI Agent is a Java Service that allows execution of scheduled Extract-Transform-Load (ETL) scenarios or on-demand ETL jobs to extract from one or multiple physical sources, and transform and load data to a target schema.
ODI Operator	Java client used for monitoring and managing ODI interface executions in the sessions as well

Component	Description
	as the scenarios in production.
ODI Master and Work Repositories	<p>ODI Master Repository is a schema that maintains all ODI topology and connectivity information. ODI Work Repository is a schema that maintains information related to the definition and execution of ETL processes.</p>
MDS Schema	<p>This Star Schema contains Fact and Dimension tables that enable you to create analytical reports using any reporting application.</p> <p><b>Note</b> ETL loads the data from the source system in batches into the target MDS tables. It is likely that the queries executed by the BI server or any other downstream application may find that the data in the MDS tables is partially available or is not consistent for reports while the batch ETL tasks are running.</p>
Staging Schema	<p>Schema with staging tables to temporarily extract data from the Agile PLM OLTP (Online Transaction Processing) database transforming and loading data to the target MDS Schema. The temporary entities in this schema are not published and can change from one release to another.</p> <p><b>Note</b> The Staging Schema and MDS Schema are collectively referred to as Data Mart database components.</p>
Oracle PLA Configurator	<p>Java client enables you to associate configurable PLM data to the MDS depending on various individual user PLM configurations. It gets installed as part of the Oracle PLA installation in the same machine.</p>
Oracle PLA Model (PLMA RPD)	<p>The Oracle PLA Model is a metadata repository that has metadata of the MDS tables, the business rules such as measure, formulae, hierarchical dimensions, and user-specific roles and privileges that are required to create analytics reports. It is installed and configured within the Oracle BI Server.</p>
Oracle PLA Web Catalog	<p>The Oracle PLA Web Catalog component presents organized information in the form of reports on Oracle PLA Interactive Dashboards. It is installed and configured within the Oracle BI Presentation Server.</p>

The following are the two main layers under which Oracle Product Lifecycle Analytics components are installed:

- Database Layer
- Application Layer

## Database Layer

Database Layer consists of the following components distributed across servers:

- Source Database
  - Agile PLM Database on Oracle
  - Agile PLM for Process Database on Oracle and SQL Server
- Target Data Mart Database (Oracle Enterprise Database Server only)
  - Staging Schema
  - MDS Schema
- ODI ETL Repositories (Oracle Enterprise Database Server only)
  - ODI Master Repository
  - ODI Work Repository

## Application layer

Application Layer consists of the following components distributed across one or more server machines:

- Oracle Data Integrator Components (Refer to the ODI documentation for all ODI components)
  - ODI Agent
  - ODI Operator
- Oracle PLA Configurator (with Agile PLM only)
- JDK or JRE
- Oracle Business Intelligence Enterprise Edition components
  - Oracle BI Server
  - Oracle BI Presentation Server
  - Web Server: IIS, OC4J, Weblogic, Websphere, or Tomcat/Apache
- Oracle PLA components installed on OBIEE
  - Oracle PLA RPD on Oracle BI Server
  - Oracle PLA Web Catalog on Oracle BI Presentation Server

Refer to the next chapter for supported software requirements and versions for installing the Oracle Product Lifecycle Analytics application.



## System Requirements

**This chapter includes the following:**

- Software Requirements ..... 11
- Hardware Requirements ..... 13

Various database and application components of Oracle Product Lifecycle Analytics outlined in the previous chapter may be deployed in different hardware/machine configurations. This depends on performance criteria set based on the source (Agile PLM or Agile PLM for Process) database size, volume of data changes in the source database, IT network and infrastructure constraints, and business requirements. The amount of time required to complete an installation depends on the complexity of your deployment configuration.

This chapter describes the minimum software and hardware requirements for the Oracle Product Lifecycle Analytics installation.

### Software Requirements

The following are the software requirements for Oracle Product Lifecycle Analytics installation:

Software Component	Name	Version
Browsers	Internet Explorer	Refer to the <i>Oracle Business Intelligence Infrastructure Installation and Configuration Guide</i> for supported versions.
	Firefox	
Oracle Business Intelligence – BI server and Presentation services	Enterprise Edition	10.1.3.4.1
Database server	Oracle Enterprise Edition	10g R2*, 11g R1, 11gR2
	Microsoft SQL Server (Agile PLM for Process only)	2005 SP2, 2005 SE
Data Integration Component	Oracle Data Integrator	10.1.3.5, 10.1.3.6.2
Software Development Package	Java Development Kit	1.5.x, 1.6
		<b>Note</b> Agile PLM for Process requires JDK 1.6 or higher
Operating Systems	Microsoft Windows Server	2003** ( 32 bit and 64 bit )***
	Oracle Enterprise Linux	5.4 ( 32 bit and 64 bit )
	Red Hat Linux	5.4 ( 32 bit and 64 bit )
	Sun Solaris	10 ( SPARC 64 bit )
	AIX	5.3, 6.1

Software Component	Name	Version
	HP-UX	11.31
Data Source	Agile PLM Releases	9.2.2.4 9.3 9.3.0.1 9.3.0.2 9.3.1
	Agile PLM for Process	6.0.0.3 with EP 2.4.1**

\*System performance may improve if Oracle Database patch 10.2.0.4 is installed on a 64-bit operating system.

\*\*Agile PLM for Process SQL Server Database Source is supported on the Windows OS only. EP 2.4.1.0.9 is only needed if you are going to extend or customize your BI solution to use fields from the Extended Attribute Denormalization capability of the source database.

\*\*\*Oracle Business Intelligence may have some restrictions on a 64-bit platform. Refer to the *Oracle Business Intelligence Infrastructure Installation and Configuration Guide* for additional details.

**Note** Refer to the *Oracle Business Intelligence Infrastructure Installation and Configuration Guide* for install options specific to various Web servers.

## Installation Notes

1. Make sure that sufficient disk space is available on the server(s) before you begin the installation of Oracle Product Lifecycle Analytics which includes both the database and ETL components. Refer to [Hardware Requirements](#) on page 13 for detailed information.
2. It is recommended to have dedicated servers for Oracle Product Lifecycle Analytics. Try to avoid installing any other software which may cause conflict or consume a lot of disk space on the systems where Oracle Product Lifecycle Analytics is installed.
3. Do not use the Oracle Product Lifecycle Analytics database server as a Primary Domain Controller (PDC) or Dynamic Host Configuration Protocol (DHCP) server.
4. Do not enable Disk Compression on Oracle Product Lifecycle Analytics database servers.
5. Disk compression should be disabled.
6. Virus protection should be disabled. If virus protection is enabled, components used in the Installer can be falsely identified as being infected and lock the installation. You can turn on virus protection after the installation is complete.

**Note** We recommend that the computer systems, on which you install Oracle Product Lifecycle Analytics and the Oracle Database, have at least two physical drives or two disk partitions. This enables you to install the Operating system and the Oracle installation components on separate drives/partitions, thus ensuring better performance.

# Hardware Requirements

When you choose a hardware configuration, it is important to consider details such as the total number of users, the number of concurrent users, the size of your database, network and I/O configurations for optimal data throughputs, the number of objects processed per day, and the number of transactions in the database.

The following are the minimum hardware requirements for the Database Server that hosts the Data Mart Database schema components (Staging and MDS Schema):

Environment	CPU	RAM	Minimum Disk Space
Development (DEV)	4	4 GB	6 x Source DB size
Testing or Staging (STAGE)	4	4 GB	6 x Source DB size
Production (PROD)	4	8 GB	6 x Source DB size

**Important** The minimum hardware requirements provided in this document are not sized for optimal ETL and BI Reports performance. Appropriate data warehouse, ETL, and BI technical experts are required to evaluate performance criteria and then size the hardware configuration based on the source database size, volume of data changes in the source application, IT network and infrastructure constraints, and business requirements.



# Upgrade Considerations

### This chapter includes the following:

---

- Before You Upgrade ..... 15
- Upgrade Process ..... 17
- Post-Upgrade Tasks ..... 17
- Upgrading Repositories ..... 17
- Upgrading Web Catalog and Permissions in the Presentation Layer ..... 18

You can upgrade from Agile PLM Business Intelligence versions 3.2 or 3.2.0.1 to Oracle Product Lifecycle Analytics 3.3. If you are running a version of Agile PLM Business Intelligence prior to version 3.2, you must first upgrade to version 3.2 before installing Oracle Product Lifecycle Analytics 3.

**Important** If you are upgrading from a version of Agile PLM Business Intelligence higher than 3.2.0.1.0, the Oracle Product Lifecycle Analytics 3.3 will not upgrade the schema.

During installation, you are asked to provide the MDS Schema User name. If the user name already exists and is compatible with Agile PLM Business Intelligence version 3.2 or 3.2.0.1, the schema can be upgraded to version 3.3.

This chapter describes the pre-upgrade requirements and the upgrade process. In addition, it lists the attributes which do not migrate when you upgrade the PLM Business Intelligence Configurator.

**Note** The Oracle Product Lifecycle Analytics 3.3 installer does not include upgrade any customizations done on the Staging Schema, MDS schema, or ODI ETL components installed with a previous release of Agile PLM Business Intelligence. Take appropriate backups, then re-implement and verify customizations after following the upgrade steps.

## Before You Upgrade

- Create a copy of all your current configurations and customizations. The examples include, RPD, Catalog, and schema.
- Make sure that you install JRE/JDK 1.5.x.
- Clean the ODI-related tables on the source database.
- Clean the ODI Repository Objects.
- Back up the ODM\_FLEXCOLS\_METADATA
- Unzip the `upgrade_prerequisites.zip` file, located in the directory where you downloaded the installation files.

## Cleaning ODI-related Tables

### To clean the ODI-related tables on the source schema:

1. Locate the files unzipped from the `upgrade_prerequisites.zip` file.
2. Run the `RunOnSource.sql` file on your existing Agile PLM Business Intelligence 3.2 or 3.2.0.1 schema. The script performs the following tasks:
  - a. Drops the `SNP_SUBSCRIBERS` table.
  - b. Drops the `T$_` database triggers.
  - c. Drops the `I$_`, `J$_`, `E$_`, and `C$_` tables.
  - d. Drops the `JV$_` views.

**Important** The script assumes that the default prefixes for the tables and views in the ODI topology have not changed. If the prefixes have changed, drop the tables manually from the source schema or modify the script according to the prefix setting in Topology Manager.

3. Run the following queries to verify that no values are returned:

```
SELECT TRIGGER_NAME FROM USER_TRIGGERS WHERE TRIGGER_NAME LIKE 'T$_%';
SELECT TABLE_NAME FROM USER_TABLES WHERE TABLE_NAME LIKE 'I$_%' OR
TABLE_NAME LIKE 'J$_%' OR TABLE_NAME LIKE 'E$_%' OR TABLE_NAME LIKE
'C$_%';
SELECT VIEW_NAME FROM USER_VIEWS WHERE VIEW_NAME LIKE 'JV$_%';
```

**Note** If any values are returned, drop the objects manually.

## Cleaning ODI Repository Objects

**Important** Perform this step only if the Agile PLM Business Intelligence 3.2 or 3.2.0.1 schema was created using the Single Schema option. The ODM, MDS, ODI Master and ODI Work Repository components must be in the same schema. If the MDS schema object was installed in a separate schema, you do not need to perform this step.

### To clean the ODI Repository objects:

1. Locate the files unzipped from the `upgrade_prerequisites.zip` file.
2. Run the `Upgrade_ODIRep_Cleaner.sql` file on your existing Agile PLM Business Intelligence 3.2 or 3.2.0.1 single schema which includes ODM, MDS, and ODI Repository schema objects. The script performs the following tasks:
  - a. Drops the `SNP_` tables and all related constraints.
  - b. Drops the `I$_`, `J$_`, `C$_`, and `E$_` work tables, the `T$_` triggers, and the `JV$_` views.
  - c. Drops all synonyms.
  - d. Drops the `NA_LISTID`, `LISTNAME`, `LISTENTRY`, `NODETABLE`, `PROPERTYTABLE`, `AGILE_FLEX`, and `VERSION` tables.

**Important** The script assumes that the default prefixes for the tables in the ODI topology have not changed. If the prefixes have changed, drop the tables manually from the source schema or modify the script according to the prefix setting in Topology Manager.

3. Run the following queries to verify that no values are returned:

```
SELECT TABLE_NAME FROM USER_TABLES WHERE TABLE_NAME LIKE 'SNP_%';
SELECT TABLE_NAME FROM USER_TABLES WHERE TABLE_NAME LIKE 'I$_%' OR
TABLE_NAME LIKE 'J$_%' OR TABLE_NAME LIKE 'E$_%' OR TABLE_NAME LIKE
'C$_%';
SELECT TRIGGER_NAME FROM USER_TRIGGERS WHERE TRIGGER_NAME LIKE 'T$_%';
SELECT VIEW_NAME FROM USER_VIEWS WHERE VIEW_NAME LIKE 'JV$_%';
SELECT SYNONYM_NAME FROM USER_SYNONYMS;
```

---

**Note** If any values are returned, drop the objects manually.

---

## Backing up Metadata

Using SQL Developer, export the ODM\_FLEXCOLS\_METADATA table content as an insert statement and save it. This table is on the ODM schema.

## Upgrade Process

To upgrade to Oracle Product Lifecycle Analytics 3.3, you must run the 3.3 Installer. During installation, you are asked to provide the MDS Schema User name. If the user name already exists and is compatible with Agile PLM Business Intelligence version 3.2 or 3.2.0.1, the schema can be upgraded to version 3.3.

If you are installing on a different schema using the default option, you must provide a new schema user name for the ODM and ODI Repositories (Master and Work). If you are installing on a single schema (ODM and MDS in the same schema) using the default option, you must provide a new schema user name for the ODI Repositories (Master and Work).

## Post-Upgrade Tasks

After you have upgraded your Agile PLM Business Intelligence 3.2 or 3.2.0.1 schema to Oracle Product Lifecycle Analytics 3.3, perform the following steps before starting ETL:

1. Truncate the ODM\_FLEXCOLS\_METADATA table in the Staging (previously named ODM) schema. Create a backup of the table before truncation.
2. Run the INSERT statement that was created and saved before the schema was upgraded in [Backing up Metadata](#) on page 17.

## Upgrading Repositories

For Repository upgrade, refer to the "Merging Oracle BI Repositories" section in the *OBIEE Server Administration Guide*.

## **Upgrading Web Catalog and Permissions in the Presentation Layer**

For Web Catalog and Presentation Layer upgrade, refer the "Managing Presentation Catalog Using Oracle BI Catalog Manager" section in the *OBIEE Presentation Services Administration Guide*.

## Installation

### This chapter includes the following:

- Pre-installation Checklist ..... 19
- Starting the Oracle Product Lifecycle Analytics Installer ..... 21
- Installing Oracle Product Lifecycle Analytics ..... 22
- Post-Installation Tasks..... 25
- Executing ETL ..... 28

This section lists the prerequisites for installation, the installation procedure, the post-installation guidelines and uninstallation of the Oracle Product Lifecycle Analytics application. In addition, this section describes the execution of ETL after you complete the installation.

The complete installation of Oracle Product Lifecycle Analytics involves:

1. [Verifying the pre-requisites using the pre-installation checklist](#) on page 19
2. [Starting the Oracle Product Lifecycle Analytics Installer](#) on page 21
3. [Installing Oracle Product Lifecycle Analytics](#) on page 22
4. [Post-Installation Tasks](#) on page 25
5. [Executing ETL](#) on page 28

## Pre-installation Checklist

Verify the prerequisites for the installation of Oracle Product Lifecycle Analytics 3.3 using the following pre-installation checklist:

#	Check point	Done
1	<p>Make sure the Database Server and Listener services are running.</p> <p><b>Note</b> All database instances hosting the Oracle Product Lifecycle Analytics schema components should have NLS_CHARACTERSET as UTF8 and NLS_LENGTH_SEMANTICS as CHAR.</p>	
2	<p>Install and configure Oracle Data Integrator.</p> <p>For information on installation and configuration of ODI, refer to the <i>Oracle Data Integrator Installation and Configuration Guide</i>.</p>	
3	<p>Install and configure Oracle Business Intelligence Enterprise Edition.</p> <p>For information on installation and configuration of OBIEE, refer to the <i>Oracle Business Intelligence Infrastructure Installation and Configuration Guide</i></p>	
4	<p>Make sure the Oracle BI Server and Presentation Services are running.</p>	
5	<p>Install American English Unicode (en_US.UTF-8) Full Locale package in Solaris system to ensure successful installation and allow the complete functionality of Oracle Product Lifecycle Analytics</p>	

#	Check point	Done
	application.	
6	For Agile PLM for Process ETL: If the source is Microsoft SQL Server, download Microsoft SQL Server JDBC Driver 3.0 from the Microsoft website, <a href="http://www.microsoft.com/downloads/en/details.aspx?FamilyID=a737000d-68d0-4531-b65d-da0f2a735707">Microsoft Download Center</a> <a href="http://www.microsoft.com/downloads/en/details.aspx?FamilyID=a737000d-68d0-4531-b65d-da0f2a735707">http://www.microsoft.com/downloads/en/details.aspx?FamilyID=a737000d-68d0-4531-b65d-da0f2a735707</a> . Follow the installation instructions and then copy the <code>sqljdbc4.jar</code> file to the <code>&lt;ODI_HOME&gt;\drivers</code> directory.	
7	For Agile PLM For Process ETL: Run the <code>ALLINOneViews.sql</code> script if the source database is SQL Server based or run the <code>OracleALLINOneViews.sql</code> script if the source database is Oracle Server based. This script should only be run ONCE, unless advised by a deployment consultant or Oracle Support.  The script is available inside the <code>P4PSource_Views.zip</code> file. Make sure you download this file with the OPLA installation files.	
8	For Agile PLM: Create TNS entry for the source (PLM) database on the target database machine.  If you are creating a new Oracle PLA Data Mart database instance, refer to Adding Database Services to the Listener.	
9	Make sure you log in with a userid that has administrative privileges on the machine where Oracle PLA components are to be installed.	
10	Agile PLM or Agile PLM for Process source database is available.	
11	The <code>ODI_JAVA_HOME</code> environment variable contains the path to the supported JDK installation directory.	
12	The <code>JAVA_HOME</code> environment variable contains the path to the supported JDK installation directory and is added to the <code>PATH</code> environment variable.	

---

**Note** If you have previously installed Agile PLM Business Intelligence, see Upgrade Considerations for detailed information about upgrading your installation.

---

It is important to gather the following information before you begin the installation:

- Deployment Configuration specification determined based on ETL and BI Reports performance criteria
- Start date of the Fiscal year for your business
- Name of the email server specific to your email configuration

- Location of the ODI details
- Location of the RDBMS and database details
- Names of the tablespaces to be used during the installation
- Name and location of the Oracle BI (OBIEE) Server
- Name and location of the Oracle BI (OBIEE) Presentation Server

**Important** Install and test this release on a designated test server before installing it on your production environment. Resolve the issues or questions that you might observe during the system testing before you install this software on your production environment.

## Starting the Oracle Product Lifecycle Analytics Installer

The installer launches an installation wizard powered by 'InstallAnywhere' to install Oracle Product Lifecycle Analytics.

**Note** Click **Help** in the wizard windows for information about each step. You can keep the Help window open during the installation. The content in the Help window is refreshed dynamically as you progress with the installation.

### To start the Oracle Product Lifecycle Analytics 3.3 installer on Windows:

Double-click **Windows\PLMBISetup\_Win.exe** in the list of files available as part of the Installer kit.

### To start the Oracle Product Lifecycle Analytics 3.3 installer on UNIX:

1. Navigate to the folder where the file exists, in your UNIX terminal.
2. Provide full (Read, Write, Execute) permissions to the setup file:
  - AIX:** PLMBISetup\_AIX.bin
  - HP-UX:** PLMBISetup\_HP-UX.bin
  - Linux:** PLMBISetup\_Lin.bin
  - Solaris:** PLMBISetup\_Sol.bin
3. Enter the following command on your UNIX prompt:
  - AIX:** ./PLMBISetup\_AIX.bin
  - HP-UX:** ./PLMBISetup\_HP-UX.bin
  - Linux:** ./PLMBISetup\_Lin.bin
  - Solaris:** ./PLMBISetup\_Sol.bin

**Important** Install Oracle Product Lifecycle Analytics 3.3 in Linux as a non-root user.

## Installing Oracle Product Lifecycle Analytics

The process to install Oracle PLA is the same for Windows (Microsoft Windows), and versions of UNIX (Sun Solaris and Red Hat Linux) Operating systems.

The Oracle PLA installation process includes the following steps:

1. Installing the Data Mart Schema and ETL Components
2. Installing BI components

---

**Note** You must start the installer twice to complete the installation process. In some implementation scenarios, there is a need to manually install the Data Mart schema. This section also describes the steps involved in the manual installation of the Data Mart Schema. For more information, refer to [Manually Installing the Data Mart schema](#).

---

### Installing the Data Mart Schema and ETL Components

The installer provides options to install Data Mart schema and ETL components separately. You can also choose to install these components together.

#### To install the Data Mart Schema and ETL Components:

1. Start the installer.  
For information, refer to [Starting the Oracle Product Lifecycle Analytics Installer](#) on page 21 .
2. In the Welcome window, click **Next**.
3. In the Choose Agile PLM Source window, select either Agile PLM or Agile PLM for Process as your source database. Click **Next**.
4. In the Choose Install Set window, select the **PLM Data Mart Database and ETL** option.

---

**Note** The PLM Data Mart Database and ETL option can be installed separately, including on different machines.

---

5. In the **Install Data Mart Components** window, select the components that you want to install. The next steps vary based on your selection. Click **Help** on the wizard window for details on values to be entered in each step of the installation wizard.
6. Verify the installation details of the selected component in the **Pre-installation Summary** window.
7. Click **Install**.
8. In the **Installation Completed** window, click **Done**.

## Manually Installing the Data Mart Schema Components

If you selected the option 'Generate SQL scripts' in the **Select schema creation** window during the installation of the Staging module, the installer generates a set of SQL files and stores them in **Schema** folder in the **Install Directory**. This option involves running these scripts in SQL\*Plus to manually create Staging schema components.

### Step 1: Run the Installer using the Generate Scripts Option

### Step 2: Run the Generated SQL Scripts

1. Go to the directory where the installation files are located.
2. Change to the `schema` directory.

The directory contains one of the following subdirectories, based on the schema option chosen during installation:

- `Analytics_A9_Script_Single_Schema`, if the Single Schema option was chosen.
  - `Analytics_A9_Script_Default1_Schema`, if the Default Schema - ODM and MDS in Same Schema option was chosen.
  - `Analytics_A9_Script_Default2_Schema`, if the Default Schema - ODM and MDS in Different Schema option was chosen.
3. If the machine where the scripts are generated is different from the machine where the schema is created, then copy the entire schema directory to the location where you want to create the Staging schema.
  4. Open a Command window and change to the directory based on the selected schema option.
  5. In the Command window, run the following commands:

```
(Windows) set ORACLE_SID=<SID_NAME>
(UNIX) export ORACLE_SID=<SID_NAME>

sqlplus sys/<password> as sysdba
@ExecuteScript.sql
```

The script prompts for tablespace names and schema usernames. The schema users and schema components are created.

6. During installation, if you select the *Default Schema* option, where the ODM and MDS are in either the same schema or in a different schema, login to ODM schema and run the following command:

```
CREATE TABLE ETL_VERSION
(
  SOURCE_VERSION VARCHAR2(20 BYTE),
  OS              VARCHAR2(50 BYTE),
  DATABASE        VARCHAR2(100 BYTE),
  DATAMART        VARCHAR2(20 BYTE),
  BUILD           NUMBER,
  SOURCE_NAME     VARCHAR2(20)
```

```
);

INSERT INTO ETL_VERSION
VALUES ( '9.2.2', 'Microsoft Windows',
        'Oracle10g Enterprise Edition Release 10.1.0 - Production',
        '3.3.0.0.0', 1, 'A9' );
COMMIT;
UPDATE ETL_VERSION
SET OS = (SELECT DISTINCT platform_name FROM v$database);
UPDATE ETL_VERSION
SET DATABASE = (SELECT banner FROM v$version WHERE ROWNUM=1);
COMMIT;
```

If you selected the *Single Schema* option during installation, login to Single schema and run the command as shown above.

### Step 3: Localization strings for Japanese and Chinese:

---

**Note** Run this step only if you want Japanese and Chinese language support.

---

1. Log in to the Staging schema.
2. Drop the `w_localized_string_gs` table.
3. Import the localization table:
  - a. Open the `Analytics_A9_Script_<option>_Schema` folder.
  - b. Unzip the `w_localized_string_gs.zip` file and save the `w_localized_string.dmp` file.
  - c. Import the `w_localized_string.dmp` file into the schema using the following command:

```
imp SYSTEM/<password> file=<location of w_localized_string_gs.dmp file>
      fromuser=MDS touser=<Schema username you want to import the table>
```
4. Make sure the `w_localized_string_gs` table is created with Japanese and Chinese language strings in the schema you specified.

## Installing BI Components

After you complete the installation of Staging Schema and ETL components, you need to install the BI components.

### To install the BI Components:

1. Start the installer.

For information, refer to [Starting the Oracle Product Lifecycle Analytics Installer](#) on page 21 .
2. In the **Welcome** window, click **Next**.

3. In the *Choose Agile PLM Source* window, select either Agile PLM or Agile PLM for Process. Click **Next**.
4. In the **Choose Install Set** window, select the **PLM Business Intelligence** option.
5. In the **Business Intelligence Application Temp Directory** window, enter the path to a folder or use the **Choose** button to select a folder as the Business Intelligence Application Temp Directory. The next steps vary based on your selection. Click **Help** on the wizard window for details on values to be entered in each step of the installation wizard.
6. Verify the installation details of the selected component that appear in the **Pre-installation Summary** window.
7. Click **Install**.
8. In the **Installation Completed** window, click **Done**.

## Post-Installation Tasks

This section describes the post-installation tasks and recommendations related to the following:

- [Adding Database Services to the Listener](#) on page 26
- [Verifying ODI Repositories](#) on page 26
- [Starting Services](#) on page 27
- [Configuring Connection Pool Settings in OBIEE](#) on page 27
- [Administering Users and Passwords in OBIEE](#) on page 28
- [Uninstalling Oracle Product Lifecycle Analytics](#) on page 28
- [Enabling PLM Reference Attributes in Configurator](#) on page 28

## Installation Folder Structure

After you complete the installation of Oracle Product Lifecycle Analytics, the installation directory should contain the following sub-folders:

Name of the Folder	Description
\ant	Used to execute ANT scripts
\bin	Configuration tools and Miscellaneous entities
\common	Common Components such as PL/SQL logging libraries
\config	All Oracle Product Lifecycle Analytics configurations including the ANT install configuration file
\images	Contains images used in the Configurator tool.
\install	Installation components such as SQL scripts, ETL

Name of the Folder	Description
	objects, and Java classes
\jdk	Contains JRE 1.5, used to install ETL components and to launch Configurator.
\lib	Dependent libraries that the Oracle Product Lifecycle Analytics 3.3 installer and Configurator uses
\logs	Centralized location for logs specific to Oracle Product Lifecycle Analytics.
\ETL_logs This folder is not created if only the database is installed.	Contains the log file for every ETL run.
\Schema This folder is created only for the Generate SQL option that you select during the installation of Staging DB Schema and ETL components.	SQL scripts to <ul style="list-style-type: none"> <li>▫ Create, update or delete schema</li> <li>▫ Create pre and post-populate scripts</li> </ul>
\olap This folder is created only for the RPD and web catalog installation.	BI Repository and Web catalog
\uninstaller	Executable files to uninstall the software. This folder also includes executable file to remove any installed Hot Fix or Service Pack for Analytics.

## Adding Database Services to the Listener

**Note** This is only applicable for Agile PLM deployments creating a new Oracle PLA Data Mart database instance.

Upon completion of the Installation process, you are required to add database services to the Listener. Use the Oracle Net Manager to specify:

- Global Database Name [eg, PLMDM]
- Oracle Home Directory [eg, D:\ORACLE\product\10.2.0\db\_1]
- SID [eg, PLMDM]

Stop and restart the Listener after you have added the services.

## Verifying ODI Repositories

Log in to **ODI Designer** to verify the following:

1. **Projects** tab lists the AGILE\_PLM\_ANALYTICS project for Agile PLM and AGILE\_PLM4P\_ANALYTICS project for Agile PLM for Process.

2. Open **ODI Topology Manager** and make sure the Source PLM Database SID and schema user details are populated:
  - a. Double-click **Physical Architecture tab > Technologies > Oracle > SRC\_CONN\_PHYSICAL** and verify the Instance and Schema name details in the **Definition** tab.
  - b. Click the **JDBC** tab and verify that the JDBC URL is pointing to the correct SID on the Source PLM Database machine.
3. Open **ODI Topology Manager** and make sure the Data Mart Database SID and schema user (default: MDS) details are populated:
  - a. Double-click **Physical Architecture tab > Technologies > Oracle > TRG\_BI\_PHYSICAL** and verify the Instance and Schema name details in the **Definition** tab.
  - b. Click the **JDBC** tab and verify that the JDBC URL is pointing to the correct SID on the Target MDS Database machine.
4. (Optional) Open **ODI Topology Manager** and make sure the Staging Database SID and schema user (default: ODM) details are populated, if installed as a separate schema:
  - a. Double-click **Physical Architecture tab > Technologies > Oracle > TRG\_ODMCONN\_PHYSICAL** and verify the Instance and Schema name details in the **Definition** tab.
  - b. Click the **JDBC** tab and verify that the JDBC URL is pointing to the correct SID on the Staging Database machine.

## Starting Services

Make sure to start the following services or processes in the listed order:

1. OC4J or IIS
2. Oracle BI Java Host
3. Oracle BI Server
4. Oracle BI Presentation Server

## Configuring Connection Pool Settings in OBIEE

Make sure that you have configured appropriate Connection Pool settings in OBIEE Administrator.

### To configure connection pool settings:

1. Log in to the OBIEE Administration tool.
2. Verify in the Physical layer that **Data Source Name** is `PLMA` and its username/password is `PLMBIMDS/PLMBIMDS`.
 

---

**Note** The login details provided are default logins and may differ from those on your system, if changed during installation.

---
3. In the Connection Pool window of Physical Layer, if the Data Source Name is not `PLMA`, then replace the Name in the **Data Source Name** field.
4. In the Connection Pool window of Physical Layer, if the username and password of the MDS Database are not `PLMBIMDS`, then replace the username and password in the **User name** and **Password** fields. Click **OK**.
5. Confirm the new password.

## Administering Users and Passwords in OBIEE

User names and passwords are used to log in and authenticate with Oracle Product Lifecycle Analytics and OBIEE components. In order to administer the Oracle Product Lifecycle Analytics system, you should be aware of the various users and passwords in OBIEE. For more information on administering users and passwords, see the Oracle Business Intelligence Enterprise Edition Deployment Guide.

## Uninstalling Oracle Product Lifecycle Analytics

The uninstaller application is available in the **Uninstaller** folder within the installation base directory for Windows installer.

**Example:**

```
C:\<Oracle_PLA_Home>\Uninstaller
```

It is recommended that you create a backup copy of the folder before you begin the un-installation of the application.

Double-click the file named **UninstallOracle Product Lifecycle Analytics.exe** to uninstall the Oracle Product Lifecycle Analytics 3.3 application.

**Important** You must manually remove the schemas after uninstalling the Oracle Product Lifecycle Analytics 3.3 application.

**Note** If the install folder is not deleted automatically after you uninstall the application, you need to manually delete the *<Oracle\_PLA\_Home>* folder.

---

## Enabling PLM Reference Attributes in Configurator

If Agile PLM version is lower than 9.3, run `<OPLA_INSTALL_HOME>\install\schema\mds\DictionaryUpdate922x.sql` on MDS to enable the PLM reference attributes in Configurator.

## Executing ETL

### Optimizing ETL Performance

Before you execute ETL, it is recommended that you configure the following parameters to optimize ETL performance:

- DB Session and process parameters
- Heap Size in ODI
- ODITimeOut Parameter in ODI

## DB Session and process parameters

Verify that the database has enough database sessions (>500) to execute ETL in ODI.

### To verify the DB session and process parameters:

1. Login using `sys as sysdba` in command prompt using SQLPlus
2. Execute `SHOW PARAMETER SESSIONS`
3. Execute `SHOW PARAMETER PROCESSES`
4. Execute `'Alter system set processes=1000 scope=spfile`  
Alternatively,  
Execute `'Alter system set processes=1000 scope=both`
5. Restart the instance. For more information, see the Oracle Database documentation.

## Heap Size in ODI

Modify the Heap size in ODI to enhance the ETL performance.

### To increase the Heap size:

1. Navigate to the `<ODI Home>/bin` folder
2. Set `ODI_INIT_HEAP=32m` (default) and Set `ODI_MAX_HEAP=256m` in the `ODIPARAMS.BAT` file

**Note** Set the values according to the memory space available in the local machine. For example, if you have 2 GB of available memory, you can set the `ODI_INIT_HEAP` to 512m and `ODI_MAX_HEAP` to 1024m. For more information refer to the ODI Documentation on Oracle Technology Network.

## ODI Timeout Parameter in ODI

Set the `ODITimeOut` Parameter to 180 seconds. Use **File > User Parameters** in the ODI Designer Tool Menu Bar to modify this value. The default value is 30 seconds.

## Setting up ODI Users

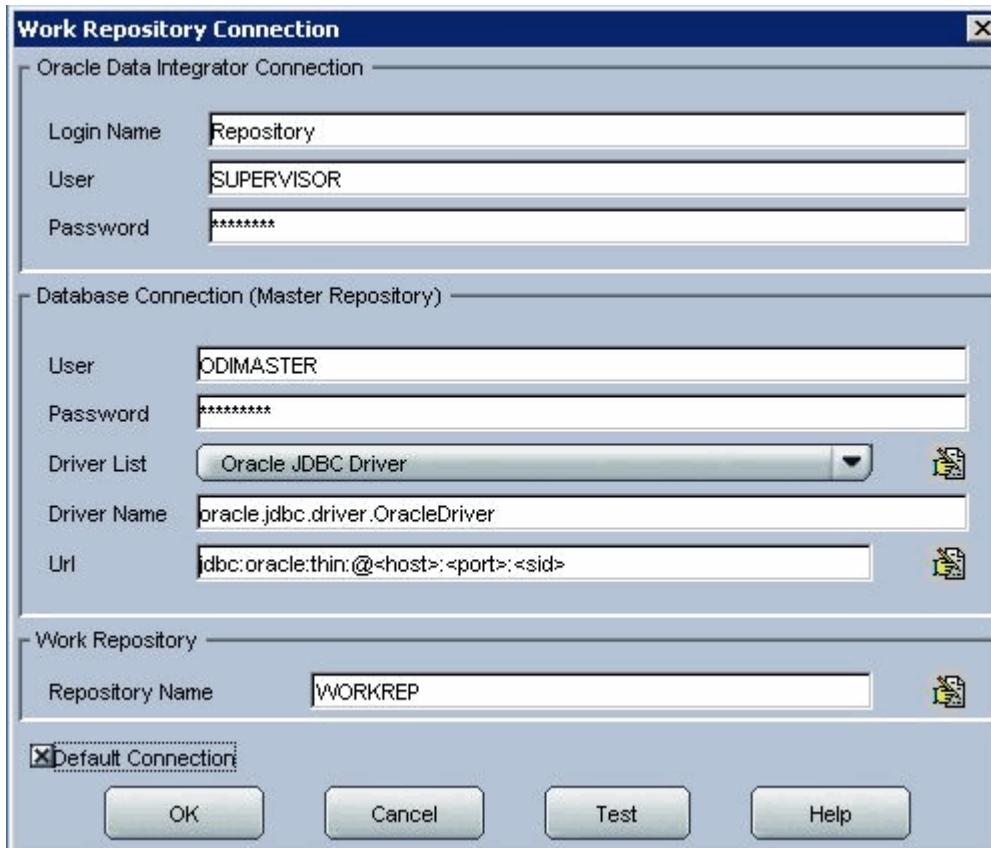
To run ETL tasks and operate on data, you can use ODI.

**Note** ODI User setup requires the information entered during installation, such as, user names and passwords.

### To configure a user:

1. On Windows, run the program **Operator** from **Start > Programs > OracleODI > Operator**  
The *Oracle Data Integrator Login* screen appears.
2. Click **New** to create a new Work Repository Connection.

The *Work Repository Connection* screen appears



3. Enter **Login Name**, **User name** and **password** for ODI connection.

These can be of your choice. The default User Name is **SUPERVISOR** and the password is **SUNOPSIS** (case sensitive).

**Important** The default password for the SUPERVISOR account is SUNOPSIS. You should change this password immediately. To configure additional users or change the password for SUPERVISOR, refer to the ODI documentation.

4. Enter the **User name** and **password** for Master Repository DB connection that you specified during installation.
5. Select **Oracle JDBC Driver** from **Driver List**

The **Driver Name** field is automatically filled with *oracle.jdbc.driver.OracleDriver*.

6. Enter the following URL:

`jdbc:oracle:thin:@<host>:<port>:<sid>`

where

<host>	Host name of Oracle Product Lifecycle Analytics DB Server
<port>	Port Number of Oracle Product Lifecycle Analytics DB Server

---

<sid>	SID or the Instance name of Oracle Product Lifecycle Analytics DB
-------	--

---

7. Enter the **Repository Name** for Work Repository.
8. Click **Test** button to verify the connection works.
9. Click **OK**. You are prompted to enter the Work Repository Password.
10. Enter the Work Repository Password that was assigned during installation and click **OK**.
11. Click **OK** to finish.

---

**Note** For complete information on installation and usage of ODI, refer to its documentation available at the [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technology/documentation) <http://www.oracle.com/technology/documentation>.

---

## Starting ETL

After the Installation of Oracle Product Lifecycle Analytics is complete and ODI users are configured, execute the Data integration task using the ODI Operator to load data into Data Mart. You can also execute ETL from the command prompt. Before you execute the ETL, it is recommended that you follow the guidelines mentioned in the section [Optimizing ETL Performance](#) on page 28.

**Important** ETL loads data in batches into target tables independently. It is likely that the queries executed by the server or any other downstream application may find that the data in these tables is not available or the data is inconsistent during ETL loads. For consistent and high availability of data during the ETL load windows, refer to and leverage various Oracle database technology options to enable maximum data availability solutions.

---

**Note** If you want to see the status of all the tasks that are under execution, increase the Operator Display Limit to 1000 (the default value is 100). Click **File Menu > User parameter >Set operator Display limit** to change the operator display limit.

---

### To execute ETL from ODI:

1. Launch the ODI Operator and log in using authentication details for the ODI session created during installation. The username and password populate automatically when you open ODI Operator.
2. Click **OK**.
3. Click the **Scenarios** tab. The Left Frame displays all components.
4. Right-click the **ANALYTICS\_ETL Version 001** component for Agile PLM or the **AGILEP4P\_ETL\_LOAD** component for Agile PLM for Process and select **Execute**. The **Execution** window appears.



5. Select MDS as **Context**.
6. Click **OK**. The **Sessions Started** window appears.
7. Click **OK**. The ETL process begins.

---

**Note** After ETL is executed, ODI sends a success or failure notification to the email users configured during installation. Email user configurations can be changed in the ETL\_PARAMETER table in the MDS schema. The ETL\_PARAMETER table is in the ODM schema if ODM and MDS were installed in separate schemas. These parameters can also be changed using the Configurator for Agile PLM deployments only.

---

## Executing ETL from Command Prompt

To execute ETL from command prompt, follow these steps:

1. Open a Command Prompt window, change to the <OPLA\_HOME>\bin directory.
2. Type the following command:

**On Windows:** `startdm ANALYTICS_ETL 001 MDS`

**On UNIX:** `sh startdm.sh ANALYTICS_ETL 001 MDS`

where

**startdm** is the batch/shell file that executes ODI tasks

**ANALYTICS\_ETL** is the ETL Package

**001** is the version number associated with the ETL Package

**MDS** is the ETL Context.

To view the status of ETL process:

1. Launch ODI Operator and select **Login**.
2. Enter the user name and password. The user name and password populate automatically on subsequent launches. Click **OK**.
3. In the **Sessions List** tab, select **All Executions** in the left frame which shows all running tasks.

Alternately,

In the **Hierarchical Sessions** tab, select **Status** or **All Executions** in the left frame to check overall progress.

---

**Note** After ETL is executed, ODI sends a success or failure notification to the email users configured during installation. Email user configurations can be changed in the ETL\_PARAMETER table in the MDS schema. The ETL\_PARAMETER table is in the ODM schema if ODM and MDS were installed in separate schemas. These parameters can also be changed using the Configurator for Agile PLM deployments only.

---



# Troubleshooting

### This chapter includes the following:

---

▪ Installation Issues .....	35
▪ ETL Runtime Issues .....	38
▪ PL/SQL Logs .....	40
▪ Database Issues .....	41

This chapter lists common errors and troubleshooting guidelines for your reference. If you experience errors other than those listed here, contact Oracle Support.

---

**Note** All issues are applicable for Agile PLM and Agile PLM for Process, unless stated otherwise.

---

## Installation Issues

### Unsupported Operating systems error

I use Windows XP operating system. I get a warning that states 'Unsupported Operating System' when I run the PLMBISetup\_Win.exe file. There are options to quit or continue the installation. If I continue the installation what is the impact?

#### Cause:

You are running the installer on a computer that is not a Server. This warning indicates that Oracle does not support any issues that might come up after the installation of the software on a desktop at work or a Personal Computer (PC) used for software demonstrations.

#### Action:

There are no known adverse impacts if you continue with the installation. This warning does not appear if you install Oracle Product Lifecycle Analytics on a Server.

You can choose to quit the installation if you do not want to install the application on your work desktop or Home PC.

### **Installation Unsuccessful**

During the installation of Oracle Product Lifecycle Analytics, I get an error message: Installation unsuccessful.

Action:

If the Database and ETL are installed together, check the Logs\DataMartInstall.log file. If the Database and ETL are installed separately, including on different machines, check the database install log at logs\DataMartDBInstall.log and the ETL install log at logs\DataMartETLInstall.log.

Repeat the installation using the latest download of the OPLASetup file.

### **Connection to PLM Database Schema Username Unsuccessful**

While the Installer is setting up connection to the PLM Database schema username, I get an error message ' Installer was not able to connect to the PLM Database Schema Username'.

Action:

Installer does not allow you to enter password containing two or more '\$' keys. In the Data Mart Database Information screen, make sure not to enter password containing two or more '\$' keys. For example, pwd\$\$.

### **Unable to select the same installation directory if I install Oracle Product Lifecycle Analytics database and ETL components separately**

I have installed the Product Lifecycle Analytics database. I am unable to install the Product Lifecycle Analytics application in the same system and in the same directory where the database is installed.

Action:

If you are installing both the database and ETL on the same system, you can select both options together in the installer. If you install them separately in the same system, you will need to use two separate install folders.

### **Page cannot be displayed**

I completed the installation successfully but when I launch the Oracle Product Lifecycle Analytics application URL, I get a 'Page cannot be displayed' screen.

Action:

Make sure to start the following services in the listed order:

1. OC4J or IIS
2. Oracle BI Java Host
3. Oracle BI Server
4. Oracle BI Presentation Server

---

**Note** For OBIEE 11g, the WebLogic Server has to be up and running.

---

**Failed to create Data Mart schema, ODI Work repository and/or ODI Master repository schemas**

Look for possible root causes in **DatamartInstall.log**, located in the logs folder of the Oracle PLA Data Mart install home directory.

Possible root causes could be:

- Database version specified is different from the one installed in the system. For example, Oracle 10g option is selected during installer while the machine has Oracle 9i.
- Path specified for Oracle Target DB Tablespaces could be invalid.
- Oracle Database path specified is incorrect.
- Database Instance exists, but the System user does not have proper privileges required to create and grant appropriate roles to schema users.

**Incorrect installation of Oracle database**

Database name specified when you create the database, may pre-exist. Choose another data base name to resolve the issue.

**Installer failed to create ODI Work repository and ODI Master repository**

Look for possible root causes under **ODIRepCreation:** tag in **DatamartInstall.log**:

- Work Repository and Master Repository schemas are not created for possible root causes outlined in #1.
- Tablespace specified for Work & Master repository are invalid.
- JAVA\_HOME and JAVA\_ODI\_HOME environment variables are incorrect.
- Specified ODI directory is incorrect or ODI is not installed at specified path.

**ODI Project "AGILE PLM ANALYTICS" does not have any packages**

Besides the root causes outlined in #2, look for errors under **ODI-PHY-Creation** section in **DatamartInstall.log** for other issues:

- OdilmporObject failed to execute for incorrect JRE specified
- JDK version specified is either less than 1.5.x or 1.6 or above.
- Specified Work Repository Name is already used in existing ODI
- ODI already has projects that have conflicting Work and Master Repository IDs. Oracle PLA Data Mart uses following repository IDs:

Work Repository ID = 102

Master Repository ID = 103

**Data Mart installation failed in Solaris.**

If you are using Solaris installer for ODI, the Data Mart Installation fails. To avoid this installation error, use ODI Linux installer and manually install ODI as outlined in the ODI Installation Guide.

**Installation fails with non-default Listener**

If you are installing Oracle PLA Data Mart on a database with a non-default listener on a non-default port, make sure the listener is added to the listener.ora file in order to be recognized by the installer.

### **Installer unable to find Oracle Database Server**

If you are installing Oracle PLA Data Mart on a 64-bit Windows system, an error message may display stating that the Oracle Database server was not found, even though it is installed. Ignore this message and continue with the installation.

### **Data Mart database instance not recognized by Oracle Database Configuration Assistant when using the Oracle Product Lifecycle Analytics Installer.**

A user with Admin privileges must manually add the database as an entry to the oratab file, located in either the /etc or var/opt/oracle/ directory, based on the operating system.

### **Unable to update RPD and Web Catalog**

The Oracle Product Lifecycle Analytics Installation is unsuccessful. I am unable to update RPD and Web Catalog.

Action:

Ensure that the OC4J server is running before you begin the installation.

## **ETL Runtime Issues**

### **Connection Identifier error on ETL run with Agile PLM source (Agile PLM)**

When I run ETL, the ODI\_INT\_CREATE\_DBLINK task displays a connection identifier error message.

Cause:

The TNSNAMES.ORA file does not have the correct information that enables connection to the source database.

Action:

Add a TNSNAME entry in the target database that points to the source database before you run the ETL.

If the database SID name of the source and target database are different (Example: Source SID = AGILE9 and Target SID = PLMDM), then modify the TNS Service name to the name of the source database name in the tnsname.ora file, like AGILE9, in this example.

If the database SID name of the source and target database are the same (Example: Source SID = AGILE9 and Target SID = AGILE9), to eliminate DBLINK errors:

1. Modify the TNS entry as follows:

```
AGILE9_LAB1 =
```

```
  (DESCRIPTION =
```

```
    (ADDRESS_LIST =
```

```
      (ADDRESS = (PROTOCOL = TCP)(HOST = LAB1)(PORT = 1521))
```

- ```

)
(CONNECT_DATA =
(SERVICE_NAME = AGILE9)
)
)

```
2. Start > Oracle > Oracle Data Integrator > Topology Manager  
In the Topology Manager select Physical Architectures >Technologies>Oracle>SRC\_CONN\_PHYSICAL.
  3. Replace the added TNSNAME (Example: AGILE9\_LAB1) in the DB link column.

#### **Credential retrieval failure error on ETL run (Agile PLM)**

My Database server and ODI/ETL systems are in two different domains. When I run ETL, the ODI\_INT\_CREATE\_DBLINK scenario returns the following message:

ORA-12638: Credential retrieval failed.

Cause:

The source DB and target DB are in different domains.

Action:

To eliminate the DBLINK errors:

4. Navigate to the %oracle\_home%\network\admin directory.
5. Modify the SID and HOSTNAME in the TNSNAME entry to reflect the domain name.
6. Start > Oracle > Oracle Data Integrator > Topology Manager.
7. In the Topology Manager, select  
Physical Architectures >Technologies>Oracle>SRC\_CONN\_PHYSICAL.
8. Replace the added TNSNAME ( Example: AGILE9.ALAB01) in the DB link column.

#### **To verify DBLINK:**

Execute the scenario ODI\_INT\_CREATE\_DBLINK from ODI operator in ODI.

If the scenario fails, the following message appears again:

Link AGILE9.ALAB01 error: ORA-12638: Credential retrieval failed

#### **To resolve this issue:**

1. Navigate to the %oracle\_home%\network\admin directory
2. Modify the value of SQLNET.AUTHENTICATION\_SERVICES in sqlnet.ora file as follows:  
Original Entry - SQLNET.AUTHENTICATION\_SERVICES= (NTS)

Modified Entry - SQLNET.AUTHENTICATION\_SERVICES= (NONE)

3. Restart the database instance.
4. Re-run the scenario ODI\_INT\_CREATE\_DBLINK from ODI operator in ODI.

#### Unable to run ETL after a configuration change

If there are any PLM configuration changes, such as the renaming of an attribute, it is recommended that you run a full ETL. Consult Oracle Support if you need help in resetting your ETL to full load.

#### Errors when using external .csv files

Do not add deleted Projects to the prj\_cost.csv and prj\_forecast.csv files.

If any ETL task fails during run-time the best option is to check the Execution tab of the ETL task in ODI Operator:

1. Log in to ODI Operator.
2. Select the **Sessions List** tab.
3. Expand **All Executions** in the left pane.
4. Select the task that is failing by double-clicking on it.
5. Select the **Execution** tab to view error details. Optionally, you can also export entire log file as an XML file through Operator to check for multiple errors.
6. If the scenario name starts with **ODI\_PRO**, look for PL/SQL errors logged in the VLOG table. See **PL/SQL Logging** section for more details on how to enable "debug mode" for detailed PL/SQL traces. Debug Mode for PL/SQL should be enabled if you need to further debug the issue.

**If any ETL task hangs during run-time, check the Execution tab of the ETL task in ODI Operator:**

1. Log in to ODI Operator.
2. Select the **Sessions List** tab.
3. Expand **All Executions** in the left pane.
4. Identify the task that is hanging by double-clicking on it.
5. Consult your DBA and provide the details noted in the previous step to help research and possibly identify any long-running SQL in the Data Mart schema.
6. Enable the Debug Mode for PL/SQL and look for errors in the VLOG table.

## PL/SQL Logs

The log details are stored in the following table/view in the Data Mart schema:

|              |                                                                                                                                                                    |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TLOG (table) | This table contains information like timestamp, ID etc. This table will be appended, if the mode is ERRORMODE. This table will be purged, if the mode is DEBUGMODE |
| VLOG (view)  | This is a view created for the TLOG table and contains only the ERROR messages. The difference between ERROR_MODE and DEBUG_MODE is explained below                |

|            |                                                                                                                                                                               |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ERROR MODE | This is the default mode. The value for this is '0' in the DEBUG_MODE column of the ETL_PARAMETER Table in the Data Mart schema and captures the error message.               |
| DEBUG MODE | This mode contains the value '1' in the DEBUG_MODE column of the ETL_PARAMETER table in the Data Mart schema and captures step-by-step information inside a PL/SQL Procedure. |

## Database Issues

### Connectivity Errors

- Agile PLM or Agile PLM for Process source database is available and accessible from the Oracle PLA Data Mart machine
- Verify source database schema details
- Target (Oracle PLA Data Mart) database is available
- Verify Target database schema details

### DB Link does not work when source and target schema are created in the same database (Agile PLM)

Create a TNS name that is different from the database name and SID. In the ODI Topology Manager, go to Physical Architecture>Technologies>Oracle>SRC\_CONN\_PHYSICAL. Manually update the Instance/Data Server field.

### Data Issues such as column width

Check the column in both Source and Target schema (refer to Schema documentation for table/column details).

### Disk space

Check the Target database machine to ensure enough space is available for ETL to execute and add data.

### Database Sessions to execute ETL

Check the database for enough sessions (>500) with which the ODI will run smoothly. To check database session and process parameters:

1. Login as sys/<PWD> as sysdba in command prompt using sqlplus.

```
SHOW PARAMETER SESSIONS
SHOW PARAMETER PROCESSES
```

2. Alter system set processes=1000 scope=spfile; OR
3. Alter system set processes=1000 scope=both;
4. After altering the Database, restart the instance.

#### Linux/Unix Specific only

- If you receive a 'cannot execute' message, re-run the command with the following options:  
`chmod u+x PLMBISetup*.bin`
- Make sure the TNS Listener is running with the `ps -ef | grep tns` command. If nothing shows, then it is not running.
- If the TNS Listener is running, check the status with the `lsnrctl status` command.

#### Unable to view reports

When I login to the Oracle Product Lifecycle Analytics Application, I am unable to view any report. The window displays ODBC Driver errors.

Action:

If either TNSNAMES or MDS schema names or both are not default, reconfigure the TNSNAMES.ORA file, CONNECTION POOL details and MDS Schema Name in OBIEE Administrator, as appropriate.

#### Performance degrades on 64-bit platform with Oracle Database 10.2.0.3

Apply Oracle Patch to upgrade database to version 10.2.0.4.

## Frequently Asked Questions

**This chapter includes the following:**

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**Note** All questions are applicable for Agile PLM and Agile PLM for Process, unless stated otherwise.

---

### Installation and Maintenance Issues

**Can I install the Data Mart Schema, ETL, and OBIEE application in one system?**

You can install ETL components including ODI in the system which has the Database installation. However, we recommend that you install OBIEE and Product Lifecycle Analytics Application components in separate systems for better performance results.

**If I modify the SID and User Name of the Data Mart database can I continue to use the existing installation of Product Lifecycle Analytics?**

You need to reinstall the application for the changes to take effect.

**How do I modify Passwords after the installation of Product Lifecycle Analytics?**

In Oracle Product Lifecycle Analytics, two different encryption techniques are used.

1. Encryption using Oracle PLA encryption methods.

The passwords encrypted using this method are stored in  
 <Oracle\_PLA\_Home>\bin\DataMartConfig.properties

2. Encryption using the ODI Agent.

These encryptions are used during ODI Imports and are stored in  
 <Oracle\_PLA\_Home>\bin\startdmparms.bat (or .sh) and in  
 <Oracle\_PLA\_Home>\bin\startbiparms.bat (or .sh)

| DataMartConfig.properties                    | Property Name     | How to generate the password |
|----------------------------------------------|-------------------|------------------------------|
| Agile PLM Source schema password             | PLM_DB_PWD        | DMEncoder.bat or .sh         |
| Agile PLM for Process Source schema password | PLM4P_DB_USER_PWD | DMEncoder.bat or .sh         |
| Data Mart Database sys schema password       | SYS_USER_PASSWORD | DMEncoder.bat or .sh         |

| <b>DataMartConfig.properties</b>                          | <b>Property Name</b> | <b>How to generate the password</b>                         |
|-----------------------------------------------------------|----------------------|-------------------------------------------------------------|
| Data Mart Database system schema password                 | DB_SYSTEM_PWD        | DMEncoder.bat or .sh                                        |
| Data Mart schema password                                 | MDS_USER_PASSWORD    | DMEncoder.bat or .sh                                        |
| Source schema Password, if installed as a separate schema | ODM_USER_PASSWORD    | DMEncoder.bat or .sh                                        |
| Master Repository schema password                         | MASTER_PWD           | DMEncoder.bat or .sh                                        |
| Work Repository schema password                           | WORK_PWD             | DMEncoder.bat or .sh                                        |
| Work Repository password                                  | WORK_REP_PWD         | DMEncoder.bat or .sh                                        |
| <b>startdmparms.bat or .sh</b>                            | <b>Property Name</b> | <b>How to generate the password</b>                         |
| Master Repository Schema Password                         | ODI_SECU_USER        | agent.bat or .sh (Located in the ODI Install\bin directory) |

In addition, you need to change the password of the Data Mart connection details in the Physical Repository of ODI Topology Manager. For more information, refer to the *Oracle Data Integrator Installation and Configuration Guide*. Also, you may need to change the password of the PLMA.RPD repository file using the OBIEE Admin Tool. For more information, refer to the *OBIEE Installation and Configuration Guide*.

#### What are the possible causes of failure in installation?

The possible causes of installation failure are:

- Failure in the Import of ODI packages during installation
- Drop in database connections
- Out-of-space errors in database tablespaces
- Unsupported database, ODI, and OBIEE versions

#### When I install OBIEE on Windows, the command prompt window for OC4J is always on. What should I do so I don't see this window?

When you install OBIEE on Windows, the command prompt window for OC4J is always on when you start the computer. You can set OC4J to run as a Windows service to avoid seeing this command prompt.

#### To set OC4J to run as a Windows service:

1. Download JavaService -2.0.1.0
2. Extract the file to a directory.

##### Example:

```
C:\JavaService
```

- Note the directory path of your oc4j.jar file in the OBIEE installation folder.

**Example:**

```
C:\OracxleBI\oc4j_bi\j2ee\home\oc4j.jar
```

- In a Command Prompt window, navigate to the folder which has the extracted JavaService files.

**Example:**

```
cd C:\JavaService\
```

- Type the following command using the two installation paths:

```
javaservice -install "Oracle BI EE OC4J" "C:\Program
Files\Java\jdk1.5\jre\bin\client\jvm.dll" -XX:MaxPermSize=128m
"-Djava.class.path=C:\OracleBI\oc4j_bi\j2ee\home\oc4j.jar" -start
oracle.oc4j.loader.boot.BootStrap -description "Oracle BI EE OC4J
Service"
```

- In **Start > Run**, type `services.msc` to open the Service manager and set the Oracle BI EE OC4J service to run in the 'Automatic' or 'Manual' mode.

**Can I use the Oracle Product Lifecycle Analytics Installer for remote installation (i.e. launch installer in machine A to install the software in machine B)?**

No, the installer does not support remote installation. However, you can manually install the database schema. See Manual Installation Steps for manual DB schema installation.

**How do I check if OC4J server is up and running?**

In `<OBIEE_Home>\oc4j_bi\j2ee\home\log\rmi.log` file, check for log entries similar to the following:

```
08/08/21 13:22:39.325 10.1.3.1.0 Started
08/08/21 13:34:40.392 10.1.3.1.0 Stopped (JVM termination)
```

This entry displays the Start time and End time of the OC4J server. If the OC4J is running, the log file will display only the Start time.

**How do I install and configure Oracle Product Lifecycle Analytics in a RAC environment?**

Contact Oracle Support for information on installing in a RAC environment.

**How do we localize the Oracle Product Lifecycle Analytics application?**

The Oracle Product Lifecycle Analytics application is built on Oracle Business Intelligence Enterprise Edition that is designed to work in multiple languages. Please refer to Appendix B "Localizing Oracle Business Intelligence Deployments" in the *Oracle® Business Intelligence Infrastructure Installation and Configuration Guide*.

The externalize strings utility in the BI Administrator displays the strings (names and descriptions) used specifically in the PLM Quality Presentation and Product Collaboration catalogs. Please note that an additional effort is required to translate them to the desired language before you can view the localized version of the application. Contact Oracle Support for additional information.

**What are the maintenance requirements?**

We recommend you to create periodic backup copies of the Data Mart schema and ODI

repositories (Master and Work Repository).

## Reports and Dashboards Issues

### How do I ensure that the graphs in the BI Interactive Dashboards have the latest data?

The Report Data refreshes with the successful completion of MDS. Contact your BI Administrator for the latest MDS ETL scheduling and completion information.

### What are the possible root causes for Reports/Dashboard issues?

The possible causes for BI Reports/Dashboard Issues are:

- Patches or Minor release upgrades to BI
- Unsupported versions of OBIEE Server Upgrades
- Reports or Dashboard Configuration Changes
- Database or OBIEE Password Changes which do not reflect in Data Mart and ODI environments.
- LDAP Group Changes

### How do I configure the out-of-box Static Repository variables in the RPD, used for Oracle PLA Reports?

There are two Static Repository variables in the RPD. The 'Default Initializer' value for both needs to be updated with the PLM source system URL details. This should be done during time of deployment.

The variables are as follows:

URLHOST: *<Agile PLM for Process Source System URL>*

A9URLHOST: *<Agile PLM Source System URL>*

---

**Note** Currently none of the OOB Agile PLM reports are using 'A9URLHOST' variable but this can be leveraged for customized reports.

---

If you are an Agile PLM for Process Business Intelligence customer, there are several reports (in Project Portfolio|Details page and Specification Dashboard) that leverage this variable. Consult with Oracle Support if further assistance is needed.

### How do I improve report performance during ETL?

Oracle PLA's ETL loads the data from the source database schema and Staging schema into the target MDS schema tables in batches. It is likely that the database queries executed by the BI server may find that the data in these MDS tables is partially available or is not consistent while the batch ETL tasks are running. You should leverage appropriate Oracle Database platform high availability options and appropriate OBIEE platform features to enable a solution that allows BI users to access reports without any errors or shows accurate data during ETL load windows.

## ETL Issues

### I made configuration changes in Oracle PLA Configurator. What do I need to do? (Agile PLM)

Whenever you make any configuration changes using Oracle PLA Configurator, always execute a Full ETL Load.

---

**Note** You can use Oracle PLA Configurator to change the ETL mode to Full, if it is not already. Refer to the question, Which scenarios can I configure using the Configurator, for more details.

---

### What are the possible causes for ETL run time failures?

The possible causes for ETL run time failures are as follows:

- Agile PLM Server Upgrades such as HotFix Patches, and unsupported minor/major releases
- Agile PLM Configuration Changes
- Data Mart Configuration Changes
- Unsupported Database Server Version Upgrade
- Database Password Changes which do not reflect in Data Mart and ODI environments.
- Unsupported version of ODI Server Upgrade or Repository Changes

### Tablespaces assigned for Data Mart data and indexes grows after successive ETL runs. What are the steps that I can take to prevent this?

After successful every ETL run, purge unused database objects using the following command:

```
PURGE TABLESPACE <Tablespace_Name>;
PURGE TABLESPACE agileodm;
PURGE TABLESPACE agileodm_indx;
```

### Are triggers shipped with the Agile PLM database disabled? (Agile PLM)

Agile PLM sets up triggers in the Agile PLM database to update the last modified date columns for the rows in source tables. Oracle PLA ETL uses the last modified date column value from the source database tables to extract changed data. If these source database triggers are disabled, CDC ETL does not capture the changed data. Make sure they are enabled.

To check if source triggers are enabled on the Agile PLM database schema, run the following SQL statement:

```
select * from user_triggers where trigger_name like '%_T';
```

If the Agile PLM triggers cannot be enabled, execute ETL in FULL Mode only and not in CDC mode.

### What steps do I follow to execute ETL always in FULL load type or always in CDC load type?

ETL loads to both Stage and MDS schemas can be executed always in FULL load type by changing

the values for the MDS and STAGE columns in the ETL\_PARAMETER table to Y.

Similarly, ETL loads to both Stage and MDS schemas can be executed always in CDC load by changing the values for the MDS and STAGE columns in the ETL\_PARAMETER table to N. However, note that the CDC load type uses the following rules:

1. The first ETL run is always executed as a FULL load, regardless of the configuration setting.
2. The last FULL load ETL run should be completed successfully. If not, successive ETL runs will be FULL load, regardless of the configuration.

For Agile PLM 9.x deployments, use the Configurator to configure the Stage and MDS load type parameters either to FULL or CDC instead of directly updating the ETL\_PARAMETER table. For more information, see the Oracle Product Lifecycle Analytics Configurator Guide.

---

**Note** ETL\_PARAMETER table is available on the ODM schema, if ODM and MDS are installed on separate schemas.

---

#### Can I run Stage in CDC and MDS in Full?

Yes, you can do this by updating the ETL\_PARAMETER table's MDS columns with Y and the STAGE column with N. However, ETL to Staging will run in FULL load if the last executed FULL load has failed.

#### Can I run Stage always FULL and MDS in CDC?

No, this is not a supported configuration.

#### What are all the possible ETL run scenarios and how can I configure them?

ETL behavior can be controlled by using the Configurator's ETL Runtime Configuration or by updating the ETL\_PARAMETER table manually.

| Column Name in ETL_PARAMETER table | Value  | Value in Configurator (ETL Runtime Configuration Window) | Description                                                                                  |
|------------------------------------|--------|----------------------------------------------------------|----------------------------------------------------------------------------------------------|
| MDS ETL Load Type                  | NULL/D | Disable                                                  | MDS module will not run.                                                                     |
| MDS ETL Load Type                  | Y      | FULL                                                     | MDS will always run Full Load.                                                               |
| MDS ETL Load Type                  | N      | CDC                                                      | MDS may run Full or CDC depending on other conditions, like Configurator or last ETL status. |
| STAGE ETL Load Type                | NULL/D | Disable                                                  | Stage module will not run.                                                                   |
| STAGE ETL Load Type                | Y      | FULL                                                     | Stage will always run Full Load.                                                             |
| STAGE ETL Load Type                | N      | CDC                                                      | Stage may run Full or CDC depending on other conditions, like last ETL status.               |

Refer to the *Oracle Product Lifecycle Analytics Configurator Guide* for more information about ETL Runtime Configuration.

## DB Privileges

The DB privileges vary for single schema and multiple schema installations.

### Single Database Schema Privileges

The following are the privileges required when you use a single schema to host the DataMart, ODI Master, and ODI Work Repository objects:

| Privilege                         | Purpose                                                     |
|-----------------------------------|-------------------------------------------------------------|
| CONNECT,RESOURCE                  | Basic privilege for the Schema User.                        |
| CREATE DATABASE LINK              | Create DBLink to Agile PLM source system for every ETL run. |
| CREATE TABLE                      | Create table privilege for the schema.                      |
| CREATE SYNONYM*                   | Create a synonym for the source table.                      |
| CREATE MATERIALIZED VIEW*         | Create materialized view on the schema.                     |
| DROP PUBLIC DATABASE LINK         | Drop database link on schema.                               |
| ANALYZE ANY*                      | Analyze the table for performance.                          |
| SELECT ON V_\$DATABASE            | Read platform information.                                  |
| ALL ON SYS.DBMS_PIPE              | PL/SQL logger privileges                                    |
| EXECUTE ON, SYS.DBMS_SYSTEM       |                                                             |
| CREATE VIEW                       | Create a view on the schema.                                |
| CREATE PUBLIC SYNONYM             | Create a synonym on the schema.                             |
| DROP PUBLIC SYNONYM               | Drop a synonym on the schema.                               |
| *Denotes Agile PLM databases only |                                                             |

### Privileges for Multiple Schemas

The following are the privileges required when you install the Data Mart (ODM and MDS) on one schema and the ODI Master and ODI Work repositories on a separate schema:

| Privilege            | Purpose                                                        |
|----------------------|----------------------------------------------------------------|
| CONNECT, RESOURCE    | Required for MDS and ODI Repository schemas                    |
| CREATE DATABASE LINK | Create DBLink to Agile PLM source database for every ETL run.  |
| CREATE ANY TABLE     | Create i\$, e\$, c\$ tables in the ODI Work Repository schema. |

| Privilege                  | Purpose                                                                                                       |
|----------------------------|---------------------------------------------------------------------------------------------------------------|
| CREATE ANY SYNONYM         | Create a synonym for the source table in the ODI Work Repository schema.                                      |
| CREATE VIEW                | Create a view privilege for the schema.                                                                       |
| INSERT ANY TABLE           | Insert a table, like i\$, e\$, c\$, in the ODI Work Repository schema.                                        |
| DELETE ANY TABLE           | Delete records from i\$ tables in the ODI Work Repository schema. This is used during an Incremental ETL run. |
| SELECT ANY TABLE           | Select a table like i\$_listname in the ODI Work Repository schema.                                           |
| DROP ANY SYNONYM           | Drop a synonym in the ODI Work Repository schema.                                                             |
| DROP ANY TABLE             | Drop i\$ tables in the ODI Work Repository schema. This is used during Full/Incremental ETL runs.             |
| DROP PUBLIC DATABASE LINK  | Drop database link on schema.                                                                                 |
| SELECT ON V_\$DATABASE     | Reads Platform information.                                                                                   |
| CREATE PUBLIC SYNONYM      | PL/SQL Logger privileges                                                                                      |
| DROP PUBLIC SYNONYM        |                                                                                                               |
| ALL ON SYS.DBMS_PIPE       |                                                                                                               |
| EXECUTE ON SYS.DMBS_SYSTEM |                                                                                                               |

The following are the privileges required when you install ODM and MDS in different schemas:

| Privilege                | Purpose                                                                                                      |
|--------------------------|--------------------------------------------------------------------------------------------------------------|
| CONNECT, RESOURCE        | Basic privilege for schema user                                                                              |
| CREATE ANY TABLE         | Create i\$, e\$, c\$ tables in the ODI Work Repository schema.                                               |
| CREATE ANY SYNONYM       | Create a synonym for the ODM table in the ODI Work Repository schema.                                        |
| CREATE ANY VIEW          | Create a view in the schema and JV\$ view on the ODI Work Repository schema.                                 |
| CREATE ANY INDEX         | Create an index in the ODI Work Repository schema for the i\$ tables.                                        |
| CREATE ANY TRIGGER       | Create a trigger on the ODM schema.                                                                          |
| CREATE MATERIALIZED VIEW | Create a materialized view on the schema.                                                                    |
| INSERT ANY TABLE         | Insert a table, like i\$, e\$, c\$, in the ODI Work Repository schema.                                       |
| DELETE ANY TABLE         | Delete records from the i\$ tables in the ODI Work Repository schema. This is used during an Incremental ETL |

| Privilege         | Purpose                                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------------------------------|
|                   | run.                                                                                                            |
| SELECT ANY TABLE  | Select a table, like i\$_listname, in the ODI Work Repository schema.                                           |
| DROP ANY SYNONYM  | Drop a synonym in the ODI Work Repository schema.                                                               |
| DROP ANY TABLE    | Drop i\$ tables in the ODI Work Repository schema. This is used during Full and Incremental ETL runs.           |
| DROP ANY INDEX    | Drop an index on the schema.                                                                                    |
| DROP ANY TRIGGER  | Drop a trigger on the schema.                                                                                   |
| DROP ANY VIEW     | Drop a view on the schema.                                                                                      |
| ANALYZE ANY TABLE | Analyze the table for performance                                                                               |
| UPDATE ANY TABLE  | Update records in the i\$ tables in the ODI Work Repository schema. This is used during an Incremental ETL run. |
| ALTER ANY TABLE   | Alters the schema tables.                                                                                       |



## Appendix B

# Log Files

Log files are located in the Logs folder within the Oracle Product Lifecycle Analytics Home Folder. These log files are useful to troubleshoot the installation issues. The following table lists the various log files and descriptions:

| Name of the Log file    | Description                                                                                            |
|-------------------------|--------------------------------------------------------------------------------------------------------|
| <b>Agile PLM</b>        |                                                                                                        |
| BRIDGE_SD.log           | Status of MDS Bridge Control table seed data insert                                                    |
| LIST_DIM_SD.log         | Status of MDS List dimension control table seed data insert                                            |
| MDS_TEMP_DDL.log        | Status of the MDS temp table creation                                                                  |
| MDS_VIEWS.log           | Status of the MDS views creation                                                                       |
| PC_DDL.log              | Status of the MDS PC table creation                                                                    |
| PLSQLLogger.log         | Status of the PL\SQL logger objects creation                                                           |
| SEED_DATA_GLOBAL.log    | Status of the BI Measures and Dimension names seed data insert                                         |
| USERDEF_OBJ.log         | Status of the User Defined Dimension and Multi list table creation                                     |
| UsersCreation.log       | Log file for ODM user creation.                                                                        |
| UsersCreation_mds.log   | Log file for MDS user creation.                                                                        |
| MDS_COMMENT.log         | Status of Comments created on tables and columns                                                       |
| MDS_DDL.log             | Status of MDS PQM tables and index creation                                                            |
| MDS_PROCS.log           | Status of MDS Packages, procedures and function creation                                               |
| MDS_SD.log              | Status of static dimension table seed data insert                                                      |
| WorkSchemaUpd4BI.log    | Status of snp_subscriber table which internally inserts the data of J\$tables.                         |
| LoadParameter4BI.log    | Status of parameter details (such as mail id).                                                         |
| BI_DATA_DICT_PC_SD.log  | Status of MDS PC module data dictionary seed data insert                                               |
| BI_DATA_DICT_PPM_SD.log | Status of MDS PPM module data dictionary seed data insert.                                             |
| BI_DATA_DICT_PQM_SD.log | Status of MDS PQM module data dictionary seed data insert                                              |
| PPM_DDL.log             | Status of MDS PPM tables and comments creation.                                                        |
| ControlTables.log       | Execution log for Control Table DDLs.                                                                  |
| DBCcreation.log         | Execution log for DBCreation script. This log file is created when you choose the new database option. |
| postDBCcreation.log     | Log file for Post DBCreation script. This log file is created when you choose the new database option. |

| Name of the Log file         | Description                                                                                                          |
|------------------------------|----------------------------------------------------------------------------------------------------------------------|
| TablespaceCreation.log       | Log file for TableSpace Creation script. This log file is created when you choose the new database option.           |
| install_logger4odm.log       | Execution log for PL/SQL logger package and DDLs.                                                                    |
| LIST_DIM_SD.log              | Execution log for List Dimension Seed data.                                                                          |
| MDS_IND.log                  | Execution log for the Index Creation for MDS Schema.                                                                 |
| ODM_DDL.log                  | Log file for the ODM Schema DDL execution.                                                                           |
| ODM_DDL_COMMENTS.log         | Execution log for ODM Table and Column Comment.                                                                      |
| ODM_PROC.log                 | Log for ODM Procedure Creation.                                                                                      |
| ODM_SD.log                   | Log file for ODM Data Dictionary Seed data.                                                                          |
| RepositoryCreation.log       | ODI Repository creation log                                                                                          |
| BIInstall.log                | Business Intelligence components installation log. This log file is generated only when BI components are installed. |
| DataMartInstall.log          | Consolidated log file for DB and ETL installation.                                                                   |
| DataMartETLInstall.log       | Consolidated log file for ETL Component installation.                                                                |
| DataMartDBInstall.log        | Consolidated log file for DB Component installation.                                                                 |
| <b>Agile PLM for Process</b> |                                                                                                                      |
| commonDDLs.log               | Log file for the DDL execution of metadata tables, such as ETL_Parameter and ETL_RUN_INFO.                           |
| install_logger4p4p.log       | Execution log for PL/SQL logger package and DDLs.                                                                    |
| LoadParameter4BI.log         | Log file for inserting metadata into the ETL_Parameter table.                                                        |
| MDS_COMMENT.log              | Status of comments created on tables and columns.                                                                    |
| MDS_DDL.log                  | Log file for the MDS Schema DDL execution                                                                            |
| P4P_DDL.log                  |                                                                                                                      |
| P4P_MDS_PROCS.log            |                                                                                                                      |
| PC_DDL.log                   |                                                                                                                      |
| PPM_DDL.log                  |                                                                                                                      |
| P4P_STAGING_ETL.log          | Log file for PLM for Process procedure creation.                                                                     |
| RepositoryCreation.log       | ODI Repository creation log                                                                                          |
| SEED_DATA_GLOBAL.log         | Log file for BI Presentation layer externalized string inserting into metadata table.                                |
| UsersCreation.log            | User creation log                                                                                                    |
| BIInstall.log                | Business Intelligence components installation log. This log file is generated only when BI components are installed. |
| DataMartInstall.log          | Consolidated log file for DB and ETL installation.                                                                   |

| <b>Name of the Log file</b> | <b>Description</b>                                    |
|-----------------------------|-------------------------------------------------------|
| DataMartETLInstall.log      | Consolidated log file for ETL Component installation. |
| DataMartDBInstall.log       | Consolidated log file for DB Component installation.  |



# Environment Propagation

## This Appendix includes the following:

---

- Environment Propagation Process ..... 57
- MDS Propagation ..... 57

One of the important features of Oracle Product Lifecycle Analytics is the Configurator, which supports mapping of source fields to Multi-Dimensional Schema tables and columns to enable report relevant data. These mapping details or metadata changes have to be propagated from one environment to another environment during deployment to ensure the configurations are the same on both of the source PLM systems.

If the Agile PLM configuration is the same in both environments, the propagation of source column mappings to the MDS schema from the first environment to the second environment is supported. An ACP-migrated Agile PLM configuration is **not** supported.

## Environment Propagation Process

The steps to propagate the environment are as follows:

1. Create the Agile PLM configuration in environment 1.
2. Run ODM ETL, perform the configuration mappings, then run MDS ETL in environment 1.
3. Verify that the Agile PLM configurations are the same in both of the source systems.
4. Run ODM ETL in environment 2.
5. Follow the [MDS Propagation](#) on page 57 steps to propagate the configurator mappings.
6. Run MDS ETL in environment 2.

## MDS Propagation

### To propagate the configurator mappings:

1. Create the Backup Table BI\_DATA\_DICTIONARY\_ACP in the MDS schema of the source environment to copy only the configured columns:

```
CREATE TABLE BI_DATA_DICTIONARY_ACP AS SELECT bi.*, odm.src_table as
odm_src_table, odm.src_col as odm_src_col, odm.tgt_table as
odm_tgt_table, odm.tgt_col as odm_tgt_col FROM bi_data_dictionary bi,
odm_data_dictionary odmwhere bi.is_conf=1 and bi.src_table is not null
and bi.src_col is not nulland bi.att_id= odm.cust_att_id;
```

2. Connect as the ODM user and run the following SQL statement in the source environment:

```
CREATE TABLE ODM_CLASS_METADATA ACP AS SELECT sc.subclass_id,
sc.subclass, dd.tgt_table p3_view FROM odm_class_metadata sc, (SELECT
DISTINCT tgt_table, subclass_id FROM odm_data_dictionary WHERE
tgt_table LIKE '%_P3') dd WHERE sc.subclass_id = dd.subclass_id;
```

3. Connect as the MDS user in environment 1 and export the following tables:
  - BI\_DATA\_DICTIONARY\_ACP
  - BI\_DATA\_DICTIONARY
  - MDS\_LISTDIM\_CTL
  - PPM\_ACTIVITY\_DOMAINS
4. Connect as the ODM user in environment 1 and export the following tables:
  - ETL\_PARAMETER
  - ODM\_CLASS\_METADATA\_ACP
5. Connect as MDS user in environment 2 and import the following tables:
  - BI\_DATA\_DICTIONARY\_ACP
  - BI\_DATA\_DICTIONARY
  - MDS\_LISTDIM\_CTL
  - PPM\_ACTIVITY\_DOMAINS
  - ODM\_CLASS\_METADATA\_ACP
6. Connect as the ODM user in environment 2 and import the ETL\_PARAMETER table.
7. Connect as the MDS user in environment 2 and run the following script to update the non-Flex Columns:

```
merge into bi_data_dictionary bi using odm_data_dictionary odm on
(odm.tgt_table= bi.src_table and odm.tgt_col= bi.src_col and
odm.src_table is not null)when matched then update set bi.att_id =
odm.cust_att_id;
```

8. Run the following script to update Flex columns in the BI\_DATA\_DICTIONARY table:

```
merge into bi_data_dictionary bi using (select odm.cust_att_id,
odm.class_id, acp.tgt_table, acp.tgt_col , odm.tgt_table
dict_tgt_Table, odm.tgt_col dict_tgt_col,
acp.tgt_map_dim_col_name, acp.tgt_map_table, acp.tgt_dim_col_name, acp.tg
t_dim_table from odm_data_dictionary odm, BI_DATA_DICTIONARY_ACP acp
where odm.src_col= acp.odm_src_col and odm.src_table is null and
odm.cust_att_id=acp.att_id) odm on (odm.class_id=bi.class_id and
odm.tgt_col= bi.tgt_col and odm.tgt_table= bi.tgt_table) when matched
then update set bi.att_id = odm.cust_att_id, bi.src_table=
odm.dict_tgt_Table, bi.src_col=odm.dict_tgt_col, bi.tgt_dim_table=
odm.tgt_dim_table, bi.tgt_dim_col_name=odm.tgt_dim_col_name,
bi.tgt_map_table=odm.tgt_map_table, bi.tgt_map_dim_col_name=
odm.tgt_map_dim_col_name;
```

9. Run the following script to update the List ID in the BI\_DATA\_DICTIONARY table:

```
UPDATE BI_DATA_DICTIONARY A SET list_id=(SELECT SELECTION_ID FROM
ODM_ATTR_METADATA WHERE CUST_ATT_ID=A.ATT_ID and class_id=a.class_id)
WHERE IS_CONF=1 ;
```

10. Run the following script to update the PPM\_ACTIVITY\_DOMAINS table with the updated subclass ID:

```
UPDATE PPM_ACTIVITY_DOMAINS ACT SET subclass_wid=(SELECT SUBCLASS_ID
FROM ODM_CLASS_METADATA WHERE SUBCLASS= act.subclass_name);
```

11. Run the following script to create the lookup table:

```
CREATE TABLE bi_subclass_view_lkp AS SELECT sc.subclass,
acp.subclass_id AS old_subclass_id, sc.subclass_id AS new_subclass_id,
acp.p3_view AS p3_view_old, dd.tgt_table AS p3_view_new FROM
odm_class_metadata_acp acp, odm_class_metadata sc, (SELECT DISTINCT
tgt_table, subclass_id FROM odm_data_dictionary WHERE tgt_table LIKE
'%P3') dd WHERE acp.subclass = sc.subclass AND sc.subclass_id =
dd.subclass_id;
```

**12. Run the following script to update the BI\_DATA\_DICTIONARY table in environment 2:**

```
UPDATE bi_data_dictionary bi SET (bi.src_table) = (SELECT
lkp.p3_view_new FROM bi_subclass_view_lkp lkp WHERE lkp.p3_view_old =
bi.src_table) WHERE EXISTS (SELECT 1 FROM bi_subclass_view_lkp lkp
WHERE lkp.p3_view_old = bi.src_table);
```

**13. Commit the changes.**

```
Commit;
```



# Using External .csv Files

**This Appendix includes the following:**

- Preparing the Data..... 62
- Loading the Data ..... 69

External data templates help you to analyze and make improved Product and Project decisions by enabling other enterprise data to be available for analysis, such as Units Shipped and Demand and Inventory. Oracle Product Lifecycle Analytics supports the following templates:

| Template        | Description                                                                                                 | File Name           | Oracle PLA Subject Area |                     | Example Analysis                                                              |
|-----------------|-------------------------------------------------------------------------------------------------------------|---------------------|-------------------------|---------------------|-------------------------------------------------------------------------------|
|                 |                                                                                                             |                     | Project Summary         | Product Performance |                                                                               |
| Project Revenue | Planned or actual cost entered on a date. There can be more than one entry per Project                      | PRJ_FORECAST.CSV    | x                       |                     | Impact of Project delays on revenue                                           |
| Project Cost    | Planned or actual cost entered on a date. There can be more than one entry per Project.                     | PRJ_COST.CSV        | x                       |                     | Budget vs. Actual analysis (if Project Cost is managed external to Agile PPM) |
| Product Revenue | Planned or actual revenue by customer on a date. If Customer is not entered, it is assumed to be undefined. | PPM_PRD_REVENUE.CSV |                         | x                   | Revenue to SKU ratio for better SKU management                                |
| Product Demand  | Product Demand on a certain date                                                                            | PPM_PRD_DEMAND.CSV  |                         | x                   | Impact of Project delays based on Product                                     |

| Template                                       | Description                                                                                        | File Name             | Oracle PLA Subject Area |   | Example Analysis                               |
|------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------|-------------------------|---|------------------------------------------------|
|                                                |                                                                                                    |                       |                         |   | Demand                                         |
| Product Units Shipped                          | Units shipped by customer on a date. If Customer is not entered, it is assumed to be undefined     | PPM_PRD_UNIT_SHIP.CSV |                         | x | Parts per million defects                      |
| Product Units Received                         | Units received from supplier on a date. If Supplier is not entered, it is assumed to be undefined. | PPM_PRD_UNIT_REC.CSV  |                         | x | Parts per million defects for Supplier         |
| Product Inventory (Product Inventory Quantity) | Units available on a certain date                                                                  | PPM_PRD_INV_QTY.CSV   |                         | x | Impact of Change based on Inventory.           |
| Product Inventory (Product Inventory Value)    | Value of units available on a certain date                                                         | PPM_PRD_INV_VALUE.CSV |                         | x | Cost Impact of Change based on Inventory value |

**Note** All external data templates are supported for Agile PLM customers. For Agile PLM for Process customers, only the PRJ\_COST.CSV and PRJ\_FORECAST.CSV templates are supported.

## Preparing the Data

After the data is extracted from the Enterprise system, it must be prepared to load into Oracle Product Lifecycle Analytics. Make sure that the required fields are correctly populated, lengths are not exceeded, and data types are consistent with those specified, to avoid ETL failures.

The ETL process loads each data source file as Full load each time. So, make sure that only the most relevant and latest data is available. Also, there are no validations performed on the data, so verify that the data type complies exactly with the listed data types.

## Project Cost

| Field                                       | Data Type          | Field Required | Field Description                                                                                                                 |
|---------------------------------------------|--------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------|
| PROJECT_NO<br>Project Number                | VARCHAR2(150 CHAR) | Required       | The exact Project Number in Agile PLM against which the data is being loaded.                                                     |
| TRANSACTION_TYPE<br>Transaction Type        | VARCHAR2(256 CHAR) | Optional       | This optional field is not exposed in Oracle Product Lifecycle Analytics.                                                         |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                                                        |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to refer to that brings in the reference number from an external source. |
| PLAN_VS_ACTUAL<br>Plan vs. Actual           | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual                                                                    |
| AMOUNT<br>Project Total Cost Amount         | NUMBER(22, 7)      | Required       | This field denotes the cost of the Project.                                                                                       |

## Project Revenue

| Field                                       | Data Type          | Field Required | Field Description                                                                                                  |
|---------------------------------------------|--------------------|----------------|--------------------------------------------------------------------------------------------------------------------|
| PROJECT_NO<br>Project Number                | VARCHAR2(150 CHAR) | Required       | The exact Project Number in Agile PLM against which the data is being loaded.                                      |
| TRANSACTION_TYPE<br>Transaction Type        | VARCHAR2(256 CHAR) | Optional       | This field is not exposed in Oracle Product Lifecycle Analytics                                                    |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                                         |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to bring in the reference number from an external source. |
| PLAN_VS_ACTUAL                              | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual.                                                    |

| Field            | Data Type    | Field Required | Field Description                                         |
|------------------|--------------|----------------|-----------------------------------------------------------|
| Plan vs. Actual  |              |                |                                                           |
| AMOUNT<br>Amount | NUMBER(22,7) | Required       | This field is used to denote the revenue for the Project. |

## Product Revenue

| Field                                       | Data Type          | Field Required | Field Description                                                                                                                                                                      |
|---------------------------------------------|--------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM_NO<br>Item Number                      | VARCHAR2(256 CHAR) | Required       | The exact Item Number in Agile PLM that represents the Product against which the data is being loaded                                                                                  |
| ERP_ITEM_NO<br>ERP Item Number              | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to bring in the ERP Item number.                                                                                              |
| TRANSACTION_TYPE<br>Transaction Type        | VARCHAR2(256 CHAR) | Optional       | This field is not exposed in Oracle Product Lifecycle Analytics.                                                                                                                       |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                                                                                                             |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template to bring in the reference number from an external source.                                                                               |
| AMOUNT<br>Amount                            | NUMBER(22,7)       | Required       | This field denotes the revenue for the Item Number referred to in this row.                                                                                                            |
| PLAN_VS_ACTUAL<br>Plan vs. Actual           | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual.                                                                                                                        |
| CUSTOMER_NO<br>Customer Number              | VARCHAR2(256 CHAR) | Required       | This field contains the exact Customer number for this customer in Agile PLM.                                                                                                          |
| SITE<br>Site                                | VARCHAR2(256 CHAR) | Required       | Enter <b>Global</b> if you do not use Sites within Agile PLM. Enter the name of the specific site, if you use Agile PLM and wish to count the Units shipped against a particular site. |

## Product Demand

| Field                                       | Data Type          | Field Required | Field Description                                                                                                                                                                      |
|---------------------------------------------|--------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM_NO<br>Item Number                      | VARCHAR2(256 CHAR) | Required       | The exact Item Number in Agile PLM that represents the Product against which the data is being loaded                                                                                  |
| ERP_ITEM_NO<br>ERP Item Number              | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to bring in the ERP Item number.                                                                                              |
| TRANSACTION_TYPE<br>Transaction Type        | VARCHAR2(256 CHAR) | Optional       | This field is not exposed in Oracle Product Lifecycle Analytics.                                                                                                                       |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                                                                                                             |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template to bring in the reference number from an external source.                                                                               |
| NO_OF_UNITS<br>Number of Units              | NUMBER(22)         | Required       | This field contains the number of units.                                                                                                                                               |
| PLAN_VS_ACTUAL<br>Plan vs. Actual           | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual.                                                                                                                        |
| CUSTOMER_NO<br>Customer Number              | VARCHAR2(256 CHAR) | Required       | This field contains the exact Customer number for this customer in Agile PLM.                                                                                                          |
| SUPPLIER_NO<br>Supplier Number              | VARCHAR2(256 CHAR) | Optional       | This field contains the exact Supplier number for this customer in Agile PLM.                                                                                                          |
| SITE<br>Site                                | VARCHAR2(256 CHAR) | Required       | Enter <b>Global</b> if you do not use Sites within Agile PLM. Enter the name of the specific site, if you use Agile PLM and wish to count the Units shipped against a particular site. |

## Product Units Received

| Field                                       | Data Type          | Field Required | Field Description                                                                                                                                                                       |
|---------------------------------------------|--------------------|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ITEM_NO<br>Item Number                      | VARCHAR2(256 CHAR) | Required       | The exact Item Number in Agile PLM that represents the Product against which the data is being loaded                                                                                   |
| ERP_ITEM_NO<br>ERP Item Number              | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to bring in the ERP Item number.                                                                                               |
| TRANSACTION_TYPE<br>Transaction Type        | VARCHAR2(256 CHAR) | Optional       | This field is not exposed in Oracle Product Lifecycle Analytics.                                                                                                                        |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                                                                                                              |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template to bring in the reference number from an external source.                                                                                |
| NO_OF_UNITS<br>Number of Units              | NUMBER(22)         | Required       | This field contains the number of units being received.                                                                                                                                 |
| PLAN_VS_ACTUAL<br>Plan vs. Actual           | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual.                                                                                                                         |
| SUPPLIER_NO<br>Supplier Number              | VARCHAR2(256 CHAR) | Optional       | This field contains the exact Supplier number for this customer in Agile PLM.                                                                                                           |
| SITE<br>Site                                | VARCHAR2(256 CHAR) | Required       | Enter <b>Global</b> if you do not use Sites within Agile PLM. Enter the name of the specific site, if you use Agile PLM and wish to count the Units received against a particular site. |

## Product Units Shipped

| Field                  | Data Type          | Field Required | Field Description                                                                                     |
|------------------------|--------------------|----------------|-------------------------------------------------------------------------------------------------------|
| ITEM_NO<br>Item Number | VARCHAR2(256 CHAR) | Required       | The exact Item Number in Agile PLM that represents the Product against which the data is being loaded |

| Field                                       | Data Type          | Field Required | Field Description                                                                                                                                                                      |
|---------------------------------------------|--------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ERP_ITEM_NO<br>ERP Item Number              | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to bring in the ERP Item number.                                                                                              |
| TRANSACTION_TYPE<br>Transaction Type        | VARCHAR2(256 CHAR) | Optional       | This field is not exposed in Oracle Product Lifecycle Analytics.                                                                                                                       |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                                                                                                             |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template to bring in the reference number from an external source.                                                                               |
| NO_OF_UNITS<br>Number of Units              | NUMBER(22)         | Required       | This field contains the number of units being shipped.                                                                                                                                 |
| PLAN_VS_ACTUAL<br>Plan vs. Actual           | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual.                                                                                                                        |
| CUSTOMER_NO<br>Customer Number              | VARCHAR2(256 CHAR) | Required       | This field contains the exact Customer number for this customer in Agile PLM.                                                                                                          |
| SUPPLIER_NO<br>Supplier Number              | VARCHAR2(256 CHAR) | Optional       | This field contains the exact Supplier number for this customer in Agile PLM.                                                                                                          |
| SITE<br>Site                                | VARCHAR2(256 CHAR) | Required       | Enter <b>Global</b> if you do not use Sites within Agile PLM. Enter the name of the specific site, if you use Agile PLM and wish to count the Units shipped against a particular site. |

## Product Inventory Quantity

| Field                          | Data Type          | Field Required | Field Description                                                                                     |
|--------------------------------|--------------------|----------------|-------------------------------------------------------------------------------------------------------|
| ITEM_NO<br>Item Number         | VARCHAR2(256 CHAR) | Required       | The exact Item Number in Agile PLM that represents the Product against which the data is being loaded |
| ERP_ITEM_NO<br>ERP Item Number | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to bring in the ERP Item number.             |
| TRANSACTION_TYPE               | VARCHAR2(256 CHAR) | Optional       | This field is not exposed in Oracle                                                                   |

| Field                                       | Data Type          | Field Required | Field Description                                                                                                                                                                      |
|---------------------------------------------|--------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transaction Type                            |                    |                | Product Lifecycle Analytics.                                                                                                                                                           |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                                                                                                             |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template to bring in the reference number from an external source.                                                                               |
| NO_OF_UNITS<br>Number of Units              | NUMBER(22)         | Required       | This field contains the number of units.                                                                                                                                               |
| PLAN_VS_ACTUAL<br>Plan vs. Actual           | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual.                                                                                                                        |
| SUPPLIER_NO<br>Supplier Number              | VARCHAR2(256 CHAR) | Optional       | This field contains the exact Supplier number for this customer in Agile PLM.                                                                                                          |
| SITE<br>Site                                | VARCHAR2(256 CHAR) | Required       | Enter <b>Global</b> if you do not use Sites within Agile PLM. Enter the name of the specific site, if you use Agile PLM and wish to count the Units shipped against a particular site. |

## Product Inventory Value

| Field                                       | Data Type          | Field Required | Field Description                                                                                        |
|---------------------------------------------|--------------------|----------------|----------------------------------------------------------------------------------------------------------|
| ITEM_NO<br>Item Number                      | VARCHAR2(256 CHAR) | Required       | The exact Item Number in Agile PLM that represents the Product against which the data is being loaded    |
| ERP_ITEM_NO<br>ERP Item Number              | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template dimension to bring in the ERP Item number.                |
| TRANSACTION_TYPE<br>Transaction Type        | VARCHAR2(256 CHAR) | Optional       | This field is not exposed in Oracle Product Lifecycle Analytics.                                         |
| EXT_TEMPLATE_DATE<br>External Template Date | DATE               | Required       | This date is used as a date dimension for analyzing the external measures.                               |
| REF_NO<br>Reference Number                  | VARCHAR2(256 CHAR) | Optional       | This field may be used as an external template to bring in the reference number from an external source. |

| Field                             | Data Type          | Field Required | Field Description                                                                                                                                                                      |
|-----------------------------------|--------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AMOUNT<br>Amount                  | NUMBER(22,7)       | Required       | This field denotes the value for the Item Number referred to in this row.                                                                                                              |
| PLAN_VS_ACTUAL<br>Plan vs. Actual | VARCHAR2(256 CHAR) | Required       | This field is used to identify if the row is Planned or Actual.                                                                                                                        |
| SUPPLIER_NO<br>Supplier Number    | VARCHAR2(256 CHAR) | Optional       | This field contains the exact Supplier number for this customer in Agile PLM.                                                                                                          |
| SITE<br>Site                      | VARCHAR2(256 CHAR) | Required       | Enter <b>Global</b> if you do not use Sites within Agile PLM. Enter the name of the specific site, if you use Agile PLM and wish to count the Units shipped against a particular site. |

## Loading the Data

### To load the data:

1. Save the correctly formatted data as a .csv file.
2. Run the ETL.
3. Observe the results in Reports that use external metrics and dimensions.

