



Agile Product Lifecycle Management

Data Mart Setup Guide

Version 3.2.0.1

E18436-01
September 2010

Oracle Copyright

Copyright © 1995, 2010, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this software or related documentation is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR 52.227-19, Commercial Computer Software License (December 2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Oracle and Java are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

This software and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third party content, products and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third party content, products or services. The RMW product includes software developed by the Visigoth Software Society.

CONTENTS

Oracle Copyright.....	ii
Chapter 1 Overview of Agile PLM Data Mart Installation	1
Downloading Agile PLM Data Mart Software	1
Obtaining Software from Oracle E-Delivery.....	1
Chapter 2 Agile PLM Data Mart Overview	3
Introduction.....	3
Agile PLM Data Mart Features	3
Architectural Components	4
Deployment Architecture	6
Chapter 3 System Requirements	7
Software Requirements.....	7
Hardware Requirements	8
Installation Requirements.....	8
Chapter 4 Installing Agile PLM Data Mart.....	9
Data Mart Installer	9
Prerequisite Installations	9
Oracle Database Server	10
Agile PLM Database.....	10
Oracle Data Integrator.....	11
Pre-installation Checks.....	11
Installing Agile PLM Data Mart on Windows	12
Installing Agile PLM Data Mart on Solaris and HP-UX.....	12
Installing Agile PLM Data Mart on Linux	14
Installing Agile PLM Data Mart on AIX	15
Adding Database Services to the Listener	15
Manual Installation Steps for DB Schema.....	16
Setting Database Privileges	17
Validating the Agile PLM Data Mart Installation	18
Install Directory Structure	19
Database Schemas	19
Verifying ODI Repositories	20
Before you Upgrade	22
Upgrading from Agile PLM Data Mart 3.2	22
Upgrading from Agile PLM Data Mart 3.1.2 or Earlier.....	23

Chapter 5 Configuring Agile PLM Data Mart	25
List Dimension Configurator	25
Changing List Names in Dimension Table	27
Validating Dimension Tables	27
Enabling and Disabling ETL for PLM Modules	27
Changing the Agile PLM Data Mart Passwords	28
Chapter 6 Executing ETL	31
Setting up ODI Users	31
Executing ETL from ODI	33
Executing ETL from Command Prompt	34
Appendix A Troubleshooting	35
Installation Issues	35
ETL Runtime Issues	36
PL/SQL Loggings	37
General Issues	37
Database Issues	37
Performance Issues	38
Detecting Errors in ODI coming from Oracle	38
Connection Errors	39
Errors in Interfaces	40
Appendix B Best Practices	41
Purging Logs	41
Archiving	41
Changing the Database Password	41
Improving ETL Performance	42
Deployment	42
Appendix C Configuring Multiple Work Environments	43
Pre-installation Notes	43
Creating Schema and Work Repositories	43
Installing ETL Components	44
Extract the Data Mart files	44
Copy the JDK files	44
Configure property files or batch files	45
Execute Batch or Shell file	49
Configure Physical Connection in the Topology Manager	49
Export the Work Repository and Import into the QA or Production environment	49

Appendix D Manually Installing Agile PLM Data Mart ETL.....	51
Pre-Installation Notes	51
Creating Schemas.....	51
Installing ETL.....	52

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.

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>.

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.

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.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, 7 days a week. For TTY support, call 800.446.2398. Outside the United States, call +1.407.458.2479.

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 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.

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

Overview of Agile PLM Data Mart Installation

This chapter includes the following:

- Downloading Agile PLM Data Mart Software..... 1

This guide provides instructions and guidelines to successfully install or upgrade Agile PLM Data Mart 3.2.0.1. You should be familiar with or have a working knowledge of Agile PLM and Oracle Data Integrator to work with Agile PLM Data Mart.

This chapter provides the information required to access the necessary software.

Downloading Agile PLM Data Mart Software

This section provides information on downloading Agile PLM Data mart 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 Agile PLM Data Mart from Oracle E-Delivery:

1. On the Oracle E-Delivery Welcome page, choose your language and click **Continue**.
2. Enter the 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.
4. Select a **Platform** value.
5. Click **Go** to view the application Agile release downloads.

6. Select the appropriate link and click **Continue**.
7. The Download page displays downloadable release parts, including customer guides. Click **Download** for the appropriate media pack.
8. Extract the contents of the media pack, unzip the contents, and navigate to the installation folder.

Agile PLM Data Mart Overview

This chapter includes the following:

▪ Introduction	3
▪ Agile PLM Data Mart Features	3
▪ Architectural Components	4
▪ Deployment Architecture	6

Introduction

Agile PLM Data Mart is an operational data store for Agile PLM data integrated with ETL technology that provides the data foundation for your Enterprise Data Warehouse & Analytics solutions. The Agile PLM Data Mart stores all relevant data available in the PPM, PC, PCM, PG&C, and PQM Modules of Agile PLM. The data model for the Agile PLM Data Mart is structured to facilitate querying and analysis.

The Agile PLM Data Mart operational data store facilitates the following use cases:

1. To integrate Agile Data with your Corporate Data Warehouse using corporate ETLs
2. To build and deploy your corporate Business Reporting & Intelligence applications
3. To deploy pre-packaged Agile PLM Business Intelligence (BI) Solutions

For use case #2, we recommend that you design a Multi-dimensional schema (MDS) layer with the Agile PLM Data Mart as the staging schema. MDS consists of Facts and Dimension tables and its design is driven by reporting and business intelligence requirements.

Agile PLM Data Mart Features

- Agile PLM Data Mart delivers a normalized schema database that captures the business object data of Common, PC, PCM, PG&C, PPM, and PQM objects and their related data. In addition, it captures selected data and last modification timestamps which help to further extract data into any down-stream database system.
- Agile PLM Data Mart packages pre-built ETL that leverages Oracle Data Integrator (ODI) Technology. Using the ODI operator, you can extract, load, and transform the Agile PLM transactional data into the Agile PLM Data Mart.
- Agile PLM Data Mart can be set to extract data from one or more supported Agile PLM modules.
- Agile PLM Data Mart supports incremental extraction for business object data.
- Agile PLM Data Mart can be set to run a full or Incremental load.

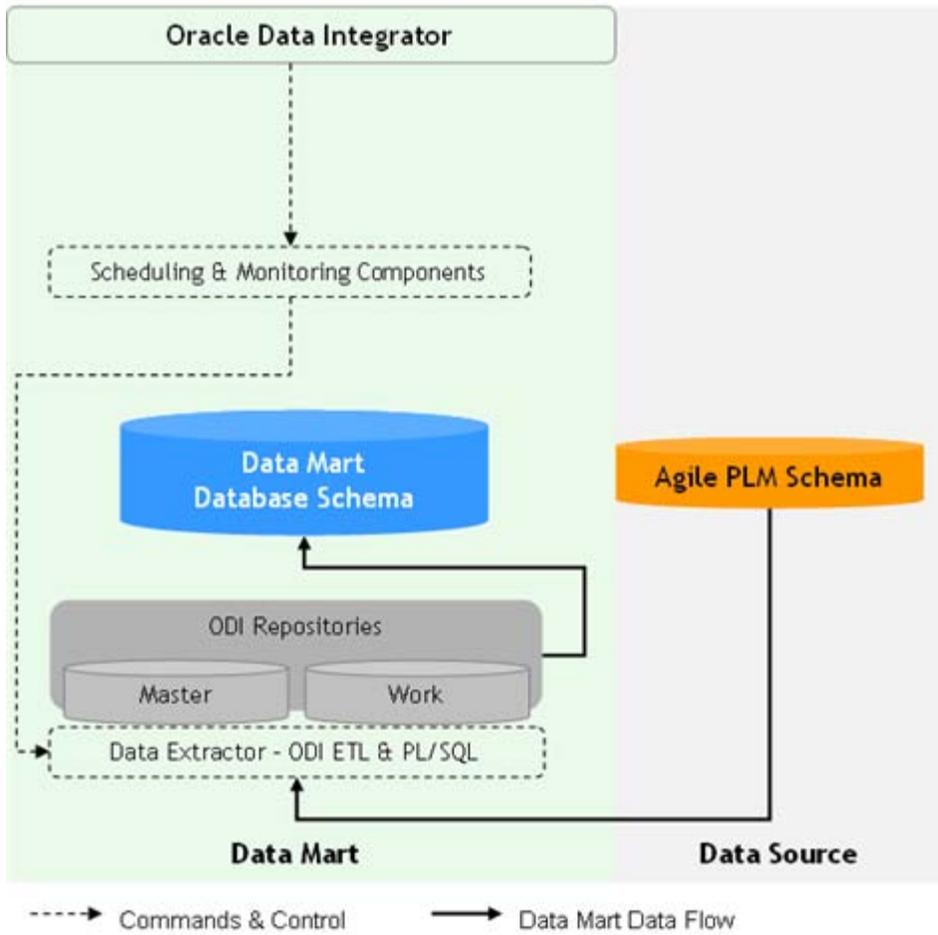
Architectural Components

The following table describes the major components in Agile PLM Data Mart architecture:

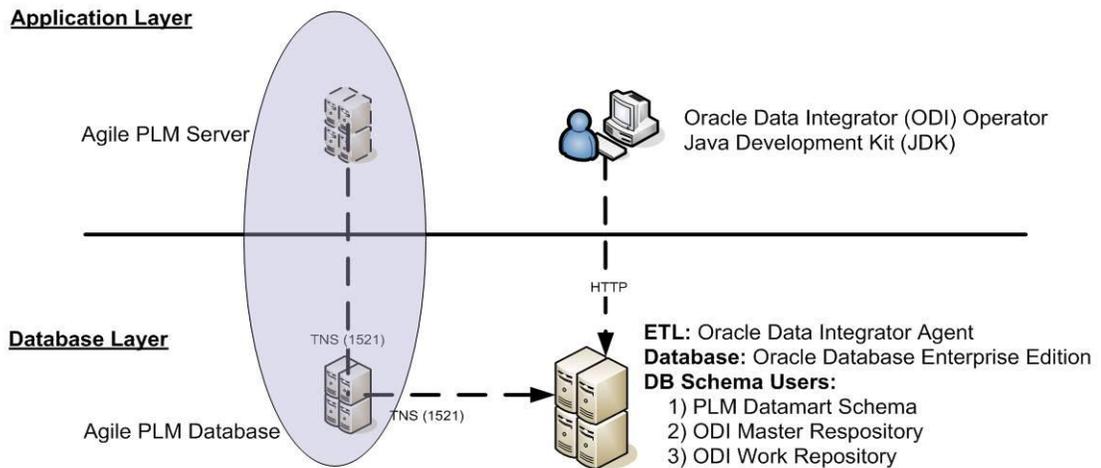
Component	Description
Oracle Data Integrator	Oracle Data Integrator (ODI) is an application which uses the Extract-Transform-Load process to transform data from one schema to another. ODI uses the ODI Interface and PL/SQL procedures to implement the Extract-Transform-Load process.
Agile PLM Data Mart Schema	This is an Operational Data Store built from the Agile PLM OLTP (Online Transaction Processing) database.
ODI Repositories	ODI Repositories maintain all information related to the definition and execution of ETL processes.

The following illustration depicts the positioning of various components in the Agile PLM Data Mart architecture:

Agile PLM Data Mart Architecture



Deployment Architecture



System Requirements

This chapter includes the following:

- Software Requirements 7
- Hardware Requirements 8
- Installation Requirements 8

Agile PLM Data Mart can be deployed in different configurations. The amount of time required to complete an installation depends on the complexity of your deployment.

This chapter describes the minimum software and hardware requirements for an Agile PLM Data Mart installation.

Software Requirements

The following table lists the software required to install Agile PLM Data Mart 3.2.0.1:

Components	Type	Supported Versions
Database software	Oracle	10g R2 Enterprise Edition 11g R1 Enterprise Edition 11g R2 Enterprise Edition Note The Agile PLM Source database and the Agile PLM Data Mart target schema must be installed with the same database version.
Middleware application	Oracle Data Integrator (ODI)	10.1.3.5 or 10.1.3.6.2
Application software	Agile PLM	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
Java Platform software	Java Runtime Environment	1.5.x

Note The Agile PLM Data Mart installer does not support the installation of Data Mart in the Oracle Database RAC environment.

Agile PLM Data Mart 3.2.0.1 is certified and supported on the following 64-bit Operating System platforms, unless specified:

- Microsoft Windows Server 2003 (32 and 64-bit)
- Oracle Enterprise Linux 5
- Sun Solaris 10 (SPARC 64 bit)
- IBM AIX 5.3 or 6
- HP-UX 11.31

Hardware Requirements

When choosing a hardware configuration, consider the number of total users, the number of concurrent users, the size of your Agile PLM database, the number of Agile PLM objects, and overall activity level. For specific technical guidance, please contact [Oracle Technical Support](https://support.oracle.com) <https://support.oracle.com>.

It is required that the computer system on which you are installing Agile PLM Data Mart components, and the Oracle Database, has at least two physical drives, or two partitions. This allows you to place the operating system on one drive/partition and use the other for Agile and/or Oracle components, thus ensuring better performance.

The following are the minimum hardware requirements based on database server size.

System Resources	Customer Size			
	Small	Medium	Large	Extra Large
CPU's	2	2 - 4	4 - 8	8 ++
Disk Space	12 GB	24 GB	32 GB	64 GB
Memory (Windows)	2 GB	4 GB	6 GB	8 GB
Memory (Linux)	2 GB	4 GB	6 GB	8 GB
Memory (AIX)	2 GB	4 GB	6 GB	8 GB

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

Installation Requirements

1. Do not install the Agile PLM Data Mart on the same drive as that of the operating system.
2. There must be at least **20 GB** of **free disk space** and **2 GB memory** available for Agile PLM Data Mart.

Important The complete path and folder names should NOT contain any spaces, because ODI fails to recognize any spaces in folder names or paths.

Installing Agile PLM Data Mart

This chapter includes the following:

▪ Data Mart Installer	9
▪ Prerequisite Installations.....	9
▪ Pre-installation Checks	11
▪ Installing Agile PLM Data Mart on Windows	12
▪ Installing Agile PLM Data Mart on Solaris and HP-UX	12
▪ Installing Agile PLM Data Mart on Linux.....	14
▪ Installing Agile PLM Data Mart on AIX.....	15
▪ Adding Database Services to the Listener.....	15
▪ Manual Installation Steps for DB Schema	16
▪ Validating the Agile PLM Data Mart Installation.....	18
▪ Before you Upgrade.....	22
▪ Upgrading from Agile PLM Data Mart 3.2.....	22
▪ Upgrading from Agile PLM Data Mart 3.1.2 or Earlier	23

Important It is recommended that the Data Mart Database installation is performed under the guidance of a DBA.

Important The ETL installation can be performed by anyone who has administrative privileges for the machine.

Data Mart Installer

The Agile PLM Data Mart Installer is a program that helps in installation of the Agile PLM Data Mart DB and its components. The installer seeks required inputs about the Source Database, Target Database and ODI from the user, configures the corresponding properties, and installs all the components required for Agile PLM Data Mart to perform its functions.

Each installation panel has online help. At any time during installation, you can click **Help** for more information about the panel's options.

The Installer deploys the following:

- Apache Ant
- Agile PLM Data Mart components
- Agile PLM Data Mart Database

Prerequisite Installations

The following products should be installed and configured before you begin installing the Agile PLM

Data Mart:

- Oracle Database Server
- Agile PLM Database
- Oracle Data Integrator
- Java Runtime Environment

If any of these is missing or improperly configured, the Data Mart installation process will fail.

For information on the required versions of the prerequisite products, see [Software Requirements](#) on page 7. For information on how to install and configure these products, go to the [Oracle Technology Network \(OTN\) Web site](#) <http://www.oracle.com/technology/documentation> for their respective documentation libraries.

Note During the ODI installation, you need to install only the Oracle Data Integrator component from the installation component checklist.

Oracle Database Server

The Agile PLM Data Mart Installer seeks the paths of the Database Datafile Directory (Destination Base) and Oracle Home Directory (Destination Home). Therefore, the system where you wish to install the Data Mart Database, the Target Database, should already have Oracle Database Server installed.

You are not required to create any DB Schema Users - the installer creates them.

For Data Mart Database creation, make sure that `SQLNET.AUTHENTICATION_SERVICES` in the Network Configuration File, `sqlnet.ora`, is set to **(NONE)**. The `sqlnet.ora` file is located in the `oracle_home\Network\Admin` directory.

For complete information about the Oracle Database and its installation procedures, refer to the Oracle DB Installation Guide on the [Oracle Technology Network \(OTN\) Web site](#) <http://www.oracle.com/technology/documentation>.

Agile PLM Database

The Agile PLM Data Mart extracts, loads and transforms data from the Agile PLM Database, the Source Database. The Agile PLM Database can be located anywhere in your enterprise, connected through Local Area Network or Wide Area Network over TCP/IP.

The source PLM DB should already exist. The target Database, the Data Mart Database, however, can be created in an existing instance, or in a new instance, using the Agile PLM Data Mart installer.

The Agile PLM Data Mart Installer requires the following information, which should be available from your Agile PLM Administrator:

- Database Host Name
- Database Port Number

- Database Name
- Database SID
- Sys User Password
- System User Password
- PLM DB Username
- PLM DB Password

Oracle Data Integrator

Agile PLM Data Mart operation is based on Oracle Data Integrator (ODI). The Data Mart Schema requires at least one Master Repository and one Work Repository. These repositories are used by ODI to operate on data during transformation.

The installer creates the Data Mart Schema on the Target Database Server. ODI should be installed on the same system where you plan to install Agile PLM Data Mart ETL Components.

For complete information on ODI, refer to its documentation, which is available at Oracle Technology Network (OTN) Web site.

ODI, and its patch, can be downloaded from the **Oracle web site** <http://www.Oracle.com>.

Pre-installation Checks

Make sure the following checks are completed on the machine where Agile PLM Data Mart will be installed:

- Minimum hardware and software requirements are met.
- Make sure that you login with a userid that has administrative privileges on the machine where Agile PLM Data Mart will be installed.
- Disk compression is disabled.
- PLM Source DB is available and you have passwords for SYS and SYSTEM.
- Correct versions of JRE and ODI are installed.
- ODI_JAVA_HOME environment variable contains the path to the installation directory of JDK 1.5.x.
- JAVA_HOME environment variable contains the path to the installation directory of JDK 1.5.x and JAVA_HOME is added to the PATH environment variable.
- If you are installing from a network drive on Windows, use Windows File Manager to map that drive to your computer.
- The machines on which you plan to install Agile PLM Data Mart computers and databases should be dedicated to Agile and should not have any other software installed, unless otherwise specified. Do not include other database schemas or use the Agile host server as the primary domain controller (PDC) or dynamic host configuration protocol (DHCP) server.

- Virus Protection should be disabled.

If virus protection is enabled, components used in the installer can be falsely identified as being infected and lockup the installation. You can turn the virus protection on after the installation is complete.

Installing Agile PLM Data Mart on Windows

Before you start the Installer, you are required to set the Environment Variables.

To set the Environment Variables:

1. On your desktop, right click on **My Computer** and select **Properties**. The *System Properties* panel appears.
2. Click **Environment Variables** in **Advanced** tab.
3. Define User variable for Java Home.
Example : JAVA_HOME=C:\Java\jdk1.5
4. Set PATH environment variable to include the bin directory path of the JDK installation.
Example : PATH=%JAVA_HOME%\bin
5. Click **OK** to complete.

To start the Agile PLM Data Mart installer on Windows:

1. Log in as a user with administrative privileges.
2. From Installer base directory in the Installer Disk, <double-click> **PLMDM3.2.0.1_Win.exe** file.
The Welcome screen appears.
3. Click **Next** for subsequent screens. Be sure to view the Installer online help for information about each panel.
4. Click **Install** to begin the installation.

Installing Agile PLM Data Mart on Solaris and HP-UX

For the Oracle databases to work properly, the default semaphore settings in Solaris and HP-UX must be changed. These settings should be reconfigured as follows:

To modify the system kernel parameters:

1. Change to the root user, and back up the **/etc/system** file:

```
$ su - [Enter]  
# cp /etc/system /etc/system_save [Enter]
```
2. Verify the following **/etc/system** kernel parameters. If the parameters do not exist, go to the next step.

```
set shmsys:shminfo_shmmax = 4294967295
```

```

set shmsys:shminfo_shmmin = 1
set shmsys:shminfo_shmmni = 100
set shmsys:shminfo_shmseg = 10
set semsys:seminfo_semmns = 1024
set semsys:seminfo_semmni = 100
set semsys:seminfo_semmsl = 500
set semsys:seminfo_semopm = 100
set semsys:seminfo_sevmx = 32767
set noexec_user_stack = 1 (Note:On Oracle 10g only)

```

Important If you have been running the host computer as an Oracle database server, you have to check with your system administrator before changing these parameters. For these parameter settings, you can also refer to the Oracle database documentation.

Note Restart the computer if you modify the /etc/system file.

3. Before you start the Installer program, set the profile as follows -

```

(Oracle 10g) ORACLE_HOME=/u01/app/oracle/product/10.2.0/db_1; export
ORACLE_HOME
(Oracle 11g)ORACLE_HOME=/u01/app/oracle/product/11.1.0/db_1; export
ORACLE_HOME
PATH=$PATH:$ORACLE_HOME/bin; export PATH
JAVA_HOME=/u01/oracle/software/jdk1.5.0_15; export JAVA_HOME
ODI_JAVA_HOME=$JAVA_HOME; export ODI_JAVA_HOME
ODI_HOME=/u01/oracle/software/odi/oracledi; export ODI_HOME

```

To start the Agile PLM Data Mart installer on Solaris or HP-UX:

1. Log on as a user with full permissions.

Important The user must have full permissions (-rwx) for all the folders of the Oracle DB and ODI or the Installation will fail.

2. Open a terminal window.

3. Change to the directory where you downloaded the installation file.

4. At the prompt, execute the **PLMDM3.2.0.1_Sol.bin** file for Solaris or the **PLMDM3.2.0.1_hpx.bin** file for HP-UX.

The *Welcome* screen appears.

5. Click **Next** for subsequent screens. Be sure to view the Installer online help for information about each panel.

6. Click **Install** to begin the installation.

Installing Agile PLM Data Mart on Linux

For the Oracle databases to work properly, the default semaphore settings in Linux must be changed.

To modify the system kernel parameters:

1. Login as the root user, and back up the `/etc/sysctl.conf` file:

```
$ su - [Enter]
# cp /etc/sysctl.conf /etc/sysctl.conf_save [Enter]
```

2. Verify the following `/etc/sysctl.conf` kernel parameters. If the parameters do not exist, go to the next step.

```
kernel.shmall = 2097152
kernel.shmmax = 2147483648
kernel.shmmni = 4096
kernel.sem = 250 32000 100 128
fs.file-max = 65536
net.ipv4.ip_local_port_range = 1024 65000
net.core.rmem_default = 1048576
net.core.rmem_max = 1048576
net.core.wmem_default = 262144
net.core.wmem_max = 262144
```

Important If you have been running the host computer as an Oracle database server, you have to check with your Linux system administrator before changing these parameters. For these parameter settings, you can also refer to the Oracle database documentation.

Note Restart the computer if you modify the `/etc/sysctl.conf` file. Alternatively, you can use the `sysctl` command to modify the semaphore parameters immediately. However, using `sysctl` command does not make the changes permanent. Permanent changes are required in `/etc/sysctl.conf` file.

3. Before you start the Installer program, set the profile as follows:

```
(Oracle 10g) ORACLE_HOME=/u01/app/oracle/product/10.2.0/db_1; export
ORACLE_HOME
(Oracle 11g)ORACLE_HOME=/u01/app/oracle/product/11.1.0/db_1; export
ORACLE_HOME
PATH=$PATH:$ORACLE_HOME/bin; export PATH
JAVA_HOME=/u01/oracle/software/jdk1.5.0_15; export JAVA_HOME
ODI_JAVA_HOME=$JAVA_HOME; export ODI_JAVA_HOME
ODI_HOME=/u01/oracle/software/odi/oracledi; export ODI_HOME
```

To start the Agile PLM Data Mart installer on Linux:

1. Log on with root privileges.

2. Open a terminal window.
3. Change to the directory where you downloaded the installation file.
4. At the prompt, execute the **PLMDM3.2.0.1_Lin.bin** file.
The **Welcome** screen appears.
5. Click **Next** for subsequent screens. Be sure to view the Installer online help for information about each panel.

Important The user should have full permission (-rwx) for all the folders of the Oracle DB and ODI or the Installation will fail.

Installing Agile PLM Data Mart on AIX

To start the Agile PLM Data Mart installer on AIX:

1. Log on as a user with full permissions.
Important The user must have full permissions (-rwx) for all the folders of the Oracle DB and ODI or the Installation will fail.
2. Open a terminal window.
3. Change to the directory where you downloaded the installation file.
4. At the prompt, execute the **PLMDM3.2.0.1_Aix.bin** file.
The *Welcome* screen appears.
5. Click **Next** for subsequent screens. Be sure to view the Installer online help for information about each panel.
6. Click **Install** to begin the installation.

Adding Database Services to the Listener

Note This is only applicable if you are creating a new Agile PLM 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.

Manual Installation Steps for DB Schema

If you selected the option *Generate SQL Scripts* in the **Select Data Mart Schema** panel during installation, the Installer generates a set of SQL files and stores them in the **Schema** folder under the *Data Mart Home* directory. You need to run them in SQL*Plus in the order given to manually create the Agile PLM Data Mart database schema.

Note The database needs to be already created before performing these steps.

The following are the different possibilities of creating the Data Mart schema using manually generated Install Scripts:

Scenario 1

Generate the scripts using installer in system A where Data Mart Schema is created and execute the scripts manually.

In SQL*Plus, connect to the Data Mart database using the Data Mart User Name and Password.

Before doing so, set the Oracle SID environment variable as follows:

Windows set oracle_sid = <sid_name>

Solaris/Linux export ORACLE_SID = <sid_name>

1. Run **TableSpaceCreation.sql** to create Tablespace. If the tablespace already exists, skip this step.
2. Run **UserCreation.sql** to create Users.
3. Run **ODM.sql** to install the Operational Data Mart (ODM).
4. Run **ODM_DDL_COMMENTS.sql** script to add comments for the tables. This step is optional.

Note The given sequence of execution is very important or the installation will fail. If you run the scripts on a machine different from where they were generated, verify the parameters, including sys and system password.

Scenario 2

Generate the scripts using installer in system A and create the Data Mart Schema on another system using the generated scripts.

If you generate the scripts on System A and run them on System B, then you need to replace the scripts in the same location on System B, because the .sql files contain an absolute path. Or, you can change the directory path in the .sql files to any valid directory.

Example :

Generate the scripts on System A in directory F:\PLM_DataMart. Copy the scripts to System B to the location F:\PLM_DataMart. If F: drive does not exist in System B, copy the scripts to any valid directory (example : D:\PLM_DataMart) on System B and change the directory path in the following .sql files:

- SingleSchemaCreation.sql (for Single Schema Option)

- UsersCreation.sql(for Default Schema Option)
- TablespaceCreation.sql(optional)
- Odm.sql

Note Follow the steps outlined in the Scenario 1 to manually install the Data Mart schema.The generated scripts can be run on all operating systems.

Setting Database Privileges

The following table illustrates the privileges that a database administrator can grant on a single schema installation:

Schema	Database Privilege	Purpose
ODM	GRANT CONNECT,RESOURCE to ODM;	Enable connection to the schema
	GRANT CREATE DATABASE LINK TO ODM	Create DB link for every full ETL run
	GRANT DROP PUBLIC DATABASE LINK TO ODM	Drop DB link
	GRANT CREATE SYNONYM TO ODM	Create synonym for Source table in Target Schema
	GRANT CREATE PUBLIC SYNONYM TO ODM	Create public synonym for Source table in Target Schema
	GRANT ANALYZE ANY TO ODM	Analyze the i\$ table during the CDC ETL run
	GRANT DROP PUBLIC SYNONYM TO ODM	Drop Synonym
	GRANT CREATE TABLE TO ODM	Create Table

The following table illustrates the important database privileges required for multiple schema installation:

Schema	Database Privilege	Purpose
ODIWORK	GRANT CONNECT, RESOURCE TO ODIWORK	
	GRANT ANALYZE ANY TO ODIWORK WITH ADMIN OPTION	ODI tool analyzes temp tables during CDC ETL run
ODM	GRANT CONNECT, RESOURCE TO ODM	
	GRANT DROP PUBLIC DATABASE LINK TO ODM	Drop DB Link for every Full ETL run
	GRANT CREATE ANY INDEX TO ODM	Create an index in WorkRep Schema for i\$ tables from ODM Schema

	GRANT INSERT ANY TABLE TO ODM	Insert tables such as i\$,e\$, and c\$ in Work Repository Schema from ODM schema
	GRANT ANALYZE ANY TO ODM	ODI Tool analyses the i\$ table during CDC ETL run
	GRANT DROP ANY SYNONYM TO ODM	Drop a synonym in WORKREP schema from ODM schema
	GRANT CREATE DATABASE LINK TO ODM	Create a DB Link
	GRANT DELETE ANY TABLE TO ODM	Delete the deleted records from i\$ in WORKREP schema from ODM schema. This is used in CDC ETL run
	GRANT UPDATE ANY TABLE TO ODM	Update the updated records from i\$ in WORKREP schema from ODM schema. This is used in CDC ETL run
	GRANT DROP ANY TABLE TO ODM	Drop i\$ table in WORKREP schema from ODM Schema
	GRANT CREATE ANY TABLE TO ODM	Create a table like i\$,e\$,c\$ in WORKREP schema from ODM Schema
	GRANT CREATE ANY SYNONYM TO ODM	Create a synonym for Source Table in WORKREP schema from ODM schema
	GRANT SELECT ANY TABLE TO ODM	Select a table like i\$_listname in WORKREP and populate the data in ODM_LISTNAME in ODM schema .The select query is executed from ODM schema.
	GRANT EXECUTE, DEBUG ON SYS.DBMS_PIPE TO ODM	This privilege is used for PL/SQL Logger
	GRANT EXECUTE ON SYS.DBMS_SYSTEM TO ODM	This privilege is used for PL/SQL Logger
	GRANT CREATE PUBLIC SYNONYM TO ODM	This privilege is used for PL/SQL Logger
ODIMASTER	GRANT CONNECT, RESOURCE TO ODIMASTER	

Validating the Agile PLM Data Mart Installation

Upon completion of installation, you may verify if it was successful or not. Perform the following checks:

- Run the SQL @ Work Repository schema


```
select count(scen_no) from SNP_SCEN;
```
- Check the following log files, located in the **logs** folder under *Data Mart Home* directory, for any errors:
 - **DatamartETLInstall.log** file for information pertaining to installation of ETL components

- **DatamartDBInstall.log** file for information on DB creation
- **DatamartInstall.log** file

Install Directory Structure

After installation, the Agile PLM Data Mart install directory structure, with the outlined content, should contain the following subdirectories:

ant	Ant installation required for Agile PLM Data Mart installation
bin	Contains configuration tools and miscellaneous utilities
config	Contains all Agile PLM Data Mart configurations including ANT install configuration file
install	Installation components
jdk	Java run-time used by the ODI
lib	Contains all dependent libraries specially used by Agile PLM Data Mart
logs	Install logs
schema	Contains SQL scripts for creating instance
uninstaller	Contains executable file to un-install the software

Database Schemas

Check to ensure that the following database schemas are created successfully:

- Agile PLM Data Mart Database
- ODI Master Repository
- ODI Work Repository

Besides making sure the directory structure and schemas are properly created, the following validation checks should be done to make sure Agile PLM Data Mart is installed properly:

Verifying Agile PLM Data Mart Schema

On the Agile PLM Data Mart Database schema, make sure

1. The ODM_LISTDIM_CTL table is populated with seed data.
2. The PARAMETER table is created and populated with one row.
3. PL/SQL packages (4), procedures (17) and functions (7) are created. Login to ODI Designer to verify.
4. The TLOG table, VLOG view and TLOG synonym are created.

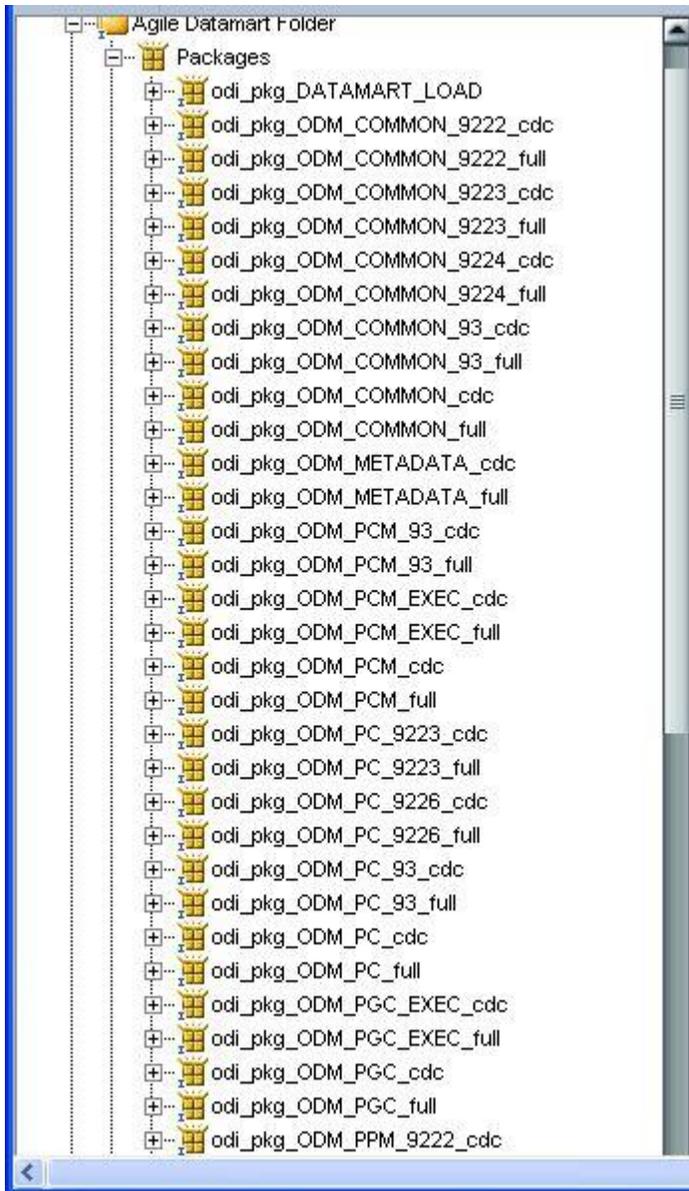
If any of the above verifications fail, look for any Oracle Database errors in the **DatamartInstall.log** file. **DatamartInstall.log** file is located in the *<Agile PLM Data Mart Home>* \logs folder. It includes information log details for the following installation steps:

- Creation of Users (Agile PLM Data Mart Schema User, ODI Master Repository user, ODI Work Repository User)
- PL/SQL logger (Analytics Log user, creation of tables TLOG)
- Agile PLM Data Mart database creation
- ODI Repository creation
- ODI Physical connection configuration, Logical connection configuration, importing Model folder, Project folder

Verifying ODI Repositories

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

1. **Projects** tab lists the AGILE PLM ANALYTICS project and the project has following packages under the **Agile Datamart Folder**:



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 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.

Before you Upgrade

Make sure one ETL load completes successfully in the current version of Agile PLM Data Mart.

Upgrading from Agile PLM Data Mart 3.2

Perform the following steps to upgrade Agile PLM Data Mart 3.2 or 3.2.0.0.1 to Agile PLM Data Mart 3.2.0.1:

1. Set the PLMDataMart_Home environment variable to point to the directory where the existing Agile PLM Data Mart 3.2 software is installed.

For example:

Windows: Set PLMDataMart_Home=D:/PLMDataMart

Linux/Solaris: export PLMDataMart_Home \home\oracle\PLMDataMart

2. Copy the DM3201_PatchInstaller.zip file into the existing PLM Data Mart install directory
3. Unzip the DM3201_PatchInstaller.zip file:
 - a. In the Command Prompt or terminal window, change to the directory where you saved the DM3201_PatchInstaller.zip file
 - b. Enter the following command to extract the contents of the file:

```
jar -xvf DM3201_PatchInstaller.zip
```

- c. After you extract the files, the following folders are displayed:

- bin
 - Patch
- \etl
- \schema

4. Using the Command Prompt or shell, login to the Data Mart schema and run the ODM_3201.sql script, located in the %PLMDataMart_Home%\Patch\schema directory on Windows or the \$PLMDataMart_Home/Patch schema directory on Linux and Solaris:

```
SQL> @ODM_3201.sql
```

5. Replace the following tokens in the Windows batch file, %PLMDataMart_Home%\bin\ImportODMComponents_patch.bat or the Linux/Solaris shell file \$PLMDataMart_Home/bin/ImportODMComponents_Patch.sh:
 - a. Replace <<AA_HOME> with the Data Mart home directory path.
 - b. Replace <ODI_WORK> with the ODI Work Repository name (default=WORKREP).

Note <ODI_WORK> is the logical name of the work repository, but is not the ODI Work schema name.

6. Run the ImportODMComponents_patch.bat (or .sh) file:

On Windows:

Note Make sure that %ODI_HOME%\bin is present in the operating system path.

```
cd %PLMDataMart_Home%\bin
ImportODMComponents_patch.bat > ..\logs\Patch.log
```

On Linux or Solaris:

```
$ cd $PLMDataMart_Home/bin
$ chmod +x *.sh
$ ./ImportODMComponents_patch.sh > ../logs/Patch.log
```

Note Make sure \$ODI_HOME is present in the operating system path.

7. Using the Command Prompt or shell, login to the Data Mart schema and run the Post_Installation.sql file, located in the %PLMDataMart_Home%\Patch\schem directory on Windows or the \$PLMDataMart_Home/Patch/schema on Linux and Solaris.
8. After running the Post_Installation.sql file, run the following statements to confirm successful execution:
 - sql> select * from dm_load_ctl;
 - sql> select * from odm_data_dictionary where tgt_table like '%_P4';
 - sql> select * from user_tables where table_name like '%_P4';
 - sql> select * from user_tables where table_name like '%_P4%_MAP';
 - sql> select * from odm_flexcols_metadata;

Note All of the statements should not return any rows.

Upgrading from Agile PLM Data Mart 3.1.2 or Earlier

The Agile PLM Data Mart 3.2.0.1 installer does not provide upgrade software or scripts to upgrade any customizations done on the Data Mart schema or ODI ETL components installed with Agile PLM Data Mart 3.1.2 or earlier versions.

If you are upgrading from a previous release of Agile PLM Data Mart, use the following steps as guidelines for upgrading your existing Agile PLM Data Mart installation:

Note These steps are applicable only if you customized any schema objects or ODI-related objects in a previous release.

1. Backup the Data Mart schema, including any views or downstream ETL developed against the Data Mart schema.

Note It is best practice to package all schema customizations into one or multiple upgrade SQL files that can be run directly after installing Agile PLM Data Mart.

2. Backup the ODI Master and Work repository schema objects and note all ODI ETL customizations developed against Agile PLM Data Mart.
3. Drop, recreate, and provide appropriate database schema user privileges for Data Mart, ODI Master and Work schemas.

Note Drop and recreate a single schema if the previous deployment used a single schema for all three schema objects.

4. Install Agile PLM Data Mart using the same schema configurations you used in the previous release.
5. Re-implement schema customizations including a refresh (or recreate) of views and downstream ETL developed on the Data Mart schema.
6. Import or re-implement any customization done on the ODI ETL.
7. Test the installation of Agile PLM Data Mart and all customizations.

Configuring Agile PLM Data Mart

This chapter includes the following:

- List Dimension Configurator 25
- Changing List Names in Dimension Table..... 27
- Validating Dimension Tables 27
- Enabling and Disabling ETL for PLM Modules 27
- Changing the Agile PLM Data Mart Passwords..... 28

List Dimension Configurator

The Agile PLM Data Mart Configurator is a tool bundled with the Agile PLM Data Mart software. The tool provides the flexibility for customers to change the dimension table names of any of the "out of the box" list in the Agile PLM Data Mart schema. These List Dimension tables are named according to their List Names. You may rename them in accordance with your own naming conventions.

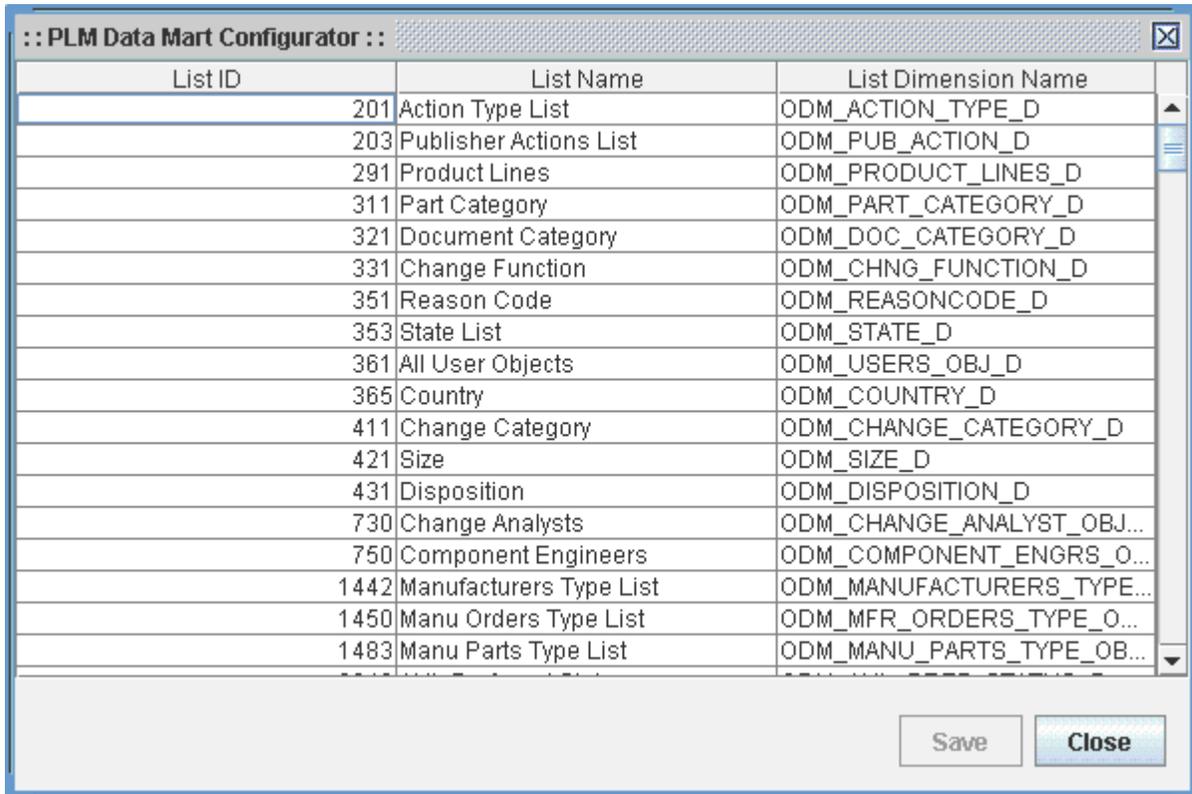
The tool also enables customers to provide new dimension table names for the customer configured lists in Agile PLM.

During ETL execution, the Agile PLM Data Mart application creates separate database tables in the Agile PLM Data Mart schema for each list Dimension. These tables serve as the master data source of list items. The Dimension Table Names for Lists are stored in table **ODM_LISTDIM_CTL** in the Agile PLM Data Mart schema.

To use the List Dimension Configurator, follow these steps:

1. Execute the **Configurator.bat** file, located in **bin** folder of the Data Mart Home directory.

The configurator console appears.



The screenshot shows a window titled "PLM Data Mart Configurator" with a table containing the following data:

List ID	List Name	List Dimension Name
201	Action Type List	ODM_ACTION_TYPE_D
203	Publisher Actions List	ODM_PUB_ACTION_D
291	Product Lines	ODM_PRODUCT_LINES_D
311	Part Category	ODM_PART_CATEGORY_D
321	Document Category	ODM_DOC_CATEGORY_D
331	Change Function	ODM_CHNG_FUNCTION_D
351	Reason Code	ODM_REASONCODE_D
353	State List	ODM_STATE_D
361	All User Objects	ODM_USERS_OBJ_D
365	Country	ODM_COUNTRY_D
411	Change Category	ODM_CHANGE_CATEGORY_D
421	Size	ODM_SIZE_D
431	Disposition	ODM_DISPOSITION_D
730	Change Analysts	ODM_CHANGE_ANALYST_OBJ...
750	Component Engineers	ODM_COMPONENT_ENGRS_O...
1442	Manufacturers Type List	ODM_MANUFACTURERS_TYPE...
1450	Manu Orders Type List	ODM_MFR_ORDERS_TYPE_O...
1483	Manu Parts Type List	ODM_MANU_PARTS_TYPE_OB...

At the bottom right of the window, there are two buttons: "Save" and "Close".

It displays all the List IDs, List Names and List Dimension Names, sorted by List ID. You can also sort the displayed data on List Name or List Dimension Name too.

2. Identify the desired List Name whose List Dimension Name you wish to modify or rename.
3. Click in the corresponding cell under List Dimension Name column.
4. If the cell is empty, enter the desired name. Otherwise, select the existing name, delete and then enter a new name.

Note The List IDs and the corresponding List Names cannot be modified.

5. Click the **Save** button. The new values are stored in the List Dimension Control table - **ODM_LISTDIM_CTL** in the Data Mart.

Note The Save button remains inactive until you edit any List Dimension Name. Undo, or Ctrl-Z, does not work.

6. Continue editing the List Dimension Names or click the **Cancel** button to exit.

Note Any updates made to List Dimension Names using Configurator will be processed during the next ETL run.

The ODM_LISTDIM_CTL table stores the latest List Dimension Names. The existing data is copied into its backup table, ODM_LISTDIM_CTL_BK, along with the timestamps of each modification before it is committed. Thus, it maintains the entire history of each and every earlier List Dimension Name, allowing you to switch back, if you want to.

Changing List Names in Dimension Table

When a new List is added in Agile PLM, the Data Mart ETL dynamically adds the appropriate dimension table name to the ODM_LISTDIM_CTL table and creates it during the next ETL run. You can change the name of this dimension table after an ETL run is completed.

To create a new List in Agile PLM and also change its dimension table in Target Data Mart:

1. Create a new List in Agile PLM Administrator.
2. Run Agile PLM Data Mart ETL.
3. Run **Configurator** and identify the row of the newly created List in Configurator.
4. *(Optional)* Delete the dimension table that was created during the previous ETL run. This step prevents schema from having orphan dimension tables.
5. Change the Dimension Table name for the newly created List.
6. Once changes are completed and saved, run Agile PLM Data Mart ETL.

Validating Dimension Tables

When you make any changes to Dimension table names using Configurator and you have not deleted previously created dimension tables from the Agile PLM Data Mart schema, anyone with Oracle Database Administration skills can take the following steps to identify and remove unused dimension tables from the Agile PLM Data Mart schema:

1. Run the following SQL query to identify all Dimension tables


```
SELECT LIST_DIM from ODM_LISTDIM_CTL_BKP
WHERE
LIST_DIM not in
(SELECT LIST_DIM from ODM_LISTDIM_CTL)
```
2. Make sure the table names returned by this query are not used by any downstream ETL application.
3. Drop every table identified as not used by Agile PLM Data Mart or the downstream ETL application from the Agile PLM Data Mart schema.

Enabling and Disabling ETL for PLM Modules

You can enable or disable ETL for the Agile PLM modules (PC, PPM, PQM, PCM, PG&C) to selectively extract their data from the PLM database server. The properties of the Enabled/Disabled modules are stored in the **DataMartConfig.Properties** file in the **Config** folder under the Agile PLM Data Mart Home Directory.

To Enable/Disable ETL for the modules:

1. Open the **DataMartConfig.Properties** file in a Text Editor.
2. Go to the section **###PLM Module###**. The PLM modules are listed here.
PQM=Y
PPM=Y
PC=Y
PCM=Y
PGC=Y
3. Change the property values to **Y** or **N**.
The properties value **Y** enables the module, and **N** disables.
4. Run the **LoadParameters** script located in the bin directory under the Agile PLM Data Mart Home directory.
5. Or, change and commit the values (Y or N) in the **Parameter** Table.

Note The module property cannot be empty. It should be either Y or N.

Changing the Agile PLM Data Mart Passwords

Password changes are stored directly in the database. However, the changed passwords should also be stored, in encrypted form, in the **DataMartConfig.properties** file. This is necessary for the following reasons:

- The **LoadParameters.bat** uses the access information (username, password) from the properties file to enable or disable the modules.
- The **Configurator.bat** file uses the access information (username, password) from the properties file to configure the new List Dimension Names.

Therefore, any changes in any passwords in the database should also be reflected in the properties file. The encryption of passwords is required for security reasons.

Changing a password entails a two-staged action:

1. Generate an encrypted string for a character password using **DMEncoder.bat** in *Windows*, or **DMEncoder.sh** in *Solaris/Linux/AIX*.
2. Replace the existing encrypted password string in the **DataMartConfig.properties** file with the new encrypted string.

Note The **LoadParameters.bat** file uses this properties file to change the PLM modules.

To change a password:

1. Go to the **bin** folder in the Agile PLM Data Mart Home directory
2. Run the batch file along with a desired password, as follows:

```
dmencoder <pwd>
```

where <pwd> is an alpha-numeric character string password.

An encrypted string appears.

3. Select and copy the encrypted string.
4. Open the **DataMartConfig.properties** file, located in the **config** folder in the Agile PLM Data Mart Home directory, in a text editor.
5. Delete the password that you wish to change.
6. Paste the new encrypted string and save and close the file.

Note To reflect the changed password(s) in ODI, refer to the *ODI Administration Guide*.

Executing ETL

This chapter includes the following:

- Setting up ODI Users 31
- Executing ETL from ODI 33
- Executing ETL from Command Prompt 34

You can perform Extraction, Transformation and Loading (ETL) of PLM data from the source database to the Agile PLM Data Mart Database by running the ETL tasks. These tasks are installed in the Agile PLM Data Mart Home directory and can be run inside ODI or from a command prompt.

Important Agile PLM Data Mart does not guarantee data consistency in the ODM schema if there are any data changes to Agile PLM while ETL is running. It is recommended that ETL runs are scheduled when Agile PLM systems are idle.

Before running any tasks, you are required to setup ODI users.

Setting up ODI Users

Agile PLM Data Mart is based on the Oracle Data Integrator. To run ETL tasks and operate on data, you are required to use ODI.

Note ODI User setup requires the information entered during the Data Mart 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).

Note To configure additional users or change 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 Agile PLM Data Mart DB Server
<port>	Port Number of Agile PLM Data Mart DB Server

<code><sid></code>	SID or the Instance name of Agile PLM Data Mart 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 the Data Mart 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>.

Executing ETL from ODI

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). In ODI Operator, go to **File Menu > User parameter > Set operator Display limit** and change the value.

The full or incremental load brings in all relevant data that were modified or added after the latest data load. If you want to run a FULL_LOAD, set **Full_Load** to **Yes** in PARAMETER table of the Agile PLM Data Mart schema.

To modify the parameter table:

1. Login to Agile PLM Data Mart database.


```
SQL> update PARAMETER set FULL_LOAD='Y';
SQL> commit;
```

To execute ETL from ODI, follow these steps:

1. Launch ODI Operator and select login, which is Repository Name
 - a. The username and password populate automatically. Click **OK**.
 - b. Go to the **Scenarios** tab.
2. You will see all the components listed in the Left Frame.
 - a. Right-click on **DATAMART_LOAD Version 001** component and select **Execute**. The *Execution* window displays.
 - b. Click **OK**. The *Sessions Started* dialog appears.
 - c. Click **OK**. The ETL process begins.

Note The Agile PLM Data Mart load does not physically delete any data, which are either soft or hard deleted in the PLM source database. The deleted items are flagged with the `delete_flag` set to 1.

Executing ETL from Command Prompt

To execute ETL from a command prompt:

1. In Windows, open a Command Prompt window.
2. Change the directory to the **bin** folder in your Data Mart Home Directory, eg, d:\PLMdatamart\bin
3. Enter the following on the command line:

```
startdm DATAMART_LOAD 001 PLMDM  
where
```

startdm is the batchfile that executes ETL tasks

DATAMART_LOAD is the ETL task

001 is the version number of ETL task

PLMDM is the ETL context

The ETL process starts.

To view the status of an ETL process:

1. Launch ODI Operator and select login, which is the Repository Name.
The username and password populate automatically.
2. Click **OK**.
3. Go to the **Sessions List** tab and select **All Executions** in the left frame, which shows all the running tasks.
4. Or, you can go to the **Hierarchical Sessions** tab and select **Status** or **All Executions** in the left frame to check overall top level progress.

Troubleshooting

This Appendix includes the following:

▪ Installation Issues	35
▪ ETL Runtime Issues	36
▪ PL/SQL Loggings.....	37
▪ General Issues.....	37
▪ Detecting Errors in ODI coming from Oracle	38

Installation Issues

The Installation Issues are as follows:

Installer 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 Agile PLM 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. Agile PLM Data Mart works with JDK 1.5.0.x version.
- Specified Work Repository Name is already used in existing ODI
- ODI already has projects that have conflicting Work and Master Repository IDs. Agile PLM Data Mart uses following repository IDs:

Work Repository ID = 102

Master Repository ID = 103

ODI Operator did not list any scenarios in the Scenario tab, including DATAMART_LOAD_scenario

Root causes are the same as those outlined for creation failure of ODI Work and Master Repositories.

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 PLM 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 PLM Data Mart installer.

Installer unable to find Oracle Database Server

If you are installing PLM 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 PLM Data Mart 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.

ETL Runtime Issues

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. Login 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 thru Operator to check for multiple errors.
6. Refer to section on **Detecting errors in ODI coming from Oracle.** (see at the end)
7. 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. Login 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 Loggings

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 appending, if the the mode is ERRORMODE. This table will be purged, if the mode is DEBUGMODE
VLOG (view)	This is a view created for 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 and the value for this is '0' in the DEBUG_MODE column in the PARAMETER Table in the Agile PLM Data Mart database schema. This captures the error message.
DEBUG MODE	This mode contains the value as '1' in the DEBUG_MODE column in the PARAMETER table in the Agile PLM Data Mart database schema. This captures step-by-step information inside a PL/SQL Procedure.

General Issues

Database Issues

Connectivity Errors

- Agile PLM Source database is available and accessible from the Agile PLM Data Mart machine
- Verify Agile PLM Source database schema details
- Target (Agile PLM Data Mart) database is available

- Verify Target database schema details

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 PLMDMSetup*.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.

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.

Detecting Errors in ODI coming from Oracle

Errors appear often in Oracle Data Integrator in the following way:

```
java.sql.SQLException: ORA-01017: invalid username/password; logon  
denied  
  
at ...  
at ...  
...
```

The `java.sql.SQLException` code simply indicates that a query was made to the database through the JDBC driver, which has returned an error. This error is frequently a database or driver error, and must be interpreted in this direction.

Only the part of text in bold must first be taken in account. It must be searched in the Oracle documentation. If its contains an error code specific to Oracle, like here (in red), the error can be immediately identified.

If such an error is identified in the execution log, it is necessary to analyze the SQL code sent to the database to find the source of the error. The code is displayed in the description tab of the task.

The most common errors with an Oracle server are detailed below, with their principal causes.

Connection Errors

1. `UnknownDriverException`
The JDBC driver is incorrect. Check the name of the driver.
2. `I/O Exception: Connection refused(DESCRIPTION=(TMP=)(VSNNUM=135290880)(ERR=12505)(ERROR_STACK=(ERROR=(CODE=12505)(EMFI=4))))`
The instance name in the JDBC URL is invalid. Check ODI Topology Manager to make sure JDBC URL is correct.
3. `I/O Exception: The Network Adapter could not establish the connection`
The IP address, machine name of Oracle listener port, is incorrect in the JDBC URL.
4. `ORA-01017: invalid username/password; logon denied`
The user and/or password specified in the data server definition is invalid. This error may also appear for certain Oracle Data Integrator commands, such as `SqlUnload`. This error may also appear if the source and target DB are different versions.
5. `Protocol violation`
This error indicates an incompatibility between the Oracle JDBC driver and the database you connect to. If it occurs at connection time, or at the first operation launched on the Oracle database, then install the version of the Oracle JDBC driver provided with your database installation.
6. `ORA-00600 internal error code`
Internal error of the Oracle database. May be caused by a driver incompatibility.
7. `ORA-12154 TNS: could not resolve service name`
TNS alias resolution. This problem may occur when using the OCI driver, or a KM using DBLinks. Check the configuration of the TNS aliases on the machines.
8. `ORA-02019 connection description for remote database not found`
You are using a KM with non-existing DBLinks. Check the KM options and pre-requisites.
9. `ORA-02085: database link string connects to string`
Set `GLOBAL_NAME` to `FALSE` in the database.

Errors in Interfaces

1. ORA-00900 invalid SQL statement

ORA-00923 FROM Keyword not found where expected.

The code generated by the interface, or typed in a procedure is invalid for Oracle. This is usually related to an input error in the mapping filter of join. The typical case is a missing quote or an unclosed bracket.

A frequent cause is also the call made to a non SQL syntax, like the call to an Oracle stored procedure using the syntax EXECUTE SCHEMA.PACKAGE.PROC(PARAM1, PARAM2).

The valid SQL call for a stored procedure is:

```
BEGIN
SCHEMA.PACKAGE.PROC (PARAM1, PARAM2) ;
END;
```

The syntax EXECUTE SCHEMA.PACKAGE.PROC (PARAM1, PARAM2) is specific to SQL*PLUS, and does not work on the Oracle JDBC Thin driver.

2. ORA-00904 invalid column name

Keying error in a mapping/join/filter. A string which is not a column name is interpreted as a column name, or a column name is misspelled.

This error may also appear when accessing an error table associated to a datastore with a recently modified structure. It is necessary to impact in the error table the modification, or drop the error tables and let Oracle Data Integrator recreate it in the next execution.

3. ORA-00903 invalid table name

The table used (source or target) does not exist in the Oracle schema. Check the mapping logical/physical schema for the context, and check that the table physically exists on the schema accessed for this context.

4. ORA-00972 Identifier is too Long

There is a limit in the object identifier in Oracle (usually 30 characters). When going over this limit, this error appears. A table created during the execution of the interface went over this limit, and caused this error (see the execution log for more details).

Check in the topology for the oracle technology, that the maximum lengths for the object names (tables and columns) correspond to your Oracle configuration.

5. ORA-01790 expression must have same datatype as corresponding expression

You are trying to connect two different values that can not be implicitly converted (in a mapping, a join). Use the explicit conversion functions on these values.

Best Practices

This Appendix includes the following:

▪ Purging Logs.....	41
▪ Archiving.....	41
▪ Changing the Database Password	41
▪ Improving ETL Performance.....	42
▪ Deployment.....	42

Purging Logs

Use Purge Log feature which is available in ODI Operator:

1. Login to **ODI Operator**.
2. Go to **File | Purge Logs** option

Note Users have option to Purge Logs based on Timeline (From/To Date), Context, Agent, Status, User Name and Session name.

In purging Agile PLM Data Mart logs, it is up to you on how you want to implement it. Refer to the ODI documentation for more details.

Archiving

It is recommended to take regular backups of the following:

- Data Mart Target DB schema
- VLOG (Parameter table)
- ODI logs (this can be done by using the "Export Logs" feature in ODI Operator).

To use Export Logs:

1. Login to ODI Operator
2. Select to "Export Logs" option from "File" drop down list

Changing the Database Password

To update the connection details for Source or Target database, update the `DataMartconfig.properties` file in <Agile PLM Data Mart Home directory>/config folder.

Note Before updating, encrypt the password using the **dmencoder** utility, located in the bin directory of the Agile PLM Data Mart install folder.

The following sections must be updated because of the password change:

- PLM Source DB Details : # PLM DATABASE DETAILS ###
- Target Data Mart DB Details: ##### DataMart Database Details#####
- Target Data Mart DB Schema Details: ###PLM Database TNSEntry Name####
- ODI Database Schema Details: ## Oracle Data Integrator Repository Details##ODI Work Repository Details: # ODI Work Repository Details

Improving ETL Performance

It is recommended to increase the Heap-Size to enhance ETL performance. This can be done in the **startdmparms.bat** file located in <ODI Home> / bin directory

The default setting in the **startdmparms.bat** file is

```
set ODI_INIT_HEAP=32m
set ODI_MAX_HEAP=256m --- this gets mapped into -Xmx%ODI_MAX_HEAP%
```

Note For Linux Machines set ODI_MAX_HEAP=1024m

Deployment

1. Schema Configuration

The source PLM Database schema and Target Database schema **MUST** be 30 characters or less. Also, it may not contain any special characters except underscore "_"

2. Install Location Restrictions

Agile PLM PLM Data Mart should not be installed in a directory which contains operating systems files (e.g. c:\)

Agile PLM Data Mart should not be installed in any directory which has space in it (e.g. d:\program files).

The ODI home directory should not exist in a directory which has space it. If it does, the Agile PLM Data Mart installation will not proceed.

3. Table space Data Sizing

Refer to the *Agile PLM Business Intelligence Capacity Planning Guide* for complete information.

Configuring Multiple Work Environments

This Appendix includes the following:

- Pre-installation Notes..... 43
- Creating Schema and Work Repositories..... 43
- Installing ETL Components..... 44

The Implementation of the Agile PLM BI application in Development, Test and Production environments require distinct Data Mart Installations on these environments.

The Installer creates both Master and Work Repositories, by default. This installation is used in the Development environment. The Production and Test environments use separate work repositories on top of the existing Master Repository.

Pre-installation Notes

The following pre-installation guidelines require you to ensure that:

- The Master Repository exists, if you want to configure work repositories in Test or Production environments.
- The existing Master Repository ID is specified in the DataMartConfig.properties file.
- All the required Database users such as Data Mart Schema user and Work Repository Schema user are created before you run the batch file, DMOExistingMasterRep.
- All the Logical connections related to Data Mart are present in the existing Master repository.
- You use the Installer.exe file to create Master repository, Work Repository and all of the Data Mart related ETL components.
- The Repository ID is within the range of 100-999. Do not use numbers such as 100,101,102,103.555,666 that are already used in the product development environment. For more information, refer to the ODI Documentation.
- The DataMartConfig.properties file is configured before you run the batch file, DMOExistingMasterRep.

The following are the steps to create a new work repository and Data Mart ETL components on an existing master repository:

1. Create schema and work repositories
2. Install ETL components

Creating Schema and Work Repositories

Generate scripts for the Work Repository and Data Mart schema using the 'Generate SQL Script' option of the Data Mart installer.

To create the Data Mart schema:

1. Navigate to the location where you have installed the scripts. Example: D:\schema
2. Open the file UsersCreation.sql. This file contains all of the database user creation statements.
3. Run the user creation statements in the database where the Data Mart and Work Repository schema must be created.
4. Run the ODM.sql file.

Installing ETL Components

The following are the steps that enable you to install the ETL Components:

1. Extract the Data Mart files.
2. Copy the JDK files.
3. Configure property files or batch files.
4. Execute Batch or Shell file.
5. Configure Physical Connection in the Topology Manager.
6. Export the Work Repository and Import into the QA or Production environment.

Extract the Data Mart files

Use WinZip to extract the DM 3.2.0.1.zip files to the Data Mart 3.2.0.1 folder.

Example: D:\DM3.2.0.1

The location shows the following sub folders:

- Ant
- Bin
- Config
- Install
- Lib
- Logs

Copy the JDK files

Copy the JDK folder provided as part of DM3.2.0.1.zip file to the DM3.2.0.1 folder.

Configure property files or batch files

The following are the property files that need configuration changes:

- DataMartConfig.properties
- Temp.properties
- DMOExistingMasterRep.bat or .sh

DataMartConfig.properties: Example Location: D:\DM3.2.0.1\config\DataMartConfig.properties

The following table lists all the properties in the DataMartConfig.properties file for Windows:

DataMartConfig.properties		
Property Name	Token	Windows Example
AA_HOME	<INSTALL_DIR>	D:\DM3.2.0.1
ODI_HOME	<ODI_HOME>	E:\OracleDI\oracledi
REPOSITORY_OPTION	DEFAULT Note If you want to create the Master Repository, Work Repository and import all Data Mart ETL components using manual scripts, do not modify this token.	QA
PLM_DATABASE	<SRC_SID_T>	AGILE
PLM_DB_HOST	<EXIST_SRDB_HOST_T>	agilelab1
PLM_DB_PORT	<EXIST_SRDB_PORT_T>	1521
PLM_DB_USER	<SRC_USER_T>	SAMP9226
TGT_DB_SID	<TGT_DBNAME_T>	DM32
TGT_DB_HOST	<TGT_HOST_NAME_T>	AGILELAB2
TGT_DB_PORT	<TGT_DB_PORT>	1521
ODM_USERNAME	<TGT_USER_T>	ODM2
MASTER_UN	<ODI_MASTER_UN>	ODIMASTER1
WORK_UN	<TGT_WORK_SCHEMA_NAME>	ODIWORK2
WORK_REP_NAME	<ODI_WORKREP>	WORKREP2
WORK_REP_ID	<WORK_REP_ID>	123

MASTER_REP_ID	<MASTER_REP_ID>	124
PQM	<PQM_T>	Y
PPM	<PPM_T>	Y
PC	<PC_T>	Y
PCM	<PCM_T>	Y
PGC	<PGC_T>	Y
NOTIFICATION_EMAILID	<TO_EMAIL_T>	DATAMART@ORACLE.COM
MAILSERVER	<EXCH_SERVER_T>	MAIL.ORACLE.COM
SOURCE_DB_URL	jdbc:oracle:thin:@ <EXIST_SRDB_HOST_T>: <EXIST_SRDB_PORT_T>: <SRC_SID_T>	jdbc:oracle:thin:@ agilelab1: 1521: agile
TGT_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32
MASTER_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32
WORK_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32

The following table lists all the properties in the DataMartConfig.properties file for Linux:

DataMartConfig.properties		
		Linux or Solaris
Property Name	Token	Example
AA_HOME	<INSTALL_DIR>	/home/oracle/DM3.2.0.1
ODI_HOME	<ODI_HOME>	/home/oracle/odi
REPOSITORY_OPTION	DEFAULT	PRODUCTION

PLM_DATABASE	<SRC_SID_T>	AGILE
PLM_DB_HOST	<EXIST_SRDB_HOST_T>	agilelab8
PLM_DB_PORT	<EXIST_SRDB_PORT_T>	1521
PLM_DB_USER	<SRC_USER_T>	SAMP93
TGT_DB_SID	<TGT_DBNAME_T>	DM32
TGT_DB_HOST	<TGT_HOST_NAME_T>	AGILELAB4
TGT_DB_PORT	<TGT_DB_PORT>	1521
ODM_USERNAME	<TGT_USER_T>	ODM3
MASTER_UN	<ODI_MASTER_UN>	ODIMASTER1
WORK_UN	<TGT_WORK_SCHEMA_NAME>	ODIWORK3
WORK_REP_NAME	<ODI_WORKREP>	WORKREP3
WORK_REP_ID	<WORK_REP_ID>	125
MASTER_REP_ID	<MASTER_REP_ID>	124
PQM	<PQM_T>	Y
PPM	<PPM_T>	Y
PC	<PC_T>	Y
PCM	<PCM_T>	Y
PGC	<PGC_T>	Y
NOTIFICATION_EMAILID	<TO_EMAIL_T>	DATAMART@ORACLE.COM
MAILSERVER	<EXCH_SERVER_T>	MAIL.ORACLE.COM
SOURCE_DB_URL	jdbc:oracle:thin:@ <EXIST_SRDB_HOST_T>: <EXIST_SRDB_PORT_T>: <SRC_SID_T>	jdbc:oracle:thin:@ agilelab1: 1521: agile
TGT_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32
MASTER_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32
WORK_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>:	jdbc:oracle:thin:@ agilelab1:

	<TGT_DB_PORT>: <TGT_DBNAME_T>	1521: DM32
--	----------------------------------	---------------

Temp.properties: Example Location D:\DM3.2.0.1\config\Temp.properties

The following table lists all the properties in the Temp.properties file:

Temp.properties		
Property Name	Token	Example
PLM_DB_PWD_HIDE	<SRC_USER_PWD_T>	AGILE
ODM_USER_PASSWORD_HIDE	<TGT_USER_PWD_T>	ODM
MASTER_PWD_HIDE	<ODI_MASTER_PWD>	ODIMASTER
WORK_PWD_HIDE	<ODIWK_DBPWD>	ODIWORK
TGT_SYS_USER_PWD_HIDE	<TGT_SYS_PWD>	ORACLE
TGT_SYSTEM_USER_PWD_HIDE	<TGT_SYSTEM_PWD>	MANAGER
WORK_REP_ODI_PWD	<WORK_REP_ODI_PWD>	WORKREP

DMOnExistingMasterRep.bat or .sh

The following table lists all the properties in the DMOnExistingMasterRep.bat or .sh file:

DMOnExistingMasterRep.bat or sh		
		Windows
Property Name	Token	Example
<INSTALL_DIR>	<INSTALL_DIR>	D:\DM3.2.0.1

DMOnExistingMasterRep.bat or sh		
		Linux or Solaris
Property Name	Token	Example
<INSTALL_DIR>	<INSTALL_DIR>	/home/oracle/DM3.2.0.1

Execute Batch or Shell file

To execute a batch or shell file:

1. In the command prompt or terminal window, navigate to the bin directory of the Data Mart 3.2.0.1 Installation folder. Example: D:\DataMart3.2.0.1\bin
2. Run the DMOnExistingMasterRep.bat or DMOnExistingMasterRep.sh file

Important Check the logs folder for error logs. Example: D:\DataMart3.2.0.1\logs

If you want to create the Master Repository, Work Repository and import all Data Mart ETL components using manual scripts, run the DataMartTLInstall.bat or DataMartETLInstall.sh file.

Before you run the batch file ensure that:

- All the required schemas exist.
- The config.properties file and DataMartTLInstall.bat or DataMartETLInstall.sh are configured as described in the Configure the config or batch files section. The tokens for DataMartTLInstall.bat or DataMartETLInstall.sh are same as DMOnExistingMasterRep.bat or .sh.

Configure Physical Connection in the Topology Manager

In the **Context** tab of the Topology Manager, configure the Physical Connection in the Schemas tab.

For the Test Context:

Context Name	SRC or Target	Logical Schema	Physical Schemas
PLMDM_QA	Source	SRC_CONN_LOGICAL	SRC_QA_CONN_PHYSICAL.<SRC_SCH_NAME>
	Target	TRG_ODMCONN_LOGICAL	TRG_ODM_QA_CONN_PHYSICAL.<TRG_SCH_NAME>

For the Production Context:

Context Name	SRC or Target	Logical Schema	Physical Schemas
PLMDM_PRODUCTION	Source	SRC_CONN_LOGICAL	SRC_PROD_CONN_PHYSICAL.<SRC_SCH_NAME>
	Target	TRG_ODMCONN_LOGICAL	TRG_ODM_PROD_CONN_PHYSICAL.<TRG_SCH_NAME>

Export the Work Repository and Import into the

QA or Production environment

Export the Work repository from the Development environment and Import it into the Test or Production environment based on your configuration.

To export the Work Repository:

1. Login to ODI Designer using Development Work Repository credentials.
2. Click **File > Export > Work Repository**.
3. Select the **Export to Zip file** option.
4. Choose a directory into which you want to export the repository.
5. Enter a name for the repository.
6. Click **OK**.

To import the Development Work Repository in Test or Production work repository:

1. Login to ODI Designer using Production or Test Work Repository credentials.
2. Click **File > Import > Work Repository**.
3. Select **Synonym Mode INSERT_UPDATE** from the drop down list.
4. Select the **Import from a zip file** option.
5. Choose the directory that has the zip file exported from the Development environment.
6. Click **OK**.

Note If you wish to change your PLM (source) schema details, refer to the Knowledge Base on Oracle Support for detailed instructions. You need to sign in to Oracle Support to view the content.

Manually Installing Agile PLM Data Mart ETL

This Appendix includes the following:

▪ Pre-Installation Notes	51
▪ Creating Schemas	51
▪ Installing ETL	52

This appendix describes the process to manually install Agile PLM Data Mart ETL.

Pre-Installation Notes

Before starting the installing, make sure the following guidelines apply:

- All of the required database users, like the Data Mart schema and Work Repository users, should be created before running the install script.
- The Repository ID should be within the range of 100-999.
- Do not use the following numbers because they are already in use:
100-103, 555, 666

Refer to the ODI documentation found on the [Oracle Technology Network \(OTN\) Web site](http://www.oracle.com/technology/documentation) <http://www.oracle.com/technology/documentation> for more information.

- Configure the properties file before running the install script.

Creating Schemas

During the Agile PLM Data Mart installation, select the **Generate SQL Scripts** option to generate the scripts for the work repository and Agile PLM Data Mart schema.

Note Ignore this step if the schemas are created during the Agile PLM Data Mart installation.

To create the schemas:

1. After the scripts are generated in the installation location, open the **UsersCreation.sql** script in the schema directory.
2. Run the UsersCreation.sql script on the database where the Agile PLM Data Mart, Master Repository, and Work Repository schemas are to be created.
3. Run the **ODM.sql** script.

Installing ETL

To install the ETL, perform the following steps:

1. Unzip the DM3.2.0.1.zip files to the DM3201 folder.
2. In the DM3.2.0.1/JRE folder, unzip the jre.zip file.
3. Copy the operating system specific JDK folder to the DM3.2.0.1 folder. If the JDK folder is not found, copy the JDK folder from your machine to the DM3.2.0.1 folder.

4. Rename the JDK folder, as follows:

Linux and Solaris: Rename the jdk_linux_solaris folder to jdk.

AIX: Rename the jdk_aix folder to jdk.

Windows: Rename the jdk_windows folder to jdk.

Note Be sure to execute permission to all folders and files on UNIX operating systems.

5. Configure the following properties files, located in the config directory:

- a. DataMartConfig.properties

DataMartConfig.properties		
		Windows
Property Name	Token	Example
AA_HOME	<INSTALL_DIR>	D:\\DM3.2.0.1
ODI_HOME	<ODI_HOME>	E:\\OracleDI\\oracledi
REPOSITORY_OPTION	DEFAULT	DEFAULT
PLM_DATABASE	<SRC_SID_T>	AGILE
PLM_DB_HOST	<EXIST_SRDB_HOST_T>	agilelab1
PLM_DB_PORT	<EXIST_SRDB_PORT_T>	1521
PLM_DB_USER	<SRC_USER_T>	SAMP9226
TGT_DB_SID	<TGT_DBNAME_T>	DM32
TGT_DB_HOST	<TGT_HOST_NAME_T>	AGILELAB2
TGT_DB_PORT	<TGT_DB_PORT>	1521
ODM_USERNAME	<TGT_USER_T>	ODM2
MASTER_UN	<ODI_MASTER_UN>	ODIMASTER1
WORK_UN	<TGT_WORK_SCHEMA_NAME>	ODIWORK2
WORK_REP_NAME	<ODI_WORKREP>	WORKREP2

WORK_REP_ID	<WORK_REP_ID>	123
MASTER_REP_ID	<MASTER_REP_ID>	124
PQM	<PQM_T>	Y
PPM	<PPM_T>	Y
PC	<PC_T>	Y
PCM	<PCM_T>	Y
PGC	<PGC_T>	Y
NOTIFICATION_EMAILID	<TO_EMAIL_T>	DATAMART@ORACLE.COM
MAILSERVER	<EXCH_SERVER_T>	MAIL.ORACLE.COM
SOURCE_DB_URL	jdbc:oracle:thin:@ <EXIST_SRDB_HOST_T>: <EXIST_SRDB_PORT_T>: <SRC_SID_T>	jdbc:oracle:thin:@ agilelab1: 1521: agile
TGT_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32
MASTER_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32
WORK_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32

The following table lists all the properties in the DataMartConfig.properties file for UNIX:

DataMartConfig.properties		
		UNIX
Property Name	Token	Example
AA_HOME	<INSTALL_DIR>	/home/oracle/DM3.2.0.1
ODI_HOME	<ODI_HOME>	/home/oracle/odi

REPOSITORY_OPTION	DEFAULT	DEFAULT
PLM_DATABASE	<SRC_SID_T>	AGILE
PLM_DB_HOST	<EXIST_SRDB_HOST_T>	agilelab8
PLM_DB_PORT	<EXIST_SRDB_PORT_T>	1521
PLM_DB_USER	<SRC_USER_T>	SAMP93
TGT_DB_SID	<TGT_DBNAME_T>	DM32
TGT_DB_HOST	<TGT_HOST_NAME_T>	AGILELAB4
TGT_DB_PORT	<TGT_DB_PORT>	1521
ODM_USERNAME	<TGT_USER_T>	ODM3
MASTER_UN	<ODI_MASTER_UN>	ODIMASTER1
WORK_UN	<TGT_WORK_SCHEMA_NAME>	ODIWORK3
WORK_REP_NAME	<ODI_WORKREP>	WORKREP3
WORK_REP_ID	<WORK_REP_ID>	125
MASTER_REP_ID	<MASTER_REP_ID>	124
PQM	<PQM_T>	Y
PPM	<PPM_T>	Y
PC	<PC_T>	Y
NOTIFICATION_EMAILID	<TO_EMAIL_T>	DATAMART@ORACLE.COM
MAILSERVER	<EXCH_SERVER_T>	MAIL.ORACLE.COM
SOURCE_DB_URL	jdbc:oracle:thin:@ <EXIST_SRDB_HOST_T>: <EXIST_SRDB_PORT_T>: <SRC_SID_T>	jdbc:oracle:thin:@ agilelab1: 1521: agile
TGT_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: Dm32
MASTER_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>: <TGT_DBNAME_T>	jdbc:oracle:thin:@ agilelab1: 1521: DM32
WORK_DB_URL	jdbc:oracle:thin:@ <TGT_HOST_NAME_T>: <TGT_DB_PORT>:	jdbc:oracle:thin:@ agilelab1: 1521:

	<TGT_DBNAME_T>	DM32
--	----------------	------

b. Temp.properties:

Temp.properties		
Property Name	Token	Example
PLM_DB_PWD_HIDE	<SRC_USER_PWD_T>	AGILE
ODM_USER_PASSWORD_HIDE	<TGT_USER_PWD_T>	ODM
MASTER_PWD_HIDE	<ODI_MASTER_PWD>	ODIMASTER
WORK_PWD_HIDE	<ODIWK_DBPWD>	ODIWORK
TGT_SYS_USER_PWD_HIDE	<TGT_SYS_PWD>	ORACLE
TGT_SYSTEM_USER_PWD_HIDE	<TGT_SYSTEM_PWD>	MANAGER
WORK_REP_ODI_PWD	<WORK_REP_ODI_PWD>	WORKREP

6. Configure the <INSTALL_DIR> property in the DataMartETLInstall script file, located in the bin directory.
7. Run the DataMartETLInstall script.

Note If the Java heap size needs to change, modify the ODI_MAX_HEAP parameter in the startdparams script file, located in the <ODI_HOME>\bin directory.

8. Check the logs directory for error logs.

