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Oracle Product Lifecycle Analytics

Readme

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Preface

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

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.

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Overview of Oracle PLA 3.3

This chapter includes the following:

- What's New in Oracle PLA 3.3 2

Welcome to Oracle Product Lifecycle Analytics (Oracle PLA) 3.3. This release of the product enables **Agile PLM for Process - Item and Project Portfolio Analytics** use cases.

Item and Project Portfolio Analysis enables companies to closely manage their NPD Product pipeline and phase gate processes, proactively identify risks, prioritize projects, and improve the predictability of product success.

Oracle PLA 3.3 is available in English language only, but the application is enabled for translations to other languages. Oracle PLA 3.3 is a full installer.

Important You need to execute a Full Load after any Agile PLM configuration changes.

What's New in Oracle PLA 3.3

The Oracle PLA 3.3 release introduces the following new features and updates:

- **New data source:** Agile PLM for Process has been added as a data source in this release in addition to Agile PLM, so that Oracle PLA can be deployed with either Agile PLM or Agile PLM for Process (but not both at the same time). The Web Catalog and the *.rpd* are pruned to provide the relevant content upon choosing the data source at the time of build generation.

- **Ability to select Agile PLM or PLM for Process during installations** that install relevant parts of *.rpd* file, Subject Areas and Web Catalogs.

- **Certified data sources** include Agile PLM for Process 6.0.0.3, Agile PLM 9.2.2.4, 9.3, 9.3.0.1, 9.3.0.2 and 9.3.1.

- **New functional dashboards** for Agile PLM and Agile PLM for Process:
 - Agile PLM:**
 - KPI
 - Product Management
 - Modifications to Product Portfolio Dashboard to showcase new analysis areas around Team and Deliverables.
 - Agile PLM for Process:**
 - Project Portfolio Dashboard
 - Specification Dashboard

- **New pre-built Agile PLM for Process subject areas** to support Project Portfolio & Specification analysis comprising of pre-defined dimensions and measures.

- **New example** added to show how Role-based security can be implemented and further secured by providing access to relevant Product lines to the user. The example has been provided for Project Summary subject area and uses Product Line as a dimension that can be secured so that a Project Manager can view only Projects pertaining to his Product Line. It is expected that this example will provide guidance for an actual customization based on specific customer needs. (Custom upgrade would be required.)

- **Project and Product dimensions** added across all Agile PLM subject areas.
- **Ability to map Text fields** in the Oracle PLA Configurator.
- **Part and Document defined measures** in Agile PLM Quality Subject areas.
- **Enhanced data extraction capabilities:** Changed data can now be extracted from Agile PLM 9 without any downtime for the source system. Data can also be extracted from a Read-Only Agile PLM 9 database instance.
- **Performance improvements** across Full as well as Incremental ETL loads from Agile PLM 9.
- **Additional external data imports are supported.** New Excel templates are provided for demand, revenue, and inventory data import.

Important You need to execute a Full Load after any Agile PLM configuration changes.

Supported Upgrade Paths

You can upgrade to Oracle PLA 3.3 from the following earlier releases:

- PLM Business Intelligence 3.2
- PLM Business Intelligence 3.2.0.1

If you are running a version of Agile PLM Business Intelligence prior to version 3.2, you must first upgrade to version 3.2 before installing Oracle Product Lifecycle Analytics 3.3.

Note Agile PLM Data Mart is no longer shipped as a standalone product.

Notes on Implementing Oracle PLA with PLM for Process

Cycle Time Calculations

The cycle times for individual objects (such as Projects, Activity, and Specifications) are provided as integers within Oracle PLA. In these calculations, the decimals are not rounded off, they are truncated as described below. It is important to understand the following:

- The calculations are performed taking into account the time stamp in addition to the date: For example:

Duration = End Date: 09-14-10 12:00:00 - Start Date: 09-10-10 08:01:35 = 3.6655

- Decimals are truncated at this point:

Duration = 3.6655 = 3

NPD Project Schedule Activity Type

It is required that a customer implementing Oracle PLA with PLM for Process implement the new functionality associated with NPD's Project Schedule Activity Type released as part of PLM for Process 6.0.0.3.

In addition, note that if a project does not have at least one instance of a project schedule approved and in a terminal step, then scheduled dates will not be available in Oracle PLA. Only actual and template dates/durations are available in the absence of a project schedule.

Important You need to execute a Full Load after any Agile PLM configuration changes.

Resolved Issues

The following bugs were resolved in patch releases delivered after Agile PLM BI 3.2.0.1, and the fixes are merged with this release:

12533692

NOT GETTING DATA FOR ECR PRODUCT LINES

- **Issue:** The data did not populate into the pc_productline_d table because all the class product line attributes were configured to a different list rendering the att_id column null in the bi_data_dictionary.
- **Resolution:** The att_id column now gets updated in the bi_data_dictionary, and the dimension tables get populated using max used list logic.

12533587

PHASES SHOWING UP AS PROJECT IN PROJECT SUMMARY SUBJECT AREA RESULT IN WRONG METRIC CALCULATION

- **Issue:** In the PPM_ACTIVITY_F table for phase under phases, wrong values were getting populated into the Domain_value column. In the MDS_PPM_ACT_INFO_TEMP_PRO procedure need to revise domain_value to 3 for phase under phases in two update statements.
- **Resolution:** The PPM_ACTIVITY_F table now shows phases (that are under phases) as tasks.

12534405

PPM_ACTIVITY_BASELINE_F_FULL SUB-TASK FAILS WITH VALUE LARGER THAN SPECIFIED PRECISION

- **Issue:** For Agile PLM 9.3.1 users and onwards, in the ppm_baseline_f table the data precision for three columns [PRJ_SCH_DUR, PRJ_EST_DUR, PRJ_EST_VAR_DAYS] is less if compared to the source table.
- **Resolution:** Duration is now measured in days not milliseconds.

10132200

BI AVG DAYS CALCULATING FROM LAST FULL ETL AND NOT FROM LAST INCREMENTAL ETL

- **Issue:** When you run a report with measures Avg Days Overdue - In Process and Status Cycle Time In Process, the calculation is being done from the last full ETL run and not from the last incremental run.
- **Resolution:** The formula for these calculations has been corrected to use the last successful CDC Load ETL run date instead of the last successful Full Load ETL run date.

10224920

"ORIGINATE TO COMPLETE W/O HOLD" IS POPULATING NULL VALUE

- **Issue:** "Originate to Complete w/o Hold" populates NULL value for records which have not gone through HOLD status at least once.
- **Resolution:** Changed the query and added an outer join to all the derivations in the BI_DATA_DICTIONARY related to workflow subject area to fix this issue.

10260991

AFFECTED ITEMS DATA IS NOT LOADED INTO MDS

- **Issue:** The Affected Items data is not loaded in MDS although the data exists in ADM.
- **Resolution:** Modified the join condition to join with the Fact table instead of the Affected Item table.

11775931

MDS "CDC" FAILING DUE TO DUPLICATE RECORDS IN TABLE ODIWORK.I\$_USER_USER_GROUP_B

Issue: When you execute the CDC load, the following error results:
`java.sql.SQLException: ORA-01452: cannot CREATE UNIQUE INDEX;
duplicate keys found`

- **Resolution:** USER_USER_GROUP_B table data population logic changed to handle duplicate records.

11810455

PROJECT P3 ATTRIBUTE VALUES ARE NOT COMING THROUGH TO BI REPORT AFTER MAPPING AND MDS ETL RUN

- **Issue:** Data is not getting populated in the PPM_ACTIVITY_D table.
- **Resolution:** Added a filter condition Lang_id=0 while selecting the data from the DM dimension table, so that data is populated in the PPM_ACTIVITY_D table.

11838106

MDS LOAD FAILS WITH ORA-01400: CANNOT INSERT NULL ERROR

- **Issue:** The PLMDM load executes successfully but the MDS run fails with a "cannot insert NULL" error.
- **Resolution:** Added NVL() for all PPM bridge tables object_wid,entry_wid columns to handle not null constraint issue.

11828085

PC REPORTS CAUSING ORACLE TEMP TABLE TO SPIKE QUITE SIGNIFICANTLY

- **Issue:** When you run OOTB PC reports, the TEMP table space increases dramatically due to the large volumes of PC data that the report queries.
- **Resolution:** Removed Time utility from the reports which were causing the problem.

Note Oracle provides pre-configured dashboards and reports for reference purposes. These reports are configured to include a set of dimensional filters and/or metrics that are not necessarily optimized for performance or memory usage, especially since the product cannot make any assumptions about dimensional or fact data sizes. It is important that the customer uses these out-of-box packaged reports as a reference to develop relevant dashboards based on business requirements or usage.

BI reports that are executed to process and sort against large volumes of data in the Oracle database will require sufficient memory allocated for sorting. If Oracle cannot fit all data being sorted into memory, it will move data into the TEMP tablespace to free up memory for further sorting. The Oracle DBA needs to monitor and optimize SGA and PGA memory allocations as well as tablespace size allocations in the Oracle database, based on data sizes and usage loads.

10043386

AFTER SUCCESSFUL ETL LOAD TLOG SHOWS 'ORA-00904: "C"."COL_12": INVALID IDENTIFIER' ERROR

- **Issue:** If the number of flex fields configured in PLM are >1000, the tlog shows the error 'ORA-00904: "C"."COL_12": INVALID IDENTIFIER' after a successful ETL run.
- **Resolution:** Provided a post installation script to execute after the patch installation and before the execution of the ETL. Modified the procedure plsql_odm_metaflex_pro to incorporate the expected results.

10174243

ETL IS TRANSFERRING DISABLED FLEX ATTRIBUTES

- **Issue:** Cursor get_attids was fetching disabled attributes along with the enabled attributes.
- **Resolution:** Added a filter for the cursor to ensure the primary sql fetches only enabled attributes.

Note Disabled flex attributes will not be transferred to Staging schema after applying this patch, but subsequent ETL runs will not remove flex attributes that were already transferred to Staging in prior ETL runs.

Known Issues in 3.3

The following issues are known to exist in Oracle PLA 3.3 for Agile PLM. These were deferred from this release, but may be fixed in a future release.

Important You need to execute a Full Load after any Agile PLM configuration changes.

FULL LOAD ETL FAILS WHEN THE SOURCE IS UPGRADED TO AGILE PLM 9.3.1

- **Issue:** The Full Load ETL fails when the source is upgraded to Agile PLM 9.3.1 from older versions. This issue is an A9 related upgrade script and the bug logged against it.
- **Workaround:** Execute the following SQL statements in MDS Schema.
 - ALTER TABLE PPM_BASELINE_F MODIFY PRJ_SCH_DUR NUMBER;
 - ALTER TABLE PPM_BASELINE_F MODIFY PRJ_EST_DUR NUMBER;
 - ALTER TABLE PPM_BASELINE_F MODIFY PRJ_EST_VAR_DAYS NUMBER;

DISABLING THE LANGUAGE TABLE WHEN A DIMENSION TABLE IS CONFIGURED TO A DYNAMIC LIST

- **Issue:** Dimension that is pre-mapped out-of-the-box to an Agile PLM attribute does not show any data if the Agile PLM attribute's list is reconfigured to a dynamic list of object data type (For example, Item, User and so on) from the out-of-the-box configured standard list (For example, Category Type) in Agile PLM Administrator. This is because the dimension table in the BI Model (PLMA.RPD) does a join to lookup localized data from the LANG table, in addition, the Agile PLM does not maintain any localized data for a dynamic object based list, and thus it is not loaded into the LANG table. As result of this, some reports (such as reports using the Part Category dimension) do not show results. In order to address the issue, the LANG table lookup needs to be disabled for these dimensions in the Oracle BI Model (PLMA.RPD). You must disable the language data [LANG table] lookup in the BI Model in order for Dimension to show proper data.
- **Workaround:** To disable the language data [LANG table] lookup in the BI Model in order for Dimension to show proper data, follow these steps:

1. Log in to the OBIEE Administration tool.
2. Identify the dimension that is configured to a dynamic list.
3. In the RPD navigate to the BMM layer, and open the dimension's **Logical Table Source**.
4. From the dimension's **Logical Table Source** remove the `_LANG` table. Select the **Column Mapping** tab and remap the Name column to the Name column in the dimension table.
5. Select the **Content** tab and remove the "WHERE" clause.

LIMITATIONS WITH AGILE FLEX ATTRIBUTES

- **Issue:** Agile PLM Data Mart supports up to 950 Agile PLM flex fields (enabled) in an Agile PLM class or its subclasses. The metadata and the mapping for 950 fields are available in the metadata table (ODM_FLEXCOLS_METADATA) and the data for these fields are available in the class-specific P4 table. The metadata and data beyond 950 fields are not available in the above-referred tables. In case a Class or its Subclass has more than 950 fields, Data Mart brings in the fields sorted by Class and Subclass Identifier.
- **Workaround:** Set up Page 3 fields instead of flex fields to stay within 950 flex fields per class and its subclasses.

DATA POPULATES ONLY IN PPM_ACTIVITY_FS FOR USER DEFINED MAPPING USING SCHEMA ENHANCER

- **Issue:** If user-defined fields generated with Schema Enhancer are used for mapping, then the data is populated only into the PPM_ACTIVITY_FS table, after the ETL run is complete.
- **Workaround:** Customization is required to ensure that data is populated in the logical tables.

Note For Agile Product Portfolio Management module, you cannot map a cascade list to any of the target list attributes.

SECURITY VULNERABILITY ISSUES

- **Issue 1:** The Agile database schema password is encrypted using a Java program that uses Symmetric Block Cipher whose implementation is based on Blowfish encryption algorithm, and the encrypted password is stored in a configuration file in the installed directory. The Java program randomly picks a 32-byte key from a pre-defined set of keys. This approach of key management and symmetric algorithm choice of library is not the most rigid encryption used and potentially poses security issues if any user is able to access the Java class files and the encrypted password stored on the machines on which Oracle Product Lifecycle Analytics software is installed. In general, this software is installed by IT professionals on machines within firewalls and these files are not generally accessible by other users.
- **Workaround:** Make sure the machines and the directory on which the software is installed is not accessible by other users.
- **Issue 2:** PL/SQL source code delivered with this product is not obfuscated and poses security vulnerability if database schema is accessed by an imposter.
- **Workaround:** Make sure schema user names and passwords are not exposed to users and the software installation location is not accessible by other users.

UNABLE TO CONFIGURE PR AFFECTED ITEM MULTILIST01 TO MULTILIST03

- **Issue:** Affected Item Multilist01 to Multilist03 attributes for PR, NCR, CAPA and Audit classes cannot be configured in MDS Configurator.
- **Resolution:** A new file *MDS_DD_93UPDATE_33.sql* has been added to update the proper attribute ID for MULTILIST01-03 in ODM_DATA_DICTIONARY.

Tables affected are:

ODM_PSR_PR_ITEM

ODM_PSR_NCR_ITEM

ODM_QCR_CAPA_ITEM

ODM_QCR_AUDITS_ITEM

The *MDS_DD_93UPDATE_33.sql* script should be manually executed on the ODM schema, and followed by an ETL run. The script is available at the following location:

<install_dir>/install/schema/mds.

Note This script should be executed only for Agile PLM version 9.3 or higher.

The following issue is known to exist in Oracle PLA 3.3 for Agile PLM for Process:

GATE DAYS TO RED & DAYS TO AMBER SHOWING INCORRECT VALUES

- **Issue:** When a Project is created from an amalgamation of templates, the Days to Red of a Gate cannot be traced back to a template.
- **Workaround:** Go to the Project and look at the signature tab to derive Days to Red or Amber that the 'private template' of this project holds.

Related Documentation in 3.3

Oracle Product Lifecycle Analytics documentation is available 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>.

- Oracle Product Lifecycle Analytics Setup Guide
- Oracle Product Lifecycle Analytics User Guide
- Oracle Product Lifecycle Analytics Data Reference Manual
- Oracle Product Lifecycle Analytics MDS Configurator and Data Mapping Guide

You can also find product documentation for Oracle Data Integrator and Agile Product Lifecycle Management on the [Oracle Documentation](http://www.oracle.com/technetwork/indexes/documentation/index.html) <http://www.oracle.com/technetwork/indexes/documentation/index.html> page.

