

# **Agile Product Lifecycle Management**

BI Setup Guide

Release 3.2.0.1

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# Preface

Agile PLM is a comprehensive enterprise PLM solution for managing your product value chain.

## Audience

This document is intended for administrators and users of the Agile PLM products.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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## Related Documents

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> 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.

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

Convention	Meaning
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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# Overview of Agile PLM Business Intelligence Installation

This guide provides instructions and guidelines to successfully install or upgrade to the Agile PLM Business Intelligence 3.2.0.1 application. 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 Data Mart (DM) and the Oracle Database Server to work with Agile PLM Business Intelligence software.

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**Note:** This document does not explain the basics of Oracle Business Intelligence (OBI), Oracle Data Integrator (ODI), and Oracle Databases. Refer to the Oracle Technology Network <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 Agile PLM Business Intelligence software. In addition, it provides the information required to access the necessary software.

## Tasks Overview

The Agile PLM Business Intelligence installation requires you to:

1. Verify the capacity planning requirements specific to your deployment configuration. For information, see the Agile PLM BI Capacity Planning Guide.
2. Verify hardware and software requirements. For information, see "[System Requirements](#)" on page 3-1 in this guide.
3. Ensure that Agile PLM Data Mart installation is complete. Follow instructions provided in the Agile PLM Data Mart Setup Guide.
4. Download the Agile PLM Business Intelligence software. For information, see "[Downloading Agile PLM Business Intelligence Software](#)" on page 1-2 in this guide.
5. Install PLM Business Intelligence software. For information, see [Chapter 4, "Installation"](#) in this guide.

## Downloading Agile PLM Business Intelligence Software

This section provides information on downloading Agile PLM Business Intelligence software from the Oracle distribution locations.

### Obtaining Software from Oracle E-Delivery

Major Oracle product releases are distributed as Media Packs on **Oracle E-Delivery** (<http://edelivery.oracle.com>). A Media 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 to select in order to search for the appropriate Media Pack(s) to download. Prior to downloading, verify that the product you are looking for is in the License and Options section of the E-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 E-Delivery 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 E-Delivery. Unzip each Zip file to its own temporary directory.

#### To download the Agile PLM BI Software from Oracle E-Delivery:

1. On the Oracle E-Delivery Welcome page, choose your language and click **Continue**.
2. Enter required information on the Export Validation screen 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 BI\_3.2.0.1 folder. The installers for all platforms are available within the BI\_3.2.0.1 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:

Acronym	Meaning
BI	Business Intelligence
DM	Data Mart
ETL	Extract Transform Load
OBI	Oracle Business Intelligence

Acronym	Meaning
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



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# Agile PLM Business Intelligence Overview

## Introduction

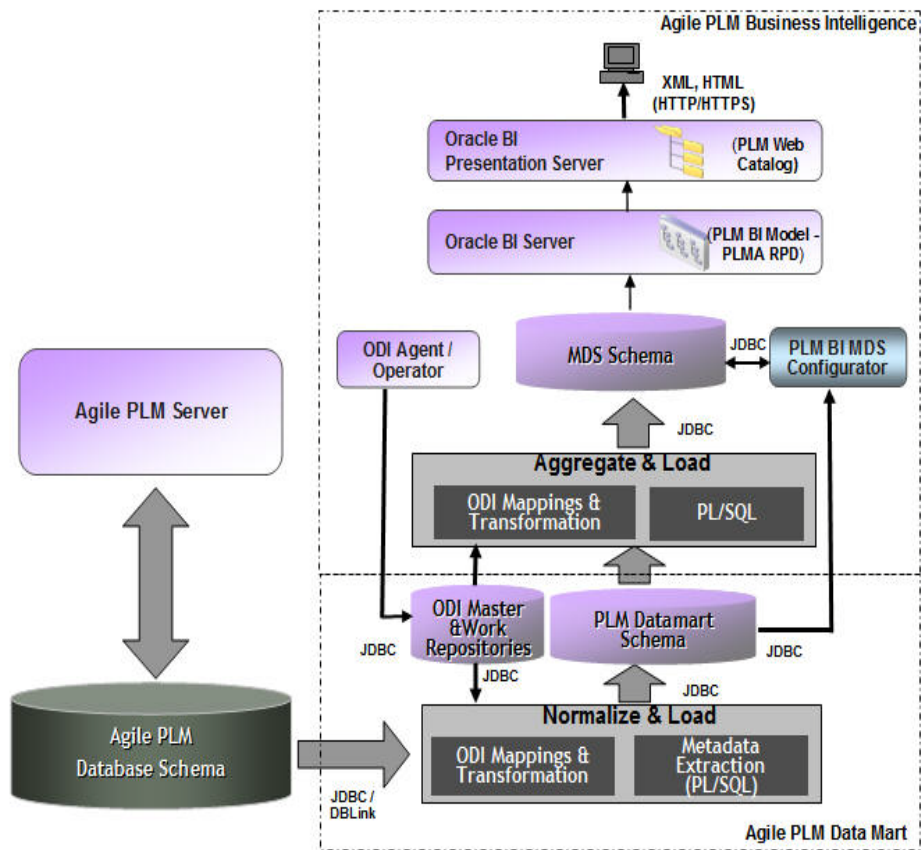
Oracle Agile PLM Business Intelligence Applications are comprehensive, pre-built Business Intelligence solutions that deliver pervasive intelligence and provide key insights into your Product Lifecycle Management (PLM) data. The Agile PLM Business Intelligence Application provides an integrated view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

Agile PLM Business Intelligence addresses the business use cases specific to Product Quality Management (PQM), Product Collaboration (PC), and Product Portfolio Management (PPM). The product design supports integration of the Oracle Business Intelligence (OBI) application across subject areas related to Customer Relationship Management (CRM) and Supply Chain Management (SCM) with data from E-business, SAP, Siebel and PeopleSoft sources.

## PLM Business Intelligence Architecture

The various components in PLM Business Intelligence Architecture are as follows:

- Oracle Data Integrator (ODI)
- Agile PLM Data Mart Schema
- ODI Repositories
- Agile PLM Multi-Dimensional Schema(MDS)
- PLM BI Configurator
- PLM BI Model (PLMA.RPD)
- PLM BI Web Catalog



## System Requirements

The Agile PLM Business Intelligence application may be deployed in different configurations. The amount of time required to complete an installation depends on the complexity of your deployment. For specifications related to your deployment configuration, see *Agile PLM BI Capacity Planning Guide*.

This chapter describes the minimum software and hardware requirements for Agile PLM BI installation.

### Software Requirements

The following are the software requirements for Agile PLM BI installation:

Software Component	Name	Version
Browsers	Internet Explorer	6.0 or 7.0 on Windows
	Firefox	1.5.x or higher.
		2.0 for Apple Mac O.S 10.x and Sun Solaris
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
Data Integration Component	Oracle Data Integrator	10.1.3.5 or 10.1.3.6.2
Data Mart	Agile PLM Data Mart	3.2.0.1
Software Development Package	Java Development Kit	1.5.x
Operating Systems	Microsoft Windows Server	2003 ( 32 bit and 64 bit )
	Red Hat Linux	AS 5.x ( 32 bit and 64 bit )
	Oracle Enterprise Linux	5 ( 32 bit and 64 bit )
	Sun Solaris	10 ( SPARC 64 bit )
	AIX	5.3, 6
	HP-UX	11.31

Software Component	Name	Version
Data Source	Agile PLM Releases	9.2.2.3 (Product Quality only)
		9.2.2.4
		9.2.2.6
		9.3
		9.3.0.1
		9.3.0.2
*System performance may improve if Oracle Database patch 10.2.04 is installed on a 64-bit operating system.		

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

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## Installation Notes

1. Ensure that sufficient disk space is available on the server(s) before you begin the installation of Agile PLM Business Intelligence which includes both the database and ETL components. Refer to Hardware Requirements on page 8 for detailed information.
2. It is recommended to have dedicated servers for Agile PLM Business Intelligence. Try to avoid installing any other software which may cause conflict or consume a lot of disk space on the systems where Agile PLM Business Intelligence is installed.
3. Do not use the Agile database server as the Primary Domain Controller (PDC) or Dynamic Host Configuration Protocol (DHCP) server.
4. Do not enable Disk Compression on Agile database servers.
5. Make sure Agile PLM Data Mart ETL is not running while installing the Agile PLM Business Intelligence components.

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**Note:** We recommend that the computer systems on which you install Agile PLM Business Intelligence, Agile PLM Data Mart and the Oracle Database, have at least two physical drives or two disk partitions. This enables you to install the Operating system and the Agile/Oracle installation components on separate drives/partitions, thus ensuring better performance.

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## 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, the number of Agile PLM 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 and the BI Database schema:

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

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**Note:** For detailed information on database sizing, see the *Agile PLM Business Intelligence Capacity Planning Guide*.

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## Installation

This section lists the prerequisites for installation, the installation procedure, the post-installation guidelines and uninstallation of the Agile PLM Business Intelligence application. In addition, this section describes the execution of ETL after you complete the Agile PLM Business Intelligence installation.

The complete installation of Agile PLM Business Intelligence application involves:

1. Verifying the pre-requisites using the pre-installation checklist
2. Starting the Agile PLM BI Installer
3. Installing Agile PLM Business Intelligence application
4. Executing the ETL
5. Performing post-installation tasks

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**Note:** For information on configuring multiple work environments, refer to "[Configuring Multiple Work Environments](#)" on page C-1.

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### Pre-installation Checklist

Verify the prerequisites for the installation of PLM Business Intelligence 3.2.0.1 application using the following pre-installation checklist:

#	Check point	Done
1	Install and configure PLM Data Mart 3.2.0.1.	
2	Ensure the Database connectivity details for the Data Mart schema, ODI Master and Work repositories are available.	
3	Ensure the Database Server and Listener services are running.	

#	Check point	Done
4	Install and Configure OBIEE 10.1.3.4.1.  For information on installation and configuration of OBIEE, refer to the <i>Oracle Business Intelligence Infrastructure Installation and Configuration Guide</i>	
5	Ensure the Oracle BI Server and Presentation Services are running.	
6	Install American English Unicode (en_US.UTF-8) Full Locale package in Solaris system to ensure successful installation and allow the complete functionality of PLM Business Intelligence application.	

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**Note:** If you have previously installed Agile PLM Business Intelligence, see "[Upgrade Considerations](#)" on page 5-1 for detailed information about upgrading your installation.

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

- Deployment Configuration specification

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**Note:** For more information, refer the *Agile PLM Business Intelligence Capacity Planning Guide*.

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- Start date of the Fiscal year for your business
- Name of the email server specific to your email configuration
- Location of the ODI and Data Mart Schema details
- Location of the RDBMS and database details
- Names of the tablespaces to be used during the installation

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**Note:** For more information on tablespace configuration, refer the *Agile PLM Capacity Planning Guide*.

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- Name and location of the OBIEE Repository Home
- Name and location of the OBIEE Web Catalog

- Location of the Data Mart 3.2.0.1 ETL installation

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**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.

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## Starting the Agile PLM Business Intelligence Installer

On Windows, the installer is packaged as **BISetup\_Win.exe** file. For UNIX-based operating systems, the installer is packaged as **BISetup\_Lin.bin** (for Linux) or **BISetup\_Sol.bin** (for Solaris) file. The installer launches an installation wizard powered by 'InstallAnywhere' to install Agile PLM Business Intelligence.

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**Important:** The GUI-based installer supports deployment scenarios that host Agile PLM Data Mart and the MDS Schema on the same Oracle database instance. If your deployment scenario requires installing the MDS schema on a separate Oracle database instance, see ["Installing Agile PLM Business Intelligence on Multiple Instances"](#) on page D-1.

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**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.

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### To start the Agile PLM Business Intelligence 3.2.0.1 installer on Windows:

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

### To start the Agile PLM Business Intelligence 3.2.0.1 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:** BI3.2.0.1\_Aix.bin

**HP-UX:** BI3.2.0.1\_Hpux.bin

**Linux:** BI3.2.0.1\_LIN.bin

**Solaris:** BI3.2.0.1\_Sol.bin

3. Enter the following command on your UNIX prompt:

**AIX:** ./BI3.2.0.1\_Aix.bin

**HP-UX:** ./BI3.2.0.1\_Hpux.bin

**Linux:** ./BI3.2.0.1\_Lin.bin

**Solaris:** ./BI3.2.0.1\_Sol.bin

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**Important:** Install Agile PLM Business Intelligence 3.2.0.1 on Linux as a non-root user.

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## Installing the Agile PLM Business Intelligence Application

The process to install Agile PLM Business Intelligence application is the same for Windows (Microsoft Windows), and versions of UNIX (Sun Solaris and Red Hat Linux) Operating systems.

The Agile PLM BI installation process includes the following steps:

1. Installing the PLM BI DB Schema and ETL Components
2. Installing the PLM BI components

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**Note:** You must start the installer twice to complete the Agile PLM BI installation process. In some implementation scenarios, there is a need to manually install the PLM BI DB schema. This section also describes the steps involved in the manual installation of the PLM BI DB Schema. For more information, refer to "[Manually Installing the MDS schema](#)" on page 4-4.

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### Installing the MDS DB Schema and ETL Components

The installer provides options to install PLM BI DB schema and ETL components separately. You can also choose to install these components together.

**To install the PLM BI DB Schema and ETL Components:**

1. Start the installer.  
For information, refer to "[Starting the Agile PLM Business Intelligence Installer](#)" on page 4-3.
2. In the Welcome window, click **Next**.
3. In the **Choose Install Set** window, select the **Business Intelligence MDS** option.
4. In the **PLM BI MDS Installation 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.
5. Verify the installation details of the selected component in the **Pre-installation Summary** window.
6. Click **Install**.
7. In the **Installation Completed** window, click **Done**.

### Manually Installing the MDS schema

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

You can create the MDS schema using the manually generated installation scripts in the following scenarios:

- Scenario 1: Generate the scripts to create MDS schema in the same system
- Scenario 2: Generate the scripts to create MDS schema in a different system

## Scenario 1

This scenario illustrates the procedure to generate the scripts using the installer in System A and create the MDS schema in the same system using the generated scripts.

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**Note:** Agile PLM Data Mart needs to be installed before you generate the scripts.

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To generate the scripts and create MDS schema in the same system:

1. Set the Oracle SID name.  
In Windows:  
set ORACLE\_SID = <sid\_name>  
In Solaris/Linux:  
export ORACLE\_SID = <sid\_name>
2. In SQL\*Plus, connect to the target database using the **System User** and **Password**.
3. Run the UsersCreation.sql script to create the MDS user and assign privileges.

The UsersCreation.sql script executes the **Create MDS User and Privileges** script if you are creating new database user. For existing users, only the **Privileges** script is executed.

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**Note:** For more information on privileges, see ["DB Privileges"](#) on page A-1.

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4. Disconnect the System user.
5. Connect to MDS schema using MDS User and password, which was created by the script UsersCreation.sql
6. Run the mds.sql script to install the MDS schema objects and logger object.

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**Note:** To avoid installation errors, follow the steps in the given sequence.

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## Scenario 2

This scenario illustrates the procedure to generate scripts using the installer in System A, and create the MDS Schema in another system using the generated scripts.

If you generate the scripts in System A and execute them in System B, then you need to replace the scripts in the same location in System B, because mds.sql invokes the SQL files using an absolute path. Alternatively, you can modify the directory path in the mds.sql file to any valid directory.

### Example:

Generate the scripts in System A in the directory F:\MDS31. Copy the scripts to System B into the location F:\MDS31. If F: drive does not exist in System B, copy the scripts to any valid directory on System B and modify the directory path in the mds.sql file.

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**Note:** To manually install the MDS Schema, follow the steps as described in Scenario 1.

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**Note:** Ensure that the TNS name is PLMA. It is recommended that you modify the TNSNAMES.ORA file to reflect PLMA as the TNS name, so you can obtain correct display of all the out of box reports.

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## Installing BI Components

After you complete the installation of MDS 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 Agile PLM Business Intelligence Installer"](#) on page 4-3.
2. In the **Welcome** window, click **Next**.
3. In the **Choose Install Set** window, select the **Business Intelligence Application** option.
4. 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 each window of the installation wizard.
5. Verify the installation details of the selected component that appear in the **Pre-installation Summary** window.
6. Click **Install**.
7. In the **Installation Completed** window, click **Done**.

## Installation Folder Structure

After you complete the installation of Agile PLM BI, the MDS installation base directory, for example, **C:\PLMBI32** contains 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 PLM Business Intelligence configurations including the ANT install configuration file
\images	Contains images used in the PLM BI MDS Configurator tool.
\install	Installation components such as SQL scripts, ETL objects, and Java classes

Name of the Folder	Description
\jdk	Contains JRE 1.5, used to install ETL components and to launch PLM BI Configurator.
\lib	Dependent libraries that the PLM BI 3.2.0.1 installer and Configurator uses
\logs	Centralized location for logs specific to BI
\Schema	SQL scripts to
This folder is created only for Generate SQL option that you select during the installation of MDS DB Schema and ETL components.	<ul style="list-style-type: none"> <li>ú Create, update or delete schema</li> <li>ú Create pre and post-populate scripts</li> </ul>
\olap	BI Repository and Web catalog
\uninstall	Executable files to uninstall the software. This folder also includes executable file to remove any installed Hot Fix or Service Pack for Analytics.

## Post-Installation Tasks

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

- [Starting the Windows Services](#)
- [Configuring Connection Pool Settings in OBIEE](#)
- [Optimizing ETL Performance](#)

### Starting the Windows Services

Ensure that you 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

### Configuring Connection Pool Settings in OBIEE

You must ensure that you have configured appropriate Connection Pool settings in OBIEE Administrator:

To configure connection pool settings:

1. Login to the OBIEE Administration tool.
2. Verify in the Physical layer that **Data Source Name** is the TNS Name of the MDS Database and its username/password is PLMBIMDS/PLMBIMDS.

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

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3. In the Connection Pool window of Physical Layer, if the TNS Name of the MDS Database is not PLMA, then replace the TNS Name in the **Data Source Name** field.

---

**Note:** If the TNS Name of the MDS Database does not exist on the Oracle BI server, then it must be created.

---

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.

## Administering Users and Passwords in OBIEE

User names and passwords are used to log in and authenticate with PLM BI and OBIEE components. In order to administer the PLM BI 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*.

## 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

Ensure that you 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.

## Executing ETL

After the BI Installation is complete, you need to execute the Data integration task using the ODI Operator to load data into MDS from the Agile PLM 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 Optimizing ETL Performance on page 18 section.

---

**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 > Setoperator Display limit** to change the operator display limit.

---

### To execute ETL from ODI:

1. Launch the ODI Operator and login using authentication details for the ODI session created during the Data Mart installation. The username and password will populate automatically when you open ODI Operator subsequently.
2. Click **OK**.
3. Click the **Scenarios** tab. The Left Frame displays all components.
4. Right-click on **MDS\_ETL\_LOAD Version 001** component and select **Execute**. The **Execution** window appears.

---

**Note:** To execute ETL for MDS and DM from ODI, execute the component 'ANALYTICS\_ETL Version 001'.

---

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

---

**Note:** If you installing both Data Mart and MDS for the first time, then you need to create an ODI login to execute ETL. Refer to the *Agile PLM Data Mart Setup Guide* for the procedure to create an ODI login.

---

## Executing ETL from Command Prompt

To execute ETL from command prompt, follow these steps:

1. In Windows command prompt, change directory to **bin** folder in your PLM BI Home Directory, for example, C:\PLMBI3201\bin

2. Type the following command:

```
startbi MDS_ETL_LOAD 001 MDS
```

where

**startbi** is the batch file that executes ETL tasks

**MDS\_ETL\_LOAD** is the ETL task name

**001** is the version number of ETL task

**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:** For complete information on installation and usage of ODI, refer to the ODI documentation available for free download at <http://www.oracle.com/technology/documentation/index.html>

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When your ETL execution is complete, a success or failure notification is sent to the E-mail ID you specified during the PLM BI MDS installation.

## Uninstalling Agile PLM Business Intelligence

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

### Example

C:\PLMBI3201\Uninstall

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 **Uninstall PLM Business Intelligence.exe** to uninstall the PLM Business Intelligence 3.2.0.1 application.

---

---

**Important:** You must manually remove the schemas after uninstalling the PLM Business Intelligence 3.2.0.1 application.

---

---

---

**Note:** If the install folder is not deleted automatically after you uninstall the application, you need to manually delete the PLMBI3201 folder.

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## Upgrade Considerations

The upgrade from Business Intelligence 3.2 to Business Intelligence 3.2.0.1 involves upgrading the following components:

- Upgrading Schema and ETL
- Repositories
- Web Catalog and Permissions in the Presentation Layer

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 Agile PLM Business Intelligence 3.2.0.1 installer is a full installer. It does not include upgrade software or scripts to upgrade any customizations done on PLM Data Mart or MDS schema or ODI ETL components installed with a previous release of Agile PLM Business Intelligence.

---

### Before You Upgrade

- Create a copy of all your current configurations and customizations. The examples include, PLM BI RPD, Catalog, and schema.
- Ensure that you install the following components:
  - PLM Business Intelligence 3.2.0.1
  - JRE/JDK 1.5.x

### Upgrading Schema and ETL

Perform the following steps to upgrade Agile PLM Business Intelligence 3.2, 3.2.0.0.1, or 3.2.0.0.2 to Agile PLM Business Intelligence 3.2.0.1:

1. Set the PLMBIMDS\_HOME environment variable to point to the directory where Agile PLM Business Intelligence 3.2 is installed.  
Windows: Set PLMBIMDS\_Home=D:/PLMBIMDS  
Linux/Solaris: export PLMBIMDS\_Home \home\oracle\PLMBIMDS
2. Copy the BI3201\_PatchInstaller.zip file into the existing PLM BI install directory

3. Rename the ETLparameters.xml file to ETLparameters\_old.xml. The ETLparameters.xml file is located in the %PLMBIMDS\_Home%\config directory on Windows or the \$PLMBIMDS\_home/config directory on Linux and Solaris.
4. Unzip the BI3201\_PatchInstaller.zip file:
  - a. In the Command Prompt or terminal window, change to the directory where you saved the BI3201\_PatchInstaller.zip file
  - b. Enter the following command to extract the contents of the file:  
jar -xvf BI3201\_PatchInstaller.zip
  - c. After you extract the files, the following folders are displayed:  
bin  
Patch  
  \etl  
  \schema  
  \rpd  
config
5. Using the Command Prompt or shell, login to the MDS schema and run the MDS\_3201.sql script, located in the %PLMBIMDS\_Home%\Patch\schema directory on Windows or the \$PLMBIMDS\_home/Patch/schema directory on Linux and Solaris.
6. Replace the tokens in the Windows batch file, %PLMBIMDS\_HOME%\bin\ImportMDSComponents\_patch.bat or the Linux/Solaris shell file, \$PLMBIMDS\_Home/bin/ImportMDSComponents.sh:
  - a. Replace <BI\_HOME> with the PLM Business Intelligence home directory path.
  - b. Replace <ODI\_WORK> with the ODI Work Repository name (default=WORKREP).

---

---

**Note:** <ODI\_WORK> is the logical name of work repository, but is not the ODI Work schema name.

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---

7. Run the ImportMDSComponents\_patch.bat (or .sh) file:

On Windows:

```
cd %PLMBIMDS_Home%\bin
ImportMDSComponents_patch.bat > ..\logs\Patch.log
```

On Linux or Solaris:

```
$ cd $PLMBIMDS_home/bin
$ chmod +x *.sh
$ ./ImportMDSComponents_patch.sh > ../logs/Patch.log
```

---

---

**Note:** Make sure \$ODI\_HOME is present in the Operating System path.

---

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8. Replace the RPD file in OBIEE:

- a. Create a backup of the existing RPD file (PLMA.rpd), located in the <OBIEE\_HOME>\server\Repository directory on Windows or the <OBIEE\_HOME>/server/Repository directory on Linux and Solaris.
- b. Stop the OBIEE Service. Refer to the *OBIEE Server Administration Guide* for instructions.
- c. Copy the 3.2.0.1 PLMA.rpd file from the %PLMBIMDS\_Home%\Patch\rpd directory on Windows or the \$PLMBIMDS\_Home/Patch/rpd directory on Linux and Solaris to the OBIEE repository directory.
- d. Start the OBIEE Services. Refer to the *OBIEE Server Administration Guide* for instructions.
- e. Configure connection pool setting in OBIEE. See "[Configuring Connection Pool Settings in OBIEE](#)" on page 4-7 for more information.

---

**Note:** If there are customizations in the Agile PLM BI Repository (PLMA.RPD), refer to the "Merging Oracle BI Repositories" section in the *OBIEE Server Administration Guide*.

---

## 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*.



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## Troubleshooting

This chapter lists common installation errors and troubleshooting guidelines for your reference. If you experience errors other than those listed here, contact **support** <http://www.oracle.com/agile/support.html> for assistance.

### Unsupported Operating systems error

I use Windows XP operating system. I get a warning that states 'Unsupported Operating System' when I run the BISetup\_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 PLM BI 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.

### Connection Identifier error on ETL run

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 as AGILE9 in the tnsname.ora file.

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

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:

1. Navigate to the %oracle\_home%\network\admin directory.
2. Modify the SID and HOSTNAME in the TNSNAME entry to reflect the domain name.
3. Start > Oracle > Oracle Data Integrator > Topology Manager.
4. In the Topology Manager, select  
 Physical Architectures >Technologies>Oracle>SRC\_CONN\_PHYSICAL.
5. 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 update RPD and Web Catalog

The PLM BI 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.

## Page cannot be displayed

I completed the installation successfully but when I launch the PLM BI application URL, I get a 'Page cannot be displayed' screen.

Action:

Ensure that you 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

## Unable to view reports

When I login to the BI 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.

## Installation Unsuccessful

During the installation of PLM BI, I get an error message: Installation unsuccessful. Check the **Logs\BiInstall.log** file. The log file is not created under **\logs\BiInstall.log**.

Action:

Repeat the installation using the latest download of BiInstall.exe

## Unable to install PLM Business Intelligence and DB in the same system

I have installed the BI 3.2.0.1 database. I am unable to install PLM Business Intelligence 3.2.0.1 in the same system and in the same directory where the BI 3.2.0.1 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.

## 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 including PLM Data Mart. 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.

## Performance Issues

**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

**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.

**How much memory space do I need on my system to execute ETL?**

Ensure that you have at least 2 GB of available disk space in both DB server and ETL (ODI) systems to execute ETL. For recommendations, refer to the Hardware Requirements section in this document.

**Can I install MDS DB Schema, ETL, and OBIEE application in one system?**

You can install ETL components including ODI in the system which has the Data base installation. However, we recommend that you install OBIEE and PLM BI Application components in separate systems for better performance results.

**In ODI Operator, I see ANALYTICS\_ETL, DATAMART\_Load, and MDS\_ETL\_LOAD in the Scenario tab. Which one should I execute to run the ETL?**

- To run both Data Mart and MDS ETL execute the ANALYTICS\_ETL scenario
- To run Data Mart ETL only, execute DATAMART\_LOAD scenario
- To run MDS ETL only, execute MDS\_ETL\_LOAD scenario

**If I modify the SID and User Name of the MDS database can I continue to use the existing installation of PLM BI?**

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

**If I modify the ODM Password after the installation of PLM BI, how do I modify the same in the existing PLM BI Installation to take effect in the PLM BI Configurator?**

**To modify the ODM password after the installation of PLM BI:**

1. Navigate to the bin directory of the install folder in the Windows command prompt or UNIX prompt.  
Example : D:/PLMBI/bin
2. Enter BIEncoder <new password to encrypt>
3. Copy the encrypted password that appears.
4. Navigate to <biinstall\_home>/config/BIDataLayerconfig.properties file.  
Example: D:/PLMBI/config/BIDataLayerconfig.properties

- 
5. Paste the encrypted password in the **ODM\_PASSWORD** field. This field is in the #ODM Schema Details section of the **BIDataLayerconfig.properties** file.
  6. **Save** and close the **BIDataLayerconfig.properties** file.
  7. **Exit** the command prompt.

In addition, you need to change the password of the ODM connection in the Physical Repository of ODI Topology Manager. For information, refer *Oracle Data Integrator User Guide*.

#### **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.

#### **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
- MDS Configuration Changes
- Unsupported Database Server Version Upgrade
- Database Password Changes which do not reflect in Data Mart, MDS and ODI environments.
- Unsupported version of ODI Server Upgrade or Repository Changes

#### **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, MDS, and ODI environments.
- LDAP Group Changes

#### **How do we localize PLM Business Intelligence application?**

Agile PLM Business Intelligence 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 MDS schema and ODI repositories (Master and Work Repository).

### **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 the OC4J to run as a Windows service to avoid seeing this command prompt.

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

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

Example

C:\JavaService

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

Example

C:\OracleBI\oc4j\_bi\j2ee\home\oc4j.jar

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

Example

cd C:\JavaService\

5. 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"
```

6. 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 install PLM BI in the same folder where Data Mart 3.2.0.1 is installed ?**

Yes, but we recommend to have a separate folder for the PLM BI installation.

### **Can I install Data Mart (including Master and Work Repository) and MDS as a single schema?**

Yes, you can. You need to use the same schema name for MDS which is being used for Data Mart.

---

For example, if you installed Data Mart as a single schema option and called it **ODM**, during MDS installation, when prompted for MDS schema name you need to input **ODM**.

**Can I use BI 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.

**Tablespaces assigned for MDS 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;
```

**How do I always execute a full load for Data Mart and MDS?**

**For Datamart:**

1. Update the Parameter table by running the following query on the Datamart schema:

```
UPDATE PARAMETER SET FULL_LOAD = 'Y';
```

```
COMMIT;
```

**For MDS:**

1. Start the ODI Designer.
2. Expand **PLM\_BI\_MDS>Agile MDS Folder>Procedures**
3. Create a backup of the `odi_pro_BI_ETLRUN_SUCCESS` procedure by using the ODI export option. Save the backup as `TRT_odi_pro_BI_ETLRUN_SUCCESS.xml`.
4. Double-click the `odi_pro_BI_ETLRUN_SUCCESS` procedure. The Procedure: `odi_pro_BI_ETLRUN_SUCCESS` window displays.
5. Click the Details tab.
6. Right-click on `odi_pro_BI_ETLRUN_SUCCESS` and select **Edit**. The Command: `odi_pro_BI_ETLRUN_SUCCESS` window displays.
7. Click **Edit**. The Expression Editor window displays.
8. Delete the following query from the Expression Editor:  

```
UPDATE ETL_PARAMETER SET FULL_LOAD = 'N' WHERE UPPER(FULL_LOAD) = 'Y' ;
```
9. Click **Apply**, and then click **OK** to close the Expression Editor window.
10. Click **Apply**, and then click **OK** to close the Command: `odi_pro_BI_ETLRUN_SUCCESS` window.
11. Click **Apply**, and then click **OK** to close the Procedure: `odi_pro_BI_ETLRUN_SUCCESS` window.
12. Expand **odi\_pro\_BI\_ETLRUN\_SUCCESS>Scenario**.

- 
13. Right-click on 'ODI\_PRO\_BI\_ETLRUN\_SUCCESS Version 001' and select **Regenerate**.
  14. Click **OK**.
  15. Update the ETL\_PARAMETER table by running the following query on the MDS schema:

```
UPDATE ETL_PARAMETER SET FULL_LOAD = 'Y';  
COMMIT;
```

---

**Note:** To revert back, import the TRT\_odi\_pro\_BI\_ETLRUN\_SUCCESS.xml file that was created during the backup in step #3. Use INSERT\_UPDATE mode while importing.

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## 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 MDS, DataMart, ODI Master, and ODI Work Repository objects:

Privilege	Purpose
CONNECT,RESOURCE	Connect, Create, Insert, Update, Delete, Drop or Alter table, Create or Drop or Alter Index in your schema
CREATE DATABASE LINK	Create DBLink to Agile PLM source system for every Full ETL run
DROP PUBLIC DATABASE LINK	Drop the DBLink to Agile PLM after connection
CREATE PUBLIC SYNONYM	Create a synonym to source table in target schema
ANALYZE ANY	ODI Tool analyzes the i\$ table during incremental ETL run
DROP PUBLIC SYNONYM	Drop synonym
ALL ON SYS.DBMS_PIPE	PL/SQL logger module to log the debug, warning and error messages
EXECUTE ON, SYS.DBMS_SYSTEM	PL/SQL logger module to log the debug, warning, and error messages
CREATE VIEW	Create a view in your schema
CREATE MATERIALIZED VIEW	Create a materialized view in your schema

### Privileges for Multiple Schemas

The Installer grants the required privileges when it creates the schemas as SYS user.

ODI Work, Data Mart, and MDS Schema require ANALYZE ANY WITH ADMIN OPTION privilege for performance optimizations.

Data Mart and MDS Schema users require the following privileges if not installed in ODI Work schema:

Privilege	Purpose
CREATE DATABASE LINK	Create DBLink to Agile PLM source database for every ETL run
DROP PUBLIC DATABASE LINK	Drop DBLink for every Full ETL run
CREATE ANY TABLE	Create i\$,e\$,c\$ tables in ODI Work Repository schema.
CREATE ANY SYNONYM	Create a synonym for Source table in ODI Work Repository schema
CREATE ANY INDEX	Create a index in ODI Work Repository Schema for i\$ tables
INSERT ANY TABLE	Insert a table like i\$,e\$,c\$ in Work Repository schema
CREATE PUBLIC SYNONYM	Create a synonym to source table in target schema
DROP ANY SYNONYM	Drop a synonym in ODI Work Repository schema
DELETE ANY TABLE	Delete records from i\$ tables in ODI Work Repository schema and this is used during Incremental ETL run
UPDATE ANY TABLE	Update records in i\$ tables in ODI Work Repository schema and this is used during Incremental ETL run
DROP ANY TABLE	Drop i\$ tables in ODI Work Repository schema and this is used during Full/Incremental ETL runs
SELECT ANY TABLE	Select a table like i\$_listname in ODI Work Repository schema.
CREATE VIEW	Create a view in your schema
CREATE MATERIALIZED VIEW	Create a materialized view in your schema
EXECUTE, DEBUG ON SYS.DBMS_PIPE	PL/SQL logger module to log debug, warning and error messages.
EXECUTE ON SYS.DBMS_SYSTEM	PL/SQL logger module to log debug, warning and error messages.

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**Note:** For information on Data Mart and ODI Schema privilege details see Agile PLM Data Mart Setup Guide.

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## Log Files

Log files are located in the Logs folder within the PLMBI Install 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
BI_DATA_DICT_PC_SD.log	Status of MDS PC module data dictionary seed data insert
BI_DATA_DICT_PQM_SD.log	Status of MDS PQM module data dictionary seed data insert
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 PLSQL 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
BIInstall.log	Status of BI Installation. This file also enables you to track the real-time Installation update.
UsersCreation.log	Status of MDS user creation. This file also stores details of the user grants.
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).

---

Name of the Log file	Description
BI_DATA_DICT_PPM_SD.log	Status of MDS PPM module data dictionary seed data insert.
PPM_DDL.log	Status of MDS PPM tables and comments creation.

---

## Configuring Multiple Work Environments

Implementation scenarios sometimes require installation of separate work repositories and MDS users for work environments such as, Development, Test, and Production. The configuration of Test and Production environments involves:

- Creating MDS user for Test and Production
- Configuring Test and Production context
- Configuring Test and Production Physical Schema

The Development and Test environments should be configured before the Production environment.

---

**Note:** The configuration order for Test and Production environments is interchangeable.

---

### Development Environment

You need to follow the installation instructions from "[Pre-installation Checklist](#)" on page 4-1 through "[Post-Installation Tasks](#)" on page 4-7 to complete the configuration for the Development environment. The installer creates a Master repository and Work repository along with the MDS user.

### Test Environment

The following are the prerequisites to configure the Test environment:

- Oracle Data Mart:

Oracle Data Mart (ODM) must be configured for Test and Production environments. The respective work repositories need to refer the Development environment's Master repository.

- Business Intelligence:

In the Development environment, ensure that the ODM and MDS ETL installation are complete.

The following are the steps to configure the Test environment:

1. Set the environment variables.
2. Extract the BI3.2.0.1.zip file.
3. Set the variables in BIDataLayerConfig.properties file for BI MDS.
4. Set the variables in Temp.properties file for BI MDS.

5. Install BI MDS Components.

## Setting Variables

Set the JAVA\_HOME variable in your system environment.

## Extracting zip File

Extract the BI3.2.0.1.zip file into a directory on your hard drive.

## Setting variables in BIDataLayerConfig.properties file for BI MDS

In the <BI Extracted Folder>\config directory, edit the **BIDataLayerConfig.properties** file to change the properties according to your requirements.

---

---

**Note:** Path separator in all of the path specifications in the **BIDataLayerConfig.properties** file is a double backward slash (\\).

---

---

The following is a sample BIDataLayerConfig.properties file with comments (A comment line begins with a hash '#' symbol) containing examples for every specification:

```
BI_DATA_LAYER_HOME=<INSTALL DIR>
#Example: BI_DATA_LAYER_HOME=E:\\MDS3.2.0.1
#ODI Repository Configuration
#Identify the repository which you want to create.
#PRODUCTION=Create BI on existing PRODUCTION Work Repository.
#QA=Create BI on existing QA Work Repository.
REPOSITORY_OPTION=PRODUCTION
#Specify if you want to create a new BI user or use the existing BI user.
#0 - BI User is existing user
#1 - BI User is new user
BI_USER_EXIST=1
#Oracle Home Directory
ORACLE_HOME_DIR=<ORACLE_OME>
#Example: ORACLE_HOME_DIR_BI=E:\\oracle\\product\\10.2.0\\db_1
#ODI Home Directory
ODI_HOME_DIR=<ODI_HOME>
#Example: ODI_HOME_BI=E:\\ODI\\oracledi
#DATAMART Database Details
#DATABASE NAME OR SID NAME
DB_SID_NAME=<DATABASE_NAME>
#Example: DB_SID_NAME=PLMDM
```

```

#HOST NAME OR MACHINE NAME
DB_HOST_NAME=<HOST_NAME>
#Example: DB_HOST_NAME=agilelab1
#PORT NO
DB_PORT=<PORT_NO>
#Example: DB_PORT=1521
#DATA MART Schema/User Name
ODM_UN=<DM_USER_NAME>
#Example: ODM_UN=ODM
#BI Schema/User Name
#You need to enter a new user name if you entered BI_USER_EXIST=1
BI_USER_NAME=<BI_USER_NAME>
#Example: BI_USER_NAME=MDS
#
#BI Tablespace details
#The Tablespace names must exist
#DATA TABLESPACE NAME
BI_TS_NAME=<DATA_TS_NAME>
#Example: BI_TS_NAME=agileodm
#INDEX TABLESPACE NAME
BI_IDX_TS_NAME=<IDX_TS_NAME>
#Example: BI_IDX_TS_NAME=agileodm_idx
#
# Oracle Data Integrator Repository Details (Database)
#
#MASTER REPOSITORY USER NAME
MASTER_REP_UN=<MASTERREP_USER_NAME>
# Example: MASTER_REP_UN=ODIMASTER
#Enter the user name of the WORK REPOSITORY
WORK_REP_UN=<WORKREP_USER_NAME>
# Example: WORK_REP_UN=ODIWORK
#Enter the name of the WORK Repository
WORK_REP_NAME=<WORKREP_NAME>
# Example: WORK_REP_NAME=WORKREP
#BI SCHEMA/USER JDBC URL
TGT_DB_URL=jdbc:oracle:thin:@<HOST>:<PORT>:<SID>
# Example: TGT_DB_URL=jdbc:oracle:thin:@agilelab1:1521:PLMDM

```

```
#MASTER REPOSITORY SCHEMA/USER JDBC URL
MASTER_DB_URL=jdbc:oracle:thin:@<HOST>:<PORT>:<SID>
# Example: MASTER_DB_URL=jdbc:oracle:thin:@AGILELAB1:1521:PLMDM
#
#Email and Mail server details
#
#EMAIL ADDRESSES [COMMA SEPARATED]
NOTIFICATION_EMAILID=<TO_EMAIL_ADDRESS>
# Example: NOTIFICATION_EMAILID=john.s@oracle.com
#Enter the name of the mail server
MAILSERVER=<MAIL_SERVER_NAME>
# Example: MAILSERVER =mail.server.com
# The format of the Fiscal Start date must be MM-DD-YYYY
FISCAL_START_DATE=<FSD>
#Example: FISCAL_START_DATE=12-31-2009
#Snapshot Frequency Types
# W - Weekly
# M - Monthly
# E - No Snapshot
# Ex. SNAPSHOT_FREQUENCY_TYPE=M
SNAPSHOT_FREQUENCY_TYPE=@BI_SNAPSHOT_FREQUENCY_TYPE_T@
# Snapshot Frequency
# If SNAPSHOT_FREQUENCY_TYPE is E (No Snapshot) then blank(no value)
# Ex. SNAPSHOT_FREQUENCY=
# If SNAPSHOT_FREQUENCY_TYPE is M (Monthly) then 1-31
# Ex. SNAPSHOT_FREQUENCY=31
# If SNAPSHOT_FREQUENCY_TYPE is W (Weekly) then MONDAY-SUNDAY
# Ex. SNAPSHOT_FREQUENCY=SUNDAY
SNAPSHOT_FREQUENCY=@BI_SNAPSHOT_FREQUENCY_T@
```

---

**Note:** If BI user and BI schema objects exist, then the BI schema objects are dropped and recreated. If you are creating a new BI user, the schema objects are created on the new BI user.

---

## Setting variables in Temp.properties file for BI MDS

In the <BI Extracted Folder>\config directory, edit the **Temp.properties** file to change the properties according to your requirements. This file mainly stores the passwords for DM, Work Repository and BI user. After the installation, the passwords stored in the **Temp.properties** file are deleted.

```

# Passwords cleared at end of installation automatically
#BI DATABASE SYSTEM USER PASSWORD
DB_SYSTEM_PWD_T=<SYSTEM USER PASSWORD>
#Example: DB_SYSTEM_PWD_T=MANAGER
#BI DATABASE SYS USER PASSWORD
DB_SYS_PWD_T=<SYS USER PASSWORD>
#Example: DB_SYS_PWD_T=ORACLE
#DATA MART USER PASSWORD
DM_PWD_T=<DATA MART USER PASSWORD>
#Example: DM_PWD_T =ODM
#MASTER REPOSITORY PASSWORD
MASTER_REP_PWD_T=<MASTER REPOSITORY USER PASSWORD>
#Example: MASTER_REP_PWD_T=ODIMASTER
#WORK REPOSITORY PASSWORD
WORK_REP_PWD_T=<WORK REPOSITORY USER PASSWORD>
#Example: WORK_REP_PWD_T=ORKREP
#BI USER PASSWORD
BI_PWD_T=<BI USER PASSWORD>
#Example: BI_PWD_T =MDS

```

## Installing BI MDS

Installation of BI MDS involves creation of ODI Physical architecture, ODI context and BI schema objects.

### To install BI MDS on Windows:

1. In the Windows Command prompt, change to the <BI Extracted Folder>\bin directory.
2. Run the MDSetIInstall.bat file.

### To install BI MDS on UNIX:

1. From the console, change to the <BI Extracted Folder>/bin directory.
2. Run the MDSetIInstall.sh file.

## Production Environment

The prerequisites and procedures to configure a Production environment for PLM BI MDS are the same as that of the Test Environment.



---

## Installing Agile PLM Business Intelligence on Multiple Instances

This appendix describes the steps to manually install various components of the PLM Business Intelligence application on separate machines using MultiInstanceInstaller.zip. These instructions are primarily used for manually installing:

- PLM BI MDS schema on an Oracle Database instance that is different from the Oracle Database instance where PLM Data Mart schema is installed
- PLM BI ETL components on ODI Repository on which Data Mart ETL ins installed
- BI Server repository (RPD file) and/or Web catalog

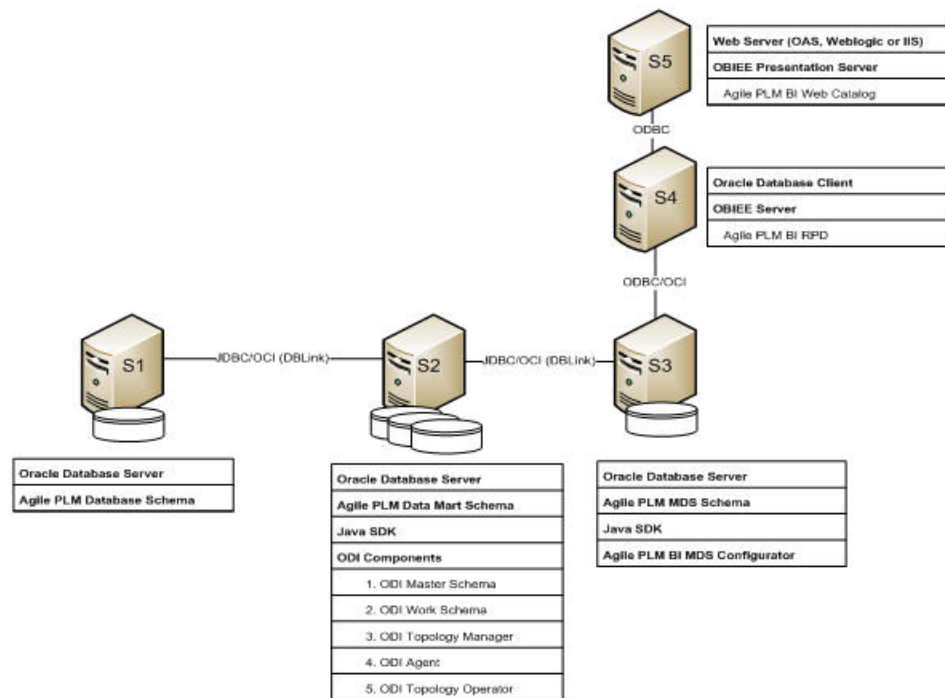
---

**Note:** The instructions provided in this document should be used only for installing on deployment configuration(s) that are not supported by the GUI Installer provided in the Agile PLM Business Intelligence application.

---

### Deployment Architecture

The following diagram illustrates the deployment architecture of Agile PLM Business Intelligence used for manually installing the application software.



BI Server and Presentation Server components can either be installed on separate machines (i.e., S4 & S5 as depicted in the picture) or they can be installed on same machine.

---

**Important:** Read the previous Note section carefully before starting the installation procedure.

---

## Pre-Installation Checklist

Verify the prerequisites for the installation of PLM Business Intelligence 3.2.0.1 application using the following pre-installation checklist:

#	Checkpoint	Done
1	Install and configure Agile PLM on S1	
2	Install and configure PLM Data Mart 3.2.0.1 on S2	
3	Ensure the Database Server and Listener services are running on S1, S2 and S3	
4	Ensure the Database connectivity details for the Data Mart schema, ODI Master and ODI Work Schema repositories are available.	

#	Checkpoint	Done
5	<p>Install and Configure OBIEE 10.1.3.5 on S4 and S5</p> <p>For information on installation and configuration of OBIEE, refer to the <i>Oracle Business Intelligence Infrastructure Installation and Configuration Guide</i> .</p>	
6	<p>Ensure the Oracle BI Server and Presentation Services are running on S4 and S5</p>	
7	<p>Create Database instance with two table spaces (one for Data and one for Indexes) on S3</p>	
8	<p>Ensure you have System user account on Oracle Database instances or appropriate Database privileges to perform the following:</p> <ul style="list-style-type: none"> <li>ú Create/drop Schema user in DB Instance on S3</li> <li>ú Create/Drop TNS Entry in DB Instances on S2 and S3</li> <li>ú Grant create/drop DBLink and Synonyms privileges to MDS Schema user on S3</li> <li>ú Grant schema privileges to Data Mart and ODI Work Schema users</li> </ul>	
9	<p>Unzip the MultiInstanceInstall.r.zip file into a separate directory (&lt;INSTALL_DIR&gt;) before proceeding.</p>	

#	Checkpoint	Done
10	Add the following Database configurations :  db_file_multiblock_read_count = 256 (or more)  open_links = 10  open_links_per_instance = 10  <b>Note</b> Restart Oracle Database after these changes.	
11	Modify the following ODI Parameters in odi_params.bat or odi_params.sh file for Large or Extra Large DB configurations:  odi_max_heap = 1024m  <b>Note</b> The odi_params.sh or odi_params.bat is located in the \$ODI_HOME/bin folder.	

## Installing PLM BI MDS Schema and ETL Components

The following steps outline the process for completing the installation of MDS and ETL components:

1. Install MDS Schema
2. Create Database Link to access Data Mart's schema objects
3. Create Synonyms for Data Mart schema objects
4. Grant Privileges to Data Mart and ODI Work Schema
5. Install MDS ETL Components
6. Update ODI Work Schema name in ODI Topology Manager
7. Executing ETL

The following Data Mart and ODI ETL configuration parameters are used as examples in this document:

### Data Mart schema parameters on S2 machine:

Database Name	PLMDM
Port Number	1521
System Name	DataMartHOST
Data Mart Schema Name	ODM
Data Mart Schema Password	ODM

**ODI Repository parameters on S2 machine:**

Master Repository Schema Name	ODIMASTER
Master Repository Schema Password	ODIMASTER
Work Repository Schema Name	ODIWORK
Work Repository Schema Password	ODIWORK
Work Repository Name	WORKREP
Work Repository Password	WORKREP

The PLM BI MDS should be installed in another database, but it should point to the PLM Data Mart repository and Data Mart schema.

The following MDS configuration parameters are used as examples in this document:

Database name	PLMBI
Port Number	1521
System Name	MDSHOST
MDS Schema Name	MDS
MDS Schema Password	MDS
System Schema Password	MANAGER

**Install MDS Schema****To install the MDS Schema on S3 machine:**

1. Unzip the MultiInstanceInstaller.zip file into a separate directory on **S3** machine and set environment variable to point to the directory <PLMBI\_INSTALL\_DIR>  
For example, <PLMBI\_INSTALL\_DIR> environment variable can be set as follows:  
In Windows:  
SET PLMBI\_INSTALL\_DIR = d:\PLMBI\_Schema  
In Unix, Linux or Solaris: /home/PLMBI\_Schema:  
export PLMBI\_INSTALL\_DIR = /home/PLMBI\_Schema  
After unzipping, make sure to set all permissions for the entire <PLMBI\_INSTALL\_DIR>/bin folder in Unix, Linux or Solaris.
2. Configure following properties in <PLMBI\_INSTALL\_DIR>/config/BIDataLayerConfig.properties for installing MDS Schema components on S3 machine:

Property	Description	Example Value
----------	-------------	---------------

BI_DATA_LAYER_HOME	Directory where the install software is located and is same as <PLMBI_INSTALL_DIR> outline above	Windows: d:\PLMBI_Schema  Linux: /home/PLMBI_Schema
ORACLE_HOME_DIR_BI	Directory where the Oracle DB Server is installed	Windows:D:\oracle\product\10.2.0\db_1  Linux: /home/oracle/product/10.2/db_1
TGT_DB_SID_BI	Database instance name in which MDS schema is created	PLMBI
TGT_DB_HOST_BI	Host machine name where the BI3201 Database schema is created, i.e., S3 machine name	MDSHOST
TGT_DB_PORT_BI	Port Number of Database Listener	1521
ODM_UN	Data Mart schema user name	ODM
BI_TS_NAME	Tablespace name for data	AGILEODM
BI_IDX_TS_NAME	Tablespace name for indexes	AGILEODM_INDX
BI_USER_NAME	MDS Schema user name	MDS32
BI_IN_SEPERATE_DB	The value should be 1 if the MDS schema exists in another database	1
TGT_DB_URL	JDBC URL for MDS schema	jdbc:oracle:thin:@MDSHost:1521:PLMBI
DM_DB_URL	JDBC URL for Data Mart schema	jdbc:oracle:thin:@DMHOST:1521:PLMDM
BI_INSTAL	Even if BI is already installed, the value should be 0 for this type of installation.	0
BI_USER_EXIST	Even if the BI User already exists, the value should be 1 for this type of installation.	1
SCHEMA_OPTION	Even if MDS schema is in a separate schema, the value should be 0 for this type of installation.	0

DLF_FILE_PATH	Token @INSTALL_DIR@ should be replaced with the proper BI_datalayer home path	Windows: d:\PLMBI_Schema  Linux /home/PLMBI_Schema
---------------	---	--

---

**Note:** For the Linux, AIX, or Solaris operating systems, the following property values should contain only a forward slash (example: /home/PLMBI\_Schema):BI\_DATA\_LAYER\_HOME, ORACLE\_HOME\_DIR\_BI, DLF\_FILE\_PATH.

---

- Configure following properties in the Temp.properties file for encrypting database schema passwords:

Property	Description	Example Value
ODM_USER_PWD_HIDE	Un-encrypted value of Data Mart schema password.	ODM
BI_USER_PWD_HIDE	Un-encrypted value of MDS schema password.	MDS
TGT_SYSTEM_PWD_HIDE	Un-encrypted value of Target system schema password.	MANAGER
ODI_MASTER_PWD_HIDE	Un-encrypted value of ODI master rep schema password.	ODIMASTER
ODI_WORKDB_PWD_HIDE	Un-encrypted value of ODI work rep schema password.	ODIWORK
TGT_SYS_PWD_HIDE	Un-encrypted value of target sys schema password.	ORACLE

- Backup the Temp.properties file after performing the previous step. This file can be reused if you have to reinstall the software.

---

**Note:** If the properties files are not configured properly, then all the steps must be repeated from the first step.

---

- Execute following batch or shell script from bin directory under <BI\_DATA\_LAYER\_HOME> to install MDS Schema.

**In Windows:**

```
cd <BI_DATA_LAYER_HOME>\bin
BIDataLayerDBInstall.bat
```

**In Unix, Linux or Solaris:**

```
cd <BI_DATA_LAYER_HOME>/bin
```

```
chmod +x *.sh
./BIDataLayerDBInstall.sh
```

## Create Database Link

After installing MDS Schema, create a DB Link by performing the following steps:

1. Create TNSentry for the Data Mart database in the MDS Database server.

### Example

TNS name:

```
PLMDM_LAB1 =
(DESCRIPTION =
  (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = TCP)(HOST = AGILELAB1)(PORT = 1521))
  )
  (CONNECT_DATA =
    (SERVICE_NAME = PLMDM)
  )
)
```

2. Create the following database links:
  - a. DB link to access ODI Work Repository Schema Objects
  - b. DB link to access Data Mart Schema Objects
3. Create the two DB links in MDS Schema using the following SQL statement:

Create database link *<dblink\_name>*

Connect to *<dm\_schema\_name>*

Identified by *<dm\_schema\_pwd>*

Using '*<tnsname>*';

### Example

Data Mart:

```
create database link PLMDM_DM
```

```
connect to ODM
```

```
identified by ODM
```

```
using 'PLMDM_LAB1';
```

ODI Work Repository Schema:

```
create database link PLMDM_WORK
```

```
connect to ODIWORK
```

```
identified by ODIWORK
```

```
using 'PLMDM_LAB1';
```

---

**Note:** Ensure that only two database links are present; PLMBI\_DM and PLMBI\_WORK DB links.

---

## Create Synonyms for Data Mart Schema Objects

Use the following steps to create synonyms for Data Mart schema objects:

1. Locate and open **replace\_proc.sql** file under <BI\_DATA\_LAYER\_HOME>/install/schema/mds.
2. Replace following tokens with the names of the DB Links created for Data Mart and ODI Work schema in the replace\_proc.sql file.

Token Name	Example DB Link Name
<dm_dblink_name>	PLMDM_DM
<work_dblink_name>	PLMDM_WORK

3. Login to MDS Schema and execute the replace\_proc.sql file

**SQL> @replace\_proc.sql**

4. Create synonyms in MDS Schema for the PARAMETER and DM\_LOAD\_CTL tables in Data Mart schema.

**SQL> Create or replace synonym PARAMETER for PARAMETER@<db\_link\_name>**

**SQL> Create or replace synonym DM\_LOAD\_CTL for DM\_LOAD\_CTL@<db\_link\_name>**

The <db\_link\_name> token in the above SQL statement should be replaced with the Database Link name created for the DataMart schema.

For example, if the db\_link\_name is PLMDM\_DM, execute the following:

**SQL> Create or replace synonym PARAMETER for PARAMETER@PLMDM\_DM;**

**SQL> Create or replace synonym DM\_LOAD\_CTL for DM\_LOAD\_CTL@PLMDM\_DM**

## Grant Database Privileges

Grant following database privileges for Data Mart schema and ODI Work schema:

1. Login to System Schema in PLM Data Mart Database
2. Execute following grants to Data Mart schema user:

**SQL> GRANT CREATE ANY VIEW TO ODM;**

**SQL> GRANT CREATE ANY TRIGGER TO ODM;**

**SQL> GRANT DROP ANY TRIGGER TO ODM;**

3. Execute following grants to ODI Work schema user:

**SQL> GRANT SELECT ANY TABLE TO ODIWORK;**

**SQL> GRANT CREATE ANY VIEW TO ODIWORK;**

---

**Note:** Replace the schema name according to your configuration.

---

## Install MDS ETL

**To install the MDS ETL on S2 machine:**

1. Unzip the MultiInstanceInstaller.zip file into a separate directory on S2 machine and set environment variable to point to the directory <PLMBI\_INSTALL\_DIR>

For example, <PLMBI\_INSTALL\_DIR> environment variable can be set as following

**In Windows:**

SET PLMBI\_INSTALL\_DIR = d:\PLMBI\_Schema

**In Unix, Linux or Solaris: /home/PLMBI\_Schema**

export PLMBI\_INSTALL\_DIR = /home/PLMBI\_Schema

After unzipping, make sure to set all permissions for the entire <PLMBI\_INSTALL\_DIR>/bin folder in Unix, Linux or Solaris.

2. Configure following properties in <PLMBI\_INSTALL\_DIR>/config/BIDataLayerConfig.properties for installing MDS ETL components on S2 machine:

Property	Description	Example Value
BI_DATA_LAYER_HOME	Directory where the install software is located and is same as <PLMBI_INSTALL_DIR> outline above	Windows: d:\PLMBI_Schema  Linux: /home/PLMBI_Schema
ODI_HOME_BI	Directory where the ODI Software is installed	Windows: D:\ODI10135\oracledi  Linux: /home/ODI/oracledi
TGT_DB_SID_BI	Database instance name in which MDS schema is created	PLMBI
TGT_DB_HOST_BI	Host machine name where the BI3201 Database schema is created, i.e., S3 machine name	MDSHOST
TGT_DB_PORT_BI	Port Number of Database Listener	1521
ODM_UN	Data Mart schema user name	ODM
BI_TS_NAME	Tablespace name for data	AGILEODM
BI_IDX_TS_NAME	Tablespace name for indexes	AGILEODM_INDX

BI_USER_NAME	MDS Schema user name	MDS
BI_IN_SEPERATE_DB	The value should be 1 if the MDS schema exists in another database	1
MASTER_UN_BI	ODI Master Repository schema Username	ODIMASTER
WORK_UN_BI	ODI Work Repository schema Username	ODIWORK
WORK_REP_NAME_BI	ODI Work Repository Username	WORKREP
DM_DB_URL	JDBC URL for Data Mart schema	jdbc:oracle:thin:@agil elab1:1521:PLMDM
TGT_DB_URL	JDBC URL for MDS schema	jdbc:oracle:thin:@MD SHost:1521:PLMBI
MASTER_DB_URL	JDBC URL for ODI Master Repository schema	jdbc:oracle:thin:@agil elab1:1521:PLMDM
WORK_DB_URL	JDBC URL for ODI Work Repository schema	jdbc:oracle:thin:@agil elab1:1521:PLMDM
NOTIFICATION_EMAILID	Email ID	<a href="mailto:ADMIN@MYDOMAIN.COM">ADMIN@MYDOMAIN.COM</a>
MAILSERVER	Mail Server Name	MAIL.MYDOMAIN.COM
FISCAL_START_DATE	Company's Fiscal Year Start Date	1/4/2010
BI_INSTAL	Even if BI is already installed, the value should be 0 for this type of installation.	0
BI_USER_EXIST	Even if the BI User already exists, the value should be 1 for this type of installation.	1
SCHEMA_OPTION	Even if MDS schema is in a separate schema, the value should be 0 for this type of installation.	0
SNAPSHOT_FREQUENCY_TYPE	Snapshot Frequency Types	M
SNAPSHOT_FREQUENCY	Snapshot Frequency	31

---

**Note:** For the Linux, AIX, or Solaris operating systems, the following property values should contain only a forward slash (example: /home/PLMBI\_Schema):BI\_DATA\_LAYER\_HOME, ORACLE\_HOME\_DIR\_BI, DLF\_FILE\_PATH.

---

3. Configure the following properties in Temp.properties to encrypt database schema passwords:

Property	Description	Example Value
ODM_USER_PWD_HIDE	Un-encrypted value of Data Mart schema password.	ODM
BI_USER_PWD_HIDE	Un-encrypted value of MDS schema password.	MDS
TGT_SYSTEM_PWD_HIDE	Un-encrypted value of Target system schema password.	MANAGER
ODI_MASTER_PWD_HIDE	Un-encrypted value of ODI master rep schema password.	ODIMASTER
ODI_WORKDB_PWD_HIDE	Un-encrypted value of ODI work rep schema password.	ODIWORK
TGT_SYS_PWD_HIDE	Un-encrypted value of target sys schema password.	ORACLE

4. Backup the Temp.properties file after performing the previous step. This file can be reused if you have to reinstall the software.

---

**Note:** If the properties files are not configured properly, then all the steps must be repeated from the first step.

---

5. Execute following batch or shell script from bin directory under <BI\_DATA\_LAYER\_HOME> to install MDS Schema.

**In Windows:**

```
cd <BI_DATA_LAYER_HOME>\bin
BIDataLayerETLInstall.bat
```

**In Unix, Linux or Solaris:**

```
cd <BI_DATA_LAYER_HOME>/bin
chmod +x *.sh
BIDataLayerETLInstall.sh
```

## Update Work Schema in Topology Manager

Update the work schema for the MDS in ODI Topology Manager on S2 machine.

1. Open ODI Topology Manager.
2. Locate the TRG\_BI\_PHYSICAL Data server for MDS in Topology Manager.
3. Make sure the Work Schema name and Schema name in the Physical Schema are identical (as shown in the following graphic). If they are different, edit to make sure they are the same as configured in BIDataLayerConfig.properties

**Physical Schema: TRG\_BI\_PHYSICAL.MDS**

Definition | Context | Version | Privileges | FlexFields

**Data Server: TRG\_BI\_PHYSICAL**

Name  
TRG\_BI\_PHYSICAL.MDS

Schema (Schema)  
MDS

Schema (Work Schema)  
MDS

☒ Default

Work Tables Prefix

Errors E\$_	Loading C\$_	Integration I\$_
----------------	-----------------	---------------------

Journalizing elements prefixes

Datastores J\$_	Views JV\$_	Triggers T\$_
--------------------	----------------	------------------

Naming Rules

Local Object Mask  
%SCHEMA.%OBJECT

Remote Object Mask  
%SCHEMA.%OBJECT@%DSERVER

OK Cancel Apply Help

## Executing ETL

After the MDS Schema and ETL installation is complete, perform the following steps:

1. Configure Database and ODI parameters for optimizing ETL Performance. Refer to ["Optimizing ETL Performance"](#) on page 4-8.
2. Execute the Data integration task using the ODI Operator to load data into MDS schema from the Agile PLM Data Mart. Refer to ["Executing ETL"](#) on page D-13.

## Installing BI (RPD and Web) Components

When installing the BI application, you have three options:

1. Installing the Repository and Web Catalog
2. Install the Repository only
3. Install the Web Catalog only

## Configure for Command Line Installation

**To install the BI RPD (or Web Catalog) on S4 machine or Web Catalog on S5 machine:**

1. Unzip the MultiInstanceInstaller.zip file into a separate directory on S4 (or S5) machine and set environment variable to point to the directory <PLMBI\_INSTALL\_DIR>

For example, <PLMBI\_INSTALL\_DIR> environment variable can be set as following

**In Windows:**

SET PLMBI\_INSTALL\_DIR = d:\PLMBI\_Schema

**In Unix, Linux or Solaris: /home/PLMBI\_Schema**

export PLMBI\_INSTALL\_DIR = /home/PLMBI\_Schema

After unzipping, make sure to set all permissions for the entire <PLMBI\_INSTALL\_DIR>/bin folder in Unix, Linux or Solaris.

2. Configure following properties in <PLMBI\_INSTALL\_DIR>/config/BIConfig.properties for installing Agile PLM RPD or Web Catalog components on S4 (or S5) machine:

Property Name	Token	Example	Description
PLM_BI_HOME	<PLM_BI_HOME>	Windows: C:\\SilentInstallerBI 3.2 Linux : /home/agile/SilentI nstallerBI3.2	BI installed Home
ORACLE_BI_HOME	<ORACLE_BI_HOME>	Windows: C:\\OBI\\OracleBI  Linux: /home/agile/OBI/O racleBI	Oracle BI Repository installed Home
ORACLE_BI_DATA_HOME	<ORACLE_BI_DATA_HOME>	Windows:C:\\OBI\\ OracleBIData\\web  Linux: /home/agile/OBI/O racleBIData/web	Oracle BI Web catalog

## Install BI Server Repository (RPD) and Web Catalog

This is the list of BI components installed on the S4 machine (with this configuration S5 machine is not used).

1. Ensure OBIEE Server and OBIEE Answers & Dashboards are installed on S4 machine
2. Open a command prompt or console window.
3. Run the BIInstall batch or sh script file.

**In Windows:**

```
%PLMBI_INSTALL_DIR%\bin\BIInstall.bat
```

**In UNIX, Linux or Solaris:**

```
$PLMBI_INSTALL_DIR/bin/BIInstall.sh
```

## Install Agile PLM BI Server Repository (RPD) Only

With this installation option, the Agile PLM BI Server Repository (RPD) is installed on S4 machine and Agile PLM BI Web Catalog is installed on S5 machine (refer to next section).

1. Ensure OBIEE Server is installed on S4 machine
2. Open a command prompt or console window.
3. Run the BIInstallRPD batch or sh script file.

**In Windows:**

```
%PLMBI_INSTALL_DIR%\bin\BIInstallRPD.bat
```

**In UNIX, Linux or Solaris:**

```
$PLMBI_INSTALL_DIR/bin/BIInstallRPD.sh
```

## Install Agile PLM BI Web Catalog (RPD) Only

With this installation option, the Agile PLM BI Web Catalog is installed on S5 machine, while the Agile PLM BI Server Repository (RPD) is installed on S4 machine (refer to previous section).

1. Ensure OBIEE Answers & Dashboards are installed on S5 machine
2. Open a command prompt or console window.
3. Run the BIInstallWeb batch or sh script file.

**In Windows:**

```
%PLMBI_INSTALL_DIR%\bin\BIInstallWeb.bat
```

**In UNIX, Linux or Solaris:**

```
$PLMBI_INSTALL_DIR/bin/BIInstallWeb.sh
```

## Verifying Install Logs

After installation is complete, check log files under <PLMBI\_INSTALL\_DIR>/logs directory to make sure there are no errors. Refer to ["Log Files"](#) on page B-1 for more details on the log files.



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## Using External .csv Files

Two files, **prj\_cost.csv** and **prj\_forecast.csv**, are installed with Agile PLM Business Intelligence and located in the <PLM\_BI\_ETL\_Home Directory>\install\etl\srcfiles directory. These files allow you to enter external project cost and project revenue forecast data into your Agile PLM Business Intelligence schema, using .csv files, with the execution of PLM BI ETL.

### Project Actual Cost

The **prj\_cost.csv** file allows you to enter cost information for a project from a .csv file, if the same information is not maintained in Agile Product Portfolio Management (PPM).

Field	Description
Project Number	This mandatory field contains Project Number information available from the Agile PLM (source) application. The default data type is string.
Cost Incurred Date	This mandatory field captures the Actual Date when the cost was incurred. The default data type is string with the following format: YYYYMMDD.
External Document Reference Number	This optional field should include a unique entry number for the line entry. The default data type is string.
Project Actual Total Cost Amount	This mandatory field contains the Actual Total Cost incurred for the project. The default data type is number with two decimal places.

### Forecast Revenue

The **prj\_forecast.csv** file allows you to enter forecast revenue by project with data from a .csv file.

Field	Description
Project Number	This mandatory field contains Project Number information available from the Agile PLM (source) application. The default data type is string.

Forecast Revenue in Years from Project Schedules end date (0-5)	This mandatory field (0-5) contains expected Forecast revenue, starting from the Project Scheduled end date ranging from 0-5 years. The default data type is number with two decimal places.
Forecast Revenue in Years from Project Schedules end date (0)	Project forecast revenue at the point of the project scheduled end date.
Forecast Revenue in Years from Project Schedules end date (1)	Project forecast revenue after one year of the project scheduled end date.
Forecast Revenue in Years from Project Schedules end date (2)	Project forecast revenue after two years of the project scheduled end date.
Forecast Revenue in Years from Project Schedules end date (3)	Project forecast revenue after three years of the project scheduled end date.
Forecast Revenue in Years from Project Schedules end date (4)	Project forecast revenue after four years of the project scheduled end date.
Forecast Revenue in Years from Project Schedules end date (5)	Project forecast revenue after five years of the project scheduled end date