Oracle Argus Mart

Installation and Administration Guide

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Oracle Argus Mart Installation and Administration Guide, Release 8.2.2

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Contents

Preface

This preface contains the following sections:

- Intended Audience
- Documentation accessibility
- Related resources
- Access to Oracle Support
  To receive support assistance, determine whether your organization is a cloud or on-premises customer. If you're not sure, use Support Cloud.

Intended Audience

Oracle Argus Mart is a data source software product that can be used for analysis and reporting in medical product safety and pharmacovigilance. The primary data for Oracle Argus Mart are the adverse event cases managed by Oracle Argus Safety.

Oracle Argus Mart product consists of:

- A pre-defined Oracle Argus Mart data model containing Signal and Reporting tables.
- Pre-built Oracle Data Integrator based interfaces that are linked to Oracle PL/SQL based packages.

Oracle Argus Safety serves as the primary source of data for Oracle Argus Mart. Oracle Data Integrator extracts the data from Oracle Argus Safety database, transforms, and loads the data into Oracle Argus Mart. When the Oracle Data Integrator tool loads the data into Oracle Argus Mart, it is available for Oracle Argus Mart users for querying, and reporting activities.

Documentation accessibility

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

Related resources

For information about Oracle Argus patches, see My Oracle Support.

All documentation and other supporting materials are available on the Oracle Help Center.

Access to Oracle Support

To receive support assistance, determine whether your organization is a cloud or on-premises customer. If you're not sure, use Support Cloud.

Cloud customers receive support assistance through Support Cloud

Oracle customers that have purchased support have access to electronic support through Support Cloud.

Contact our Oracle Customer Support Services team by logging requests in one of the following locations:

- English interface of Oracle Health Sciences Customer Support Portal (https://hsgbu.custhelp.com/)
- Japanese interface of Oracle Health Sciences Customer Support Portal (https://hsgbu-jp.custhelp.com/)

You can also call our 24x7 help desk. For information, visit http://www.oracle.com/us/support/contact/health-sciences-cloud-support/index.html or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

On-premises customers receive support assistance through My Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

Part I
Installation

This part of the guide introduces you with the Oracle Argus Mart software product. In addition, it also gives you an outline of all the tasks that are required to install and configure Oracle Argus Mart, and explains the organization of these tasks in this guide. The Oracle Argus Mart is referred to as AM and Oracle Data Integrator as ODI in all the later sections of the guide.

For more information, see:

- Install the Oracle Argus Mart Application
- Create the Oracle Argus Mart Database Structure
- Create Multiple Enterprises in Multi-tenant Environment
- Configure Oracle Data Integrator Settings
- Configure the Oracle Argus Mart Application
- Upgrade Oracle Argus Mart
- Extract, Transform, and Load Data
- Work with Incremental ETL in Oracle Data Integrator Studio
- Work with Incremental ETL in Oracle Data Integrator Console
- Uninstall the Oracle Argus Mart Application

1

Install the Oracle Argus Mart Application

This chapter explains how to use the installation wizard to install Oracle Argus Mart, including Oracle Data Integrator Repository and the DBInstaller.

For more information, see:

- Before Installing the Oracle Argus Mart Application
- Install the Oracle Argus Mart Components

Before Installing the Oracle Argus Mart Application

- Verify that the Oracle Argus Mart database instance has been created and is running. In addition, verify that the database has been created using the character set of your Oracle Argus Safety database.
- You must install the required software components, as mentioned in the following table:

Table 1-1 Oracle Argus Mart Software Requirements

Specification	Oracle Data Integrator Server	Database	DBInstaller	Client
Operating System	As certified by the ODI	As certified by the ODI (Supports bothCDB-PDB/Non CDB)	Microsoft Windows Server 2012 Standard Microsoft Windows Server 2012 R2 Standard	Windows 2016 Standard Windows 10 (64-bit)
Oracle Database	NA	Oracle RAC Exadata 19c and 12c R1 (with 12.1.0.2 or 12.2.0.1) Oracle 19c and 12c (12.1.0.2 or 12.2.0.1) (Standard Edition 2 (SE2)/Enterprise Edition) **Note:** Oracle database Standard Edition 2 (SE2) is supported for single tenant deployment only.	NA	NA
Oracle Data Integrator (ODI)	12.2.1.3	NA	--	NA

> **Note:**
>
> Oracle Client Patch required for the DBInstaller:
>
> 1. Download the patch 21821214: WINDOWS DB BUNDLE PATCH 12.1.0.2 from the Oracle Support.
> 2. Install the patch, and apply the following workaround:
>   a. Set the **oracle_home** as your client home location.
>   For example:
>
>    ```
>    SET ORACLE_HOME=C:\app\client32\product\12.1.0\client_1
>    ```
>
>   i. On the client machine, go to `%oracle_home%\bin\`
>   ii. From `\p21821214_121020_WINNT\21821214\files\bin\`, copy the file `oranfsodm12.dll`, and paste it under `%oracle_home%\bin`
>   b. Run `sqlldr help=y` or `sqlldr.exe`.

- Make sure that you have installed the following software on the machine where Oracle Argus Mart is being installed:
  - Microsoft .NET 4.7.2 Framework
  - Oracle Client 19c, 12.1.0.2, or 12.2.0.1 (Administrator Installation type)
    Only one version of Oracle Client should be installed on the server. Oracle Argus Mart Installer will not work in case there are multiple versions of Oracle Client are installed on the same machine.

Install the Oracle Argus Mart Components

To run the installation wizard and install the Oracle Argus Mart components:

1. Log in to the Oracle Argus Mart Server as a user with administrator privileges.
2. Download the Oracle Argus Mart software from Oracle E-delivery and copy the software to the Argus Mart Server.
3. Click **setup.exe.**
   The Welcome screen of the installation wizard appears with the following options:
   a. **About Oracle Universal Installer**—Specifies information about the Oracle Universal Installer.
   b. **Installed Products**—Displays the list of installed products.
4. On the Welcome screen, click **Next**.
   The Specify Home Details screen appears.
5. In the **Name** field, enter the name of the new or existing Oracle Argus Mart installation directory.
6. In the **Path** field, enter the location of the directory specified in the previous step.
   - To install Oracle Argus Mart into the default folder, click **Next**.
   - To install Oracle Argus Mart into a different folder, click **Browse**, select another folder, and click **Next**.

The Oracle Home Location screen appears.

7. Click **Browse**, and navigate to the location of Oracle Home that identifies the `TNSNAMES.ORA` file. For example:
   `C:\app\product\12.2.1\client_1`
8. Click **Next**.
   The Database Details screen appears.
9. Enter the following parameters:
   - In the **AM Database Server** field, enter name or IP address.
   - In the **AM Database Instance** field, enter the database instance name.
   - In the **AM Database Port** field, enter the database listener port number.

   When the Installation process is complete, you may validate these database inputs by navigating to the `TNSNAMES.ORA` file, saved at the following path:

   `<ORACLE_HOME>\NETWORK\ADMIN`
10. Click **Next**.
    The Summary screen appears.
11. Click **Install** to start the installation.
    A message appears — Oracle Argus Mart is configuring your new software.

    When installation is complete, the End Of Installation screen appears.
12. To verify the successful installation of Argus Mart, click **Installed Products**.
    The Inventory screen appears.
13. Navigate to **Contents** > **Independent Products**.
    Oracle Argus Mart appears in the list of products.
14. Click **Close**.
15. Click **Exit**.
    A confirmation dialog box appears.
16. Click **Yes** to close the Installer wizard screen.

2

Create the Oracle Argus Mart Database Structure

The Oracle Argus Mart is now installed in silent-mode through Liquibase.

Liquibase is a refactoring tool that enables Oracle Argus Mart to be in synchronization with the closest major release, and subsequently upgrades the product to the required minor versions of the product

The Oracle Argus Mart Liquibase install enables you to create the Oracle Argus Mart schema structure. It creates a link between the safety database and the new Oracle Argus Mart database. The Extract, Transform, and Load (ETL) process uses this link to transfer data from source (Oracle Argus Safety) database to the Oracle Argus Mart database. When transferred, this data can be used for querying and reporting purposes.

For more information, see:

- Overview of the dbinstaller.properties file
- Install Oracle Argus Mart
- Create Database Links
- Create Oracle Argus Mart Read-only User

Overview of the dbinstaller.properties file

Open the `DBInstaller\dbinstaller.properties` file, and view or modify the following parameters to make sure that Liquibase runs properly.

Parameter	Description	Modify	Default or Sample Value
db_connect_string	Jdbc Url to connect to the Target Database	Yes	`url= <host>:<port>/ <service name>`
dba_User	Name of the Target Database DBA user	Yes	`dba_User=am_dba_user`
logLevel	Log level setting related to liquibase for smooth run. Possible values: • DEBUG • INFO	Yes	`logLevel=info`
appSchema_sm_mart	Oracle Argus Mart schema Owner name and password	No	`appSchema_mart_user =AM_MART_USER/pwd`
appSchema_sm_stage	Oracle Argus Mart Staging schema Owner	No	`appSchema_sm_stage= AM_STAGE_USER/pwd`

Parameter	Description	Modify	Default or Sample Value
appSchema_sm_app	Oracle Argus Mart Application schema Owner name and password	No	`appSchema_sm_app=AM_APP_USER/pwd`
appSchema_etl_user	Oracle Argus Mart Etl User and password	No	`appSchema_etl_user=AM_ETL_USER/pwd`
appSchema_rls_user	Oracle Argus Mart VPD schema Owner name and password	No	`appSchema_rls_user=AM_VPD_ADMIN/pwd`
appSchema_bi_user	Oracle Argus Mart BI schema Owner name and password	No	`appSchema_bi_user=AM_BI_USER/pwd`
#Mart Database Role am_vpd_admin_role	Admin role given to AM_ETL_USER	Yes	`am_vpd_admin_role=AM_VPD_ADMIN_ROLE`

Safety_db	Oracle Argus Safety Database TNS	Yes	`safety_db=SAF822DB`
			or
			`safety_db=SAF822DB.US.EXAMPLE.COM`

Safety_RO_User	Oracle Argus Mart read-only user name in Argus Safety	Yes	`Safety_RO_User=AS_MART_USER`
#Datafile directory location	Location of the default datafiles directory.	Yes	`default_datafile_destination=c:/app/oradata/AM822DB`
#Argus Mart > Stage User Datafiles	Location of Oracle Argus Mart stage user datafiles.	Yes	• `am_stage_data_01_datafile=AM_STAGE_DATA_01.DBF` • `am_stage_index_01_datafile=AM_STAGE_INDEX_01.DBF` • `am_stage_lob_01_datafile=AM_STAGE_LOB_01.DBF`
#Argus Mart > Mart User Datafiles	Location of Oracle Argus Mart > Mart user datafiles.	Yes	• `am_mart_data_01_datafile=AM_MART_DATA_01.DBF` • `am_mart_index_01_datafile=AM_MART_INDEX_01.DBF` • `am_mart_lob_01_datafile=AM_MART_LOB_01.DBF`

Parameter	Description	Modify	Default or Sample Value
#Argus Mart > App User Datafiles	Location of Oracle Argus Mart APP user datafiles	Yes	• `am_app_data_01_datafile=AM_APP_DATA_01.DBF` • `am_app_index_01_datafile=AM_APP_INDEX_01.DBF` • `am_app_lob_01_datafile=AM_APP_LOB_01.DBF`
Default and Temporary tablespaces	Defines default and temporary tablespace name	No	• `default_ts=USERS` • `temp_ts=TEMP`
Tablespace Encryption	Specifies the logic used for default encryption	Yes	`tablespace_encryption=<blank>` or `<text>, where` • blank—no encryption • text— like encryption using 'AES256' default storage (encrypt)
Tablespace Parameters	Specifies the details of the tablespace	Yes	• tablespace_initial_size=10M • tablespace_autoextend=ON • tablespace_next_size=10M • tablespace_block_size=8K

Install Oracle Argus Mart

This section gives you a brief introduction about all the options that are available when you run the Oracle Argus Mart Liquibase install.

To start the Oracle Argus Mart installation, execute the following steps:

- Prerequisites
- Create User for the Oracle Argus Safety Database
- Create the Install User in Oracle Argus Mart
- Create a Fresh Oracle Argus Mart Schema
- Validate the Schema

Prerequisites

You must check the following settings before you run the Oracle Argus Mart installation:

- `GLOBAL_NAMES`
  Value of parameter `GLOBAL_NAMES` must be same in Oracle Argus Safety and Oracle Argus Mart (either TRUE for both or FALSE for both).

If GLOBAL_NAMES is set to TRUE, the Database Name reflected in the table GLOBAL_NAME, must have the same domain for both Oracle Argus Safety and Oracle Argus Mart databases (like, us.example.com).

- NLS_LENGTH_SEMANTICS is set to **CHAR** for the Oracle Argus Mart DBInstaller to run.
- TNS Name for the Oracle Argus Safety and Oracle Argus Mart databases must be present in the Oracle Database Client > tnsnames.ora file at the following path: ...\network\admin\tnsnames.ora.

Create User for the Oracle Argus Safety Database

1. To create the Oracle Argus Safety Read-only user for Oracle Argus Mart, execute the following script from the folder DBInstaller\Utilities\Create_Safety_Ro_User:
   - For Windows—Use the batch script sm_argus_read_only{user}.bat
   - For Linux—Use the shell script sm_argus_read_only{user}
2. When prompted, enter the following parameters:
   - Name of the Safety Database instance
   - Name of DBA User in Safety Database
   - DBA user password in Safety Database
   - Name of the Safety Read Only User to be created for Mart
   - Password of the Safety Read Only User
   - Default Tablespace for Safety Read-only User—For example, USERS
   - Temporary Tablespace for Safety Read-only User—For example, TEMP

   The process of creating a Safety Read-only user begins.
3. When a confirmation message appears, review the log file and check for any errors from:

   \DBInstaller\Utilities\Create_Safety_RO_User\am_as_ro_user_MMDDYYYY_HH24MISS.log

Create the Install User in Oracle Argus Mart

> **Note:**
>
> You must execute this script to install Oracle Argus Mart database, even if you are using the SYSTEM user. This script provides additional grants to the existing user.

To create an Install user that has privileges same as the SYSTEM user for installation:

1. Execute the following script from the folder DBInstaller\Utilities\Create_Dba_User:
   - For Windows—Use the batch script am_create_dba_user.bat

- For Linux—Use the shell script `am_create_dba_user`

2. When prompted, enter the following parameters:
   - Oracle Argus Mart Database instance name
   - SYS or an equivalent SYSDBA user on this database
   - SYSDBA user password
   - Name of the Install User—For example, `AM_DBA_USER`
   - Install user password

   If you provide a non-existing user name, then the script creates this as a new user, and provides the necessary grants to this user.

   If you provide an already existing user name, then the script provides the necessary additional grants to the existing user.

   When done, a message appears as:

   ```
   Install User created.
   ```
3. Verify the status from the log file.

   ```
   ...\ArgusMart\Database\DBInstaller\Utilities\Create_Dba_User\
   am_dba_user_mmddyyyy_hh24miss.log
   ```
4. Press **Exit**.

> **Note:**
>
> For security reasons, Oracle recommends to drop the Install user from the database after successful installation of Oracle Argus Mart as this user will have Install privileges.
>
> To drop this user, connect to the respective database as a privileged user, and execute the following command:
>
> ```
> DROP USER <INSTALL_USER> CASCADE;
> ```

Create a Fresh Oracle Argus Mart Schema

1. Log in to the Oracle Argus Mart Server with administrator privileges.
2. Navigate to `...\ArgusMart\Database\DBInstaller`.
3. Open `Dbinstaller\dbinstaller.properties` file.
4. Modify the following parameters:
   - **Mart Database**:
     - db_connect_string—connects to the Oracle Argus Mart database.
       Syntax: `db_connect_string=<host>:<port>/<service name>`

       For example:

       ```
       server.us.xx.com:1521/AM822MT
       ```
       or

       ```
       server.us.xx.com:1521/AM822MT.us.xx.com
       ```

  - dba_user—specifies the name of the Install user to run Oracle Argus Mart Liquibase Install.
    See Create the Install User in Oracle Argus Mart.
  - default_datafile_directory—default location on the database server, where datafiles will be created.
- **Mart User** of each schema, where password is optional:
  - appschema_sm_mart
  - appschema_sm_stage
  - appschema_sm_app
  - appschema_etl_user
  - appschema_rls_user
  - appschema_bi_user
- **Safety Database:**
  - safety_db—Oracle Argus Safety database instance name
  - safety_ro_user—Oracle Argus Mart Read-only user created in Oracle Argus Safety

> **Note:**
>
> For more information on these parameters, see Overview of the dbinstaller.properties file.
>
> It is recommended that you preserve the default names for tablespaces and roles.

5. From the command prompt, go to DBInstaller directory.
6. Type `dbinstaller.bat`, and press **Enter**.

   The Liquibase install begins, and the parameters (as entered) appear on the command prompt screen with password in the hidden mode (****).
7. Keep monitoring the Liquibase progress by querying the Liquibase Log table `mart_dbchangelog`, created in `AM_MART_USER` schema.
8. When the process is complete, a confirmation message appears with the latest version of Oracle Argus Mart.

   The following is created as per the values specified in the `dbinstaller.properties` file:

   - **Users**
     - AM_MART_USER
     - AM_STAGE_USER
     - AM_APP_USER
     - AM_ETL_USER
     - AM_VPD_ADMIN
     - AM_BI_USER

- **Roles**
  - AM_VPD_ADMIN_ROLE
- **Factory Data**
  - Out of the box Factory data is loaded into tables such as ETL_SIGNAL_TABLE_MAPPING, RM_CMN_PROFILE_GLOBAL, etc.
- **Database Links**, DB_LINK_ARGUS:
  - From AM_STAGE_USER of Oracle Argus Mart to AS_MART_USER of Safety.
- **Tablespaces**
  Note that the tablespace names begin with AM.

  The DBInstaller creates the following tablespaces for the Oracle Argus Mart database, when you create Oracle Argus Mart schema:
  - AM_APP_DATA_01
  - AM_APP_INDEX_01
  - AM_APP_LOB_01
  - AM_MART_DATA_01
  - AM_MART_INDEX_01
  - AM_MART_LOB_01
  - AM_STAGE_DATA_01
  - AM_STAGE_INDEX_01
  - AM_STAGE_LOB_01

Validate the Schema

1. Navigate to **Database > DBInstaller > SM_ValidateSchema**.
2. Run the batch script `validate_schema.bat`.
3. When prompted, enter the following parameters:
   - Enter instance name: `<Argus Mart Database Instance name>`
   - Enter DBA User Name: `<Install user>` of Oracle Argus Mart
   - Enter Password for DBA User: `<Install user password>` in Oracle Argus Mart>
   - Enter Validation Data File Name: The validation control file name: `<VLDN_AM_8.2.2.CTL>`
   - Enter the destination where the log file is to be placed: `<C:\AM_822\Database\DBInstaller\SM_ValidateSchema>`
   - Enter the log file name for recording the schema differences: `<VLDN_AM_8.2.2_diff.log>`
   - Enter Validation Output File Name: The validation output file name to record the validation progress: `<VLDN_AM_8.2.2_out.log>`
4. When the validation process is complete, a confirmation message appears.

- To view any schema discrepancies, such as missing objects, use the Difference Log File.
- To view the list of errors, which occurred during schema validation, use the Output Log File.

> **Note:**
>
> If Oracle Argus Mart read-only user is created, then ignore the schema validation differences, where
>
> - Objects are RO% views/columns
> - GRANTEE is Oracle Argus Mart Read-only user

Create Database Links

You can create database links:

- From Oracle Argus Mart to Oracle Argus Safety (manually)
- From Oracle Argus Mart to Oracle Argus Insight

From Oracle Argus Mart to Oracle Argus Safety (manually)

During Fresh installation, the database link from Oracle Argus Mart to Oracle Argus Safety (DB_LINK_ARGUS) is created as a part of the installation process. However, you can manually recreate the link DB_LINK_ARGUS.

1. Navigate to `DBInstaller\Utilities\Create_Safety_RO_User`:
   - For Windows—execute the batch script `sm_create_db_link_argus.bat`
   - For Linux—execute the shell script `sm_create_db_link_argus`
2. When prompted, enter the following parameters:
   - Enter the name of the Safety Database instance: Safety Database Instance Name
   - Enter the name of the Mart Database instance: Mart Database Instance Name
   - Enter the name of DBA User in Mart DB: Mart Install user
   - Enter the password for user Mart DBA User: Mart Install user password
   - Enter the name of the Read Only User in Safety DB: Safety Read-only user for Mart
   - Enter the password for Read Only user in Safety: Read-only user password
   - Enter the name of the stage owner in Mart: Stage user of Mart
   - Enter the password for Stage user: Stage user password
3. Verify that the script is successfully connected as `<Mart Install user/Mart Install user pwd>@<Argus Mart>`, and press **Enter**.

   Wait until a message `Created <Safety DB Global Name>@DB_LINK_ARGUS` appears for Stage user.

The key DB_LINK_ARGUS of RM_CMN_PROFILE_GLOBAL in the Oracle Argus Mart database contains the DB link name.

For example, a DB link is:

```
SAF822DB@DB_LINK_ARGUS
```
or

```
SAF822DB.US.CORP.COM@DB_LINK_ARGUS
```

4. Press **Exit** to close the Mart to Argus Database Link Creation window.
5. Verify the log files for status from:

   ```
   DBInstaller\Utilities\Create_Safety_RO_User\DB_LINK_ARGUS_MMDDYYYY_HH24MISS.log
   ```

From Oracle Argus Mart to Oracle Argus Insight

1. When Oracle Argus Insight and Oracle Argus Mart are on different database instances, execute the script from the folder `DBInstaller\Utilities\Database_Links\ai_am_db_link`:
   - For Windows—execute the batch script `am_insight_db_link_setup.bat`
   - For Linux—execute the shell script `am_insight_db_link_setup`
2. When prompted, enter the following parameters:
   - Enter the Oracle Argus Mart Database Instance name
   - Enter the INSTALL user name in Oracle Argus Mart, like `AM_DBA_USER`
   - Enter the password for the above user
   - Enter the Oracle Argus Mart application user name, like `AM_APP_USER`
   - Enter the password for the above user
   - Enter the Oracle Argus Mart Schema user name, like `AM_MART_USER`
   - Enter the password for the above user
   - Enter the Oracle Argus Insight Database Name
   - Enter the Oracle Argus Insight Application User name, like `APR_APP`
   - Enter the Password for the above user
   - Enter the Oracle Argus Insight Readonly User name, like `APR_LINK_USER`
   - Enter the Password for the above user

   The process of creating the database links begins.
3. The following database links are created (by dropping the existing links if any, with the same name.
   - <*Insight DB Global Name*>@DB_LINK_INSIGHT—From Oracle Argus Mart AM_APP_USER >Oracle Argus Insight APR_APP

     The key `DB_LINK_INSIGHT` of `RM_CMN_PROFILE_GLOBAL` in the Oracle Argus Mart database is updated with this DB link name.
   - <*Insight DB Global Name*>@ARGUS_MART_TO_INSIGHT_MART—From Oracle Argus Mart AM_MART_USER > Oracle Argus Insight APR_LINK_USER

The key `DB_LINK_AM_MART_TO_AI_MART` of `RM_CMN_PROFILE_GLOBAL` in the Oracle Argus Mart database is updated with this DB link name.

4. Review the following log file, and check for any errors, when a confirmation message appears.

   `\DBInstaller\Utilities\ai_am_db_link\MART_TO_INSIGHT_DB_LINK_MMDDYYYY_HH24MISS.log`

Create Oracle Argus Mart Read-only User

You can create a read-only schema in Oracle Argus Mart. This schema will have read-only (SELECT) access on all the tables and views of the AM_MART schema. Besides, this read-only schema can also be used for customized reporting purpose.

1. Open `DBInstaller\Utilities\Create_Mart_Ro_User` file.
   - For Windows—execute the batch script `am_ro_user.bat`
   - For Linux—execute the shell script `am_ro_user`
2. When prompted, enter the following parameters:
   - Enter TNSNAME Entry to connect to the ARGUS MART Database: <ARGUS MART Database name>
   - Enter the name of Custom DBA user in Mart Database: <Argus Mart Install user>
   - Enter password for install user in Mart Database: <Install user password>
   - Enter Read Only user to be created in Mart Database: <Read-only user to be created in Mart>
   - Enter password for Read Only user of Mart Database: <Mart Read-only user password>
3. When the process is complete, press **Exit**.
4. Verify the log files for status information from:

   `DBInstaller\Utilities\Create_Mart_Ro_User\AM_RO_User_MMDDYYYY_HH24MISS.log`

3 Create Multiple Enterprises in Multi-tenant Environment

When you run ETL to transfer data from the Oracle Argus Safety database to Oracle Argus Mart, a default enterprise is automatically fetched into Oracle Argus Mart. In addition to the default enterprise, Oracle Argus Mart also enables you to create multiple enterprises by using:

- The configuration of default enterprise.
- The configuration of any other existing enterprise in Oracle Argus Safety Database.

This chapter explains the step-by-step procedure that you need to execute to create multiple enterprises in Oracle Argus Mart in a multi-tenant environment.

> **Note:**
>
> In case of a Multi-tenant setup, you can create additional enterprises after initial or incremental ETL as well.

To create multiple enterprises in Oracle Argus Mart:

1. Fetch a new enterprise from Oracle Argus Safety to Oracle Argus Mart by executing the script from: `DBInstaller\Utilities\create_enterprise`
   - For Windows—execute the batch script `am_create_enterprise.bat`
   - For Linux—execute the shell script `am_create_enterprise`
2. When prompted, enter the following parameters:
   - Enter the Oracle Argus Mart Database instance
   - Enter the name of ETL User in the above instance, like `AM_ETL_USER`
   - Enter Password for ETL User in the above instance
   - Enter comma separated enterprise short names to be copied over from Oracle Argus Safety, like `ENT1,ENT2,ENT3`
   - Enter the enterprise short name in Oracle Argus Mart, from which data is to be copied, like `ENT_ABBREV`

   Note that the Default enterprise in Oracle Argus Mart will be used to copy the base values, if no use input is provided.
3. Before bringing over the new enterprise to Oracle Argus Mart, the following checks are performed, whether:
   - the set-up is multi-tenant
   - the Factory data is loaded in the specified Oracle Argus Mart database

- the new enterprise exists in Oracle Argus Safety
- the new enterprise does not already exist in Oracle Argus Mart
- the base enterprise from which data is to be copied over, exists in Oracle Argus Mart

When all these Prerequisites are satisfied, the process of enterprise addition into Oracle Argus Mart begins.

4. Review the following log file, and check for any errors, when a confirmation message appears.
`\DBInstaller\Utilities\create_enterprise\am_create_enterprise_MMDDYYYY_HH24MISS.log`.

4

Configure Oracle Data Integrator Settings

After you have installed Oracle Data Integrator, you must configure certain settings to be able to use it to run the ETL process.

All the Oracle Data Integrator related data has been zipped into a file, which is a part of the installation package and is available at the following path:

```
...\ArgusMart\ODI\AM.zip
```

However, there are certain tasks that you need to execute before and after importing this zip file. All these tasks are covered in sequence in the later sections.

This chapter explains the step-by-step procedure to configure all the Oracle Data Integrator related tasks using the Oracle Data Integrator Studio. The configuration of these tasks using the Oracle Data Integrator Console is not supported for this release.

For more information, see:

Minimum Components Required

The following are the minimum components required to setup Oracle Data Integrator for Oracle Argus Mart:

- Oracle Data Integrator Studio
- Oracle Data Integrator Agent

Install and Configure Oracle Data Integrator

To install and configure the Oracle Data Integrator components (Oracle Data Integrator Studio and Oracle Data Integrator Agent):

> **Note:**
>
> To view the *Oracle® Fusion Middleware Installing and Configuring Oracle Data Integrator Guide*, refer to the following:
>
> - For Oracle Data Integrator Release 12.1.3 https://docs.oracle.com/middleware/1213/core/ODING/toc.htm
> - For Oracle Data Integrator Release 12.2.1 https://docs.oracle.com/middleware/1221/core/ODING/toc.htm

1. Understand the Oracle Data Integrator Topology—To understand the Oracle Data Integrator agent topologies for the best suitable installation, refer to the *Oracle® Fusion Middleware Installing and Configuring Oracle Data Integrator Guide* > Section: Planning the Oracle Data Integrator Installation.
2. Install the Oracle Data Integrator—Refer to the *Oracle® Fusion Middleware Installing and Configuring Oracle Data Integrator Guide* > Section: Installing Oracle Data Integrator.
3. Create the Master and Work Repository Schema—Refer to the *Oracle® Fusion Middleware Installing and Configuring Oracle Data Integrator Guide* > Section Creating the Master and Work Repository Schema.
4. Create Repository Login—Create a login name for the Master or Work Repository.
    a. On the Oracle Data Integrator Login screen, click the **+** icon.
    The Repository Connection Information screen appears.
    b. On the Repository Connection Information screen:
        i. In the **Login Name** field, enter a login name for the repository.
        ii. In the **User** field, enter the name of the SUPERVISOR user.
        iii. In the **Password** field, enter the password for the SUPERVISOR user.
        Enter the same password as provided for the SUPERVISOR while installing the ODI.
        iv. In the **Database Connection** section, enter the Master Repository User Name and Password.
        Enter the same User Name and Password as provided while installing the Oracle Data Integrator.
        v. Enter the database details in the **Driver List** (Oracle JDBC Driver), **Driver Name** (oracle.jdbc.OracleDriver) and **URL** (jdbc:oracle:thin:@<host>:<port>:<sid>) fields.
        You may also click the Search icon next to the **Driver List** and **URL** fields to search for the required Driver List and URL.
        vi. In **Work Repository** section:
            - Select **Master Repository Only** option, if the login is being created for the Master Repository.
            - Select the **Work Repository** option, and enter the name of the Work Repository in the adjacent text box (for example, WORKREP1).
            You may also click the Search icon next to the Work Repository name text box.
        vii. Click **OK**.

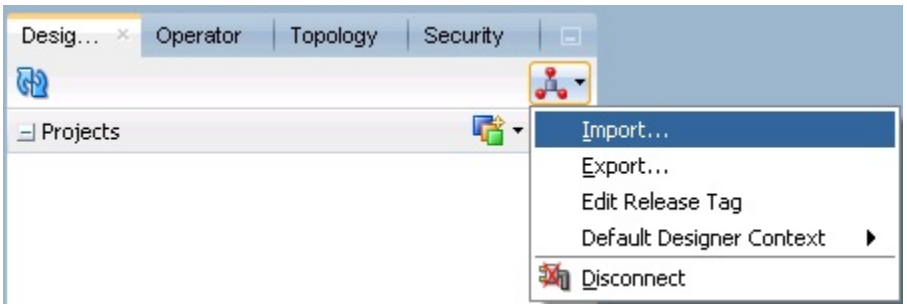
The login name is created.

5. Import Oracle Argus Mart Schema Objects

   a. Open the ODI, and connect to the repository using the Work Repository credentials that you have just created, as mentioned in the previous section.

   b. From the **Designer** tab, click the down arrow.
   A drop-down menu appears.

Figure 4-1 Import Link



   c. Click **Import**.
   The Import Selection dialog box appears.

   d. Select **Smart Import**, and click **OK**.
   The **Smart Import** dialog box appears.

   e. Click the Search icon next to the **File Selection** field.
   The **Select an import file** dialog box appears.

   f. Navigate to the `AM.zip` file, saved at the following location:
   `...\ArgusMart\ODI\AM.zip`

   g. Select the `AM.zip` file, and click **Open**.
   The complete path of the zip file appears in the **File Selection** field. Keep the **Response file** field as blank.

   h. Click **Next**.
   The **Please wait** dialog box appears with a **Matching Import Objects** message.

   Subsequently, the **Smart Import** dialog box appears listing the components that will be imported from the zip file using the **Import Actions** screen.

   i. Click **Next**.
   The **Summary** screen appears with the **No issues** message if there are no errors in the import process.

   j. Click **Finish**.
   The **Please wait** dialog box appears with a **Import in progress** message.

   Subsequently, the **Smart Import Report** screen appears listing the objects imported using the zip file.

   k. Click **Save**.
   The **Save Report** dialog box appears.

   l. Click the **Search** icon next to the **Name of the target file** field.
   The **Save** dialog box appears.

m. Navigate to the path where you want to save the report, and in the **File Name** field, enter the name for the report.

n. Click **Save**.
The name of the report file appears along with the complete path in the **Name of the target file** field.

o. Click **OK**.
The Information dialog box appears with the path where the report file has been saved.

p. Click **OK**.
This completes the steps to import the `AM` zip file.

You may verify this from ODI > Designer tab. The Oracle Argus Mart specific folders now appears in the Designer tab under Projects section, such as **ARGUSMART<version number>**.

6. Setup the Physical Agent:

a. Open the Oracle Data Integrator Studio, and login to the Work Repository Connection created in the Step 4.

b. Go to the **Topology** tab, from the left side pane, navigate to the **Physical Architecture > Agents**.

c. Double -click **PA_AM**.

d. From the Definition Vertical tab, in the **Host** field, enter the IP address of the ODI Server.
If you configure a Standalone Agent, then leave the Agent Name as PA_AM, and configure the Standalone Agent in the next step with same name. If you configure a Java EE Agent, then change the Agent Name to OracleDIAgent (as by default), and the Agent Name for Java EE Agent will be created as OracleDIAgent. For more information, refer to *Oracle® Fusion Middleware Installing and Configuring Oracle Data Integrator* > 5 Configuring the Domain for the Java EE Agent > 5.3 Creating a Java EE Agent in the Master Repository Using ODI Studio.

Make sure to use the same port number in Oracle Data Integrator Studio as well as Agent configured.

7. Configure the Domain for the Oracle Data Integrator Agent:

> **Note:**
>
> For Oracle Argus Mart, configure either one of the Oracle Data Integrator Agents (Standalone, or Java EE).

- To configure the domain for the Standalone Agent, refer to the Configure Standalone Installation Topology for Standalone Agent.
- To configure the domain for the Java EE Agent, refer to the Configure Standard Installation Topology for Java EE Agent.

Create and Test the Data Server Connection

To create and test the Data Server connection, execute the following procedure:

1. Select the **Topology** tab.

   In the Physical Architecture section, under Oracle folder, double-click **DS_AM_ARGUSMART**.

   The connection details appears in the right pane, with **Definition** selected by default.

2. In the **User** field, enter the name of the Argus ETL user (**AM_ETL_USER**).

   This user was created in the Create a Fresh Oracle Argus Mart Schema.

3. In the **Password** field, enter the password for the Argus ETL User.

4. Select **JDBC** in the right pane, and enter database details of the Argus Mart schema in the **JDBC Driver** (oracle.jdbc.OracleDriver) and **JDBC URL** (jdbc:oracle:thin:@<Argus_Mart_DB_Server_Name>:<Argus_Mart_DB_Listener_Port>:<Argus_Mart_DB_SID>) fields.

   You may also click the Search icon next to these fields to search for the required value.

5. Click **Test Connection**.

   A confirmation message appears to save data before testing the connection.

6. Click **OK**.

   The Test Connection dialog box appears.

7. From the **Physical Agent** drop-down list, select **Local**, and click **Test**.

   The Information dialog box appears with the Successful Connection message.

8. Click **OK**.

9. From the **Physical Agent** drop-down list, select the **Physical Agent**, and click **Test**.

   The Information dialog box appears with the **Successful Connection** message.

10. Click **OK**.

    This completes the steps to create and test the Data Server connection.

Create a New Physical Schema

To fetch data by Oracle Data Integrator ETL, you must create a new physical schema.

1. Select the **Topology** tab.

   In the Physical Architecture section, under Oracle folder, right-click **DS_AM_ARGUSMART**.

2. Select **New Physical Schema**.

   The Physical Schema screen appears, where **Definition** is selected by default.

3. From the **Schema** drop-down list, select the Argus ETL User (**AM_ETL_USER**).

   This user was created in Create a Fresh Oracle Argus Mart Schema.

4. From the **Schema (Work Schema)** drop-down list, select the Argus ETL User (**AM_ETL_USER**) again.

5. From the left-pane, select **Context**, and click the **+** icon.

A new row is added in the empty space below the **Context** and **Logical Schema** options.

6. From the **Context** drop-down list, select **CTX_ARGUSMART**.
7. From the **Logical Schema** drop-down list, select **LS_AM_ARGUSMART**.
8. Click **Save** on the menu bar.

   The new physical schema appears under Physical Architecture section, in `Oracle` folder.

Set Up the Physical Agent for Context CTX_ARGUSMART

To associate the physical agent with the context:

1. Select the **Topology** tab.
2. To open the context, from the **Contexts** section, double click **CTX_ARGUSMART**.
3. Navigate to Agents.
4. For the Logical Agent **LA_AM**, from the **Physical Agent** drop-down list, select the physical agent that was created while configuring the ODI. For example, PA_AM.
5. Click **Save**.

Validate the Load Plan

To validate the Load Plan, execute the following steps:

1. Select Operator tab.
2. In the Load Plans and Scenarios > LP_ARGUSMART822 section, double-click the **LP_INI_AM** Load Plan.

   If the **Object Locking** dialog box appears, click **No** and proceed with the Validation process.

   The Load Plan details appears in the right pane.
3. Click **Validate**.

   A confirmation message appears, if there are no issues associated with the Load Plan.

5

Configure the Oracle Argus Mart Application

Before running the Initial ETL (Extract, Transform, and Load) process, you need to configure the Oracle Argus Mart Common Profile Switches to have control over the data that you want to transfer from the Oracle Argus Safety database to the Oracle Argus Mart database. These Common Profile Switches are configured using the Oracle Argus Safety Console.

This section explains these Common Profile Switches along with the step-by-step procedure to configure these profile switches using the Oracle Argus Safety Console.

To configure the Common Profile Switches using the Oracle Argus Safety Console:

1. Log on to the Oracle Argus Safety Console and navigate to **System Configuration** > **System Management (Common Profile Switches)**.
   The Common Profile screen appears with the list of configuration options in the left pane.
2. Click **Argus Mart**.
   The Modify Oracle Argus Mart screen appears with the list of Oracle Argus Mart Common Profile Switches that you need to configure, in the right pane.

   You can configure these Common Profile Switches using this screen.

   See Table 5-1 for description about these profile switches along with their type (Global or Enterprise-specific).

   The Global switches are visible only if you are logged in from a default enterprise.

   If you are logged in from a non-default enterprise, only the enterprise-specific switches are visible in the list of Common Profile Switches.
3. Enter the required input in the text box (or select the radio buttons in case of the ENABLE SM PROCESSING profile switch) adjacent to the name of each profile switch, and click **Save**.

> **Note:**
>
> The Global Switches, as mentioned in the table below, impact all enterprises configured for Oracle Argus Mart whereas the Enterprise specific Switches impact the enterprise to which user is logged in, to access the Argus Safety console.

The following table lists the Common Profile Switches that you can configure for Oracle Argus Mart, their type, and their description:

Table 5-1 Common Profile Switches for Oracle Argus Mart

Profile Switch	Type	Description
ENABLE SM PROCESSING	Global switch	This switch is used to enable or disable SM Processing for Oracle Argus Mart. **Yes** - Enable SM Processing for Argus Mart. **No** - Disable SM Processing for Oracle Argus Mart. The value for this switch cannot be changed once initial ETL has been executed.
ENABLE_AI_PROCESSING	Global switch	This switch is used to enable or disable Argus Insight Processing for Oracle Argus Mart. `0` - Do not populate Oracle Argus Insight data in Oracle Argus Mart. `1` - Populate Oracle Argus Insight data in Oracle Argus Mart.
REVISIONS TO PROCESS	Global switch	This switch refers to the Configuration Flag to process maximum number of revisions in an incremental ETL run. Setting the value as 0 for this switch represents that the Configuration Flag is not set.
FIRST HUMAN LANGUAGE	Enterprise specific switch	This switch refers to first human language for derived decoded items. This value should not be changed after data mart is initialized. For information on the First Human Language profile switch columns in SM Tables, refer to the ETL Mapping document.
SECOND HUMAN LANGUAGE	Enterprise specific switch	This switch refers to second human language for derived decoded items. This value should not be changed after data mart is initialized. For information on the Second Human Language profile switch columns in SM Tables, refer to the ETL Mapping document.
CUSTOM DATASHEET FOR LISTEDNESS	Enterprise specific switch	This switch refers to the specific datasheet value to be used for the SM_EVENT_PRODUCT.LISTEDNESS_CDS_VE column. This value should not be changed after data mart is initialized.
SMQ/CMQ FOR FATAL TERMS	Enterprise specific switch	This switch refers to the specific SMQ/CMQ to be used for determining fatal terms for the FATAL_YN_DV column. This value should not be changed after data mart is initialized.

Table 5-1 (Cont.) Common Profile Switches for Oracle Argus Mart

Profile Switch	Type	Description
CUSTOM ROUTINE BEFORE STAGE TABLES POPULATION	Global switch	This switch refers to the full path of the custom routine to be executed before population of the Signal Staging Tables. If this routine fails or is not found, the ETL is not run and an error message is displayed.
CUSTOM ROUTINE BEFORE REPORTING TABLES POPULATION	Global switch	This switch refers to the full path of the custom routine to be executed before population of Signal Reporting Tables. If this routine fails or is not found, the ETL is not run and an error message is displayed.
CUSTOM ROUTINE AFTER REPORTING TABLES POPULATION	Global switch	This switch refers to the full path of the custom routine to be executed after population of Signal Reporting Tables. If this routine fails or is not found, the ETL is not run and an error message is displayed.
CUSTOM ROUTINE BEFORE SIGNAL HELPER TABLES POPULATION	Global switch	This switch refers to the full path of the custom routine to be executed before population of Signal Helper Tables. If this routine fails or is not found, the ETL is not run and an error message is displayed.
CUSTOM ROUTINE AFTER SIGNAL HELPER TABLES POPULATION	Global switch	This switch refers to the full path of the custom routine to be executed after population of Signal Helper Tables. If this routine fails or is not found, the ETL is not run and an error message is displayed.
CUSTOM ROUTINE AFTER ETL	Global switch	This switch refers to the full path of the custom routine to be executed after Initial/ Incremental ETL (post ETL commit). If this routine fails or is not found, the ETL is not run and an error message is displayed.
MISSING_CODE_DISPLAY_VALUE	Global switch	This switch refers to the missing display value corresponding to the code.

6
Upgrade Oracle Argus Mart

You can upgrade Oracle Argus Mart through Liquibase. Liquibase is a refactoring tool that is utilized to enable a silent installation.

For more information, see:

- Prepare for the Database Upgrade
- Upgrade the Database

Prepare for the Database Upgrade

1. Recreate the Install User of Oracle Argus Mart.
2. Recreate the Safety RO User of Oracle Argus Mart.
3. Recreate the DB_LINK_ARGUS manually, from Oracle Argus Mart to Oracle Argus Safety. For more information, see From Oracle Argus Mart to Oracle Argus Safety (manually).

Upgrade the Database

1. Log in to Oracle Argus Mart Transaction Server.
2. Navigate to `...\ArgusMart\Database\DBInstaller`.
3. Open `DBInstaller.properties` file.
4. Modify the following parameters:
   - **Mart Database**:
     - `db_connect_string`—connects to the Oracle Argus Mart database. Syntax: `db_connect_string=<host>:<port>/<service name>`

       ```
       For example:
       db_connect_string=server.us.xx.com:1521/AM822MT
       Or, db_connect_string=server.us.xx.com:1521/AM822MT.us.xx.com
       ```

     - `dba_user`—specifies the name of the Install user to run Argus Mart Liquibase Install.
       See Create the Install User in Oracle Argus Mart.
   - **Mart User** of each schema, where password is optional:
     - `appschema_sm_mart`
     - `appschema_sm_stage`
     - `appschema_sm_app`
     - `appschema_etl_user`
     - `appschema_rls_user`
     - `appschema_bi_user`

- **Safety Database:**
  - `safety_db`—Oracle Argus Safety database instance name
  - `safety_ro_user`—Oracle Argus Mart read-only user created in Oracle Argus Safety

> **Note:**
>
> For more information on these parameters, see Overview of the dbinstaller.properties file.

5. From the command prompt, go to `DBInstaller` directory.
6. Type `dbinstaller.bat`, and press **Enter**.

   The Liquibase upgrade begins, and the parameters (as entered) appear on the command prompt screen with password in the hidden mode (****).
7. Keep monitoring the Liquibase progress by querying the Liquibase Log table `mart_dbchangelog`, created in AM_MART_USER schema.
8. When the process is complete, a confirmation message appears with the latest version of Oracle Argus Mart.
9. Validate Schema using the schema validation control file `VLDN_AM_8.2.2.CTL`.

   See Validate the Schema.

7

Extract, Transform, and Load Data

This chapter describes the steps to run the Extract, Transform, and Load (ETL) process using the Oracle Data Integrator Studio and Oracle Data Integrator Console.

The following table illustrates some of the terms along with the name of the Load Plan that has been used to refer the different types of ETL in the later sections of this chapter:

Table 7-1 Describing ETL Types

Type of ETL	Description	Name of the Load Plan
Initial ETL	The Initial ETL process involves full load of data from Oracle Argus Safety and DLP to Oracle Argus Mart. It can be described as the first ETL run that is executed for a fresh setup.	LP_INI_AM
Incremental ETL	The Incremental ETL brings changed case data, from last ETL run till start of current ETL run, from Oracle Argus Safety and DLP. The LM/CFG data is reloaded only if any change in record(s) is identified. Dictionary data is always reloaded in case of an Incremental ETL. If a new enterprise is added, the Incremental ETL loads complete data of the new enterprise along with delta data of other enterprises.	LP_INC_AM
Incremental ETL with BI Clear Cache	The Incremental ETL brings changed case data, from last ETL run till start of current ETL run, from Oracle Argus Safety and DLP. The LM/CFG data is reloaded only if any change in record(s) is identified. Dictionary data is always reloaded in case of an Incremental ETL. If a new enterprise is added, the Incremental ETL loads complete data of the new enterprise along with delta data of other enterprises and clears the BI cache.	LP_INC_AM_with_ClearCache

For more information, see:

- Manage Initial ETL Process: Oracle Data Integrator Studio
- Monitor Initial ETL Process: Oracle Data Integrator Studio
- Manage Initial ETL Process: Oracle Data Integrator Console
- Monitor Initial ETL Process: ODI Console

Manage Initial ETL Process: Oracle Data Integrator Studio

In this section:

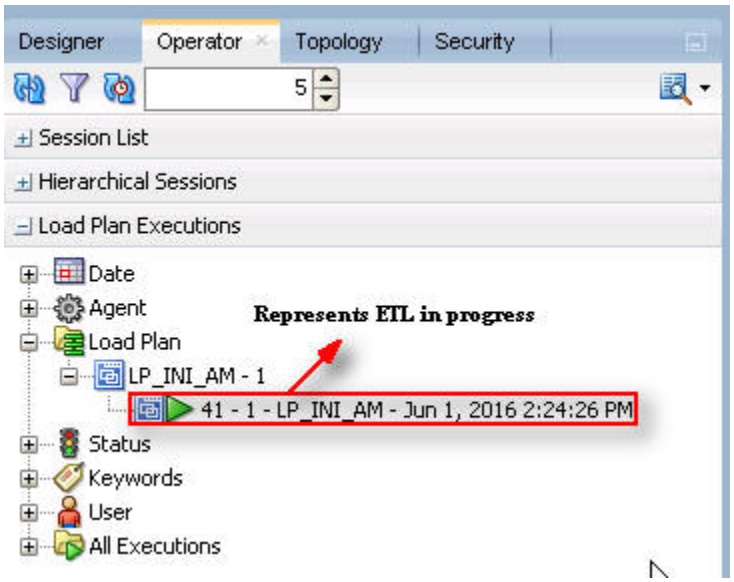
Run the ETL

1. Open the ODI Studio, and click **Connect to Repository**.

   The Oracle Data Integrator Login screen appears.
2. In the **Oracle Data Integrator Login** screen:
   a. From the **Login Name** drop-down list, select the ODI Work Repository name.
   b. In the **User** field, enter the name of the ODI user.
   c. In the **Password** field, enter the password for the ODI user.
   Enter the SUPERVISOR password as provided while configuring the ODI.
   d. Click **OK**.
   The **Oracle Data Integrator** screen appears.
3. Select the **Operator** tab in the left pane.
4. Expand the **Load Plans and Scenarios** section.
5. Expand **LP_ARGUSMART822**, and scroll-down to **LP_INI_AM**.
   This option in this section represents the load plan for the initial ETL process for Argus Mart.
6. Right-click the **LP_INI_AM** option, from the drop-down menu select **Run**.
   The Start Load Plan screen appears.
7. In the **Start Load Plan** screen:
   a. From the **Context** drop-down list, select **CTX_ARGUSMART**.
   b. From the **Logical Agent** drop-down list, select **LA_AM**.
   c. From the **Log Level** drop-down list, select the desired log level.
   d. Click **OK**.
   The Information dialog box appears with the Load Plan Started confirmation message.
8. Click **OK**.

   To verify the status of the ETL process, navigate to the **Load Plan Executions** section, and expand the `Load Plan` folder. The status of the Load Plan appears in **Green** color, which signifies that the ETL session is in progress.

Figure 7-1 Status of the Load Plan



Stop the ETL

1. In **Load Plan Executions** section, `Load Plan` folder, right-click the **Load Plan**, which you want to stop.

   A drop-down menu appears.

2. Select **Stop Normal**.

   The Stop Load Plan dialog box appears.

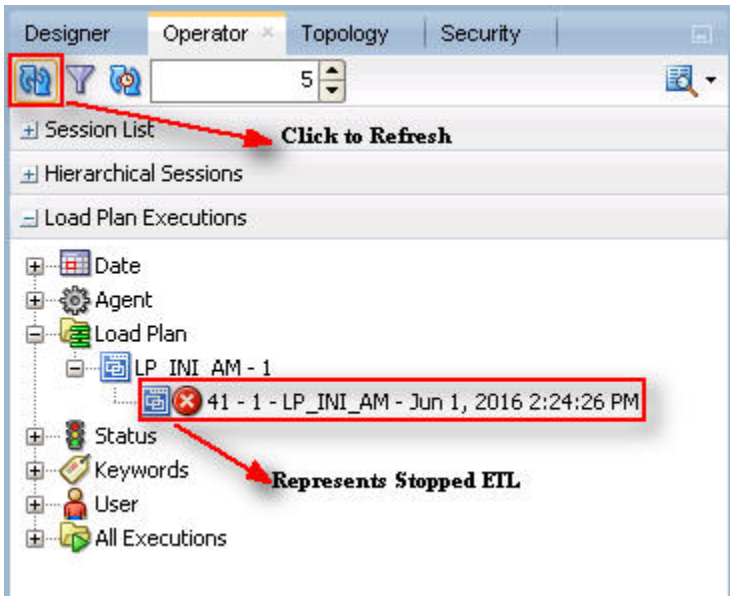
3. From the **Physical Agent** drop-down list, select **PA_AM**.

4. Click **OK**.

   The execution of the Load Plan is stopped.

   To verify the status of the ETL process, navigating to the Load Plan Executions section and expand the `Load Plan` folder. The status of the Load Plan appears in Red color with the **X** symbol, which signifies that the ETL session is not in progress.

Figure 7-2 Stopped Initial ETL Session



> **Note:**
>
> You must verify in Oracle Argus Mart database if the ETL session has been successfully ended after this step.

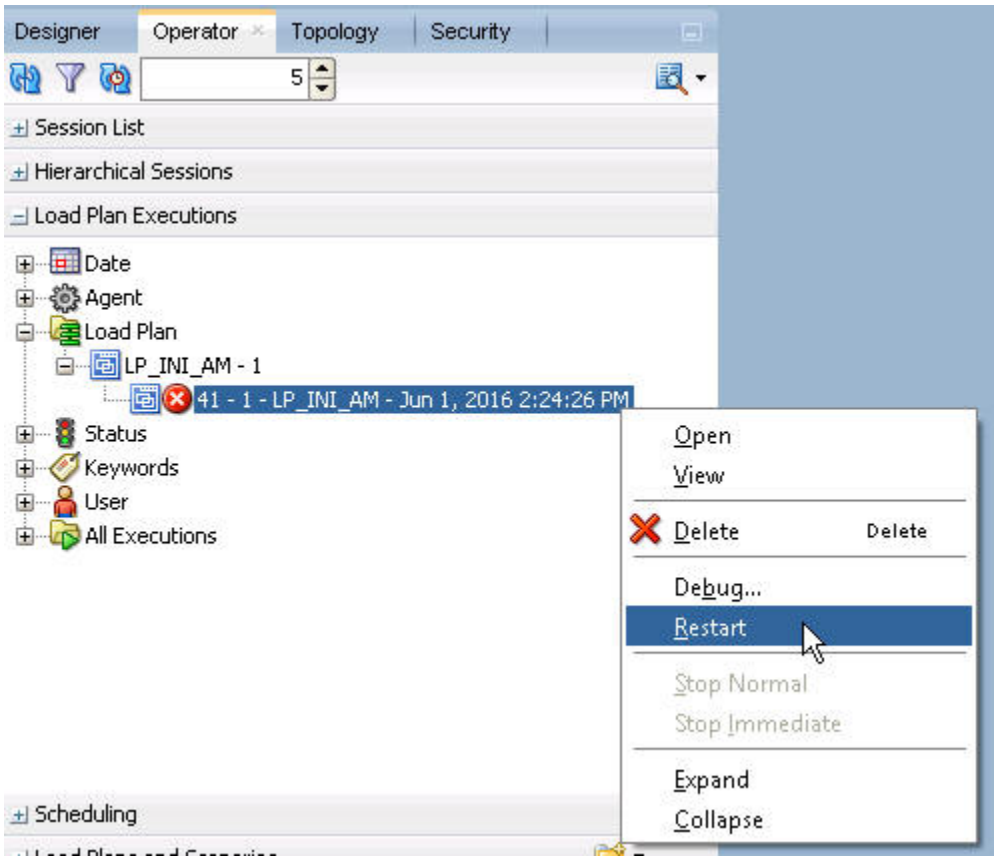
Restart the ETL (Resume)

Restarting the Initial ETL process enables you to start the ETL process from the last execution step where it was stopped or failed.

1. In **Load Plan Executions** section, **Load Plan** folder, right-click the **Load Plan**, which you want to restart.

   The drop-down menu appears.

Figure 7-3 Restarting the Initial ETL



2. Click **Restart**.

   The **Restart Load Plan** dialog box appears.

3. From the **Physical Agent** drop-down list, select **PA_AM**.

4. From the **Log Level** drop-down list, select the required log level.

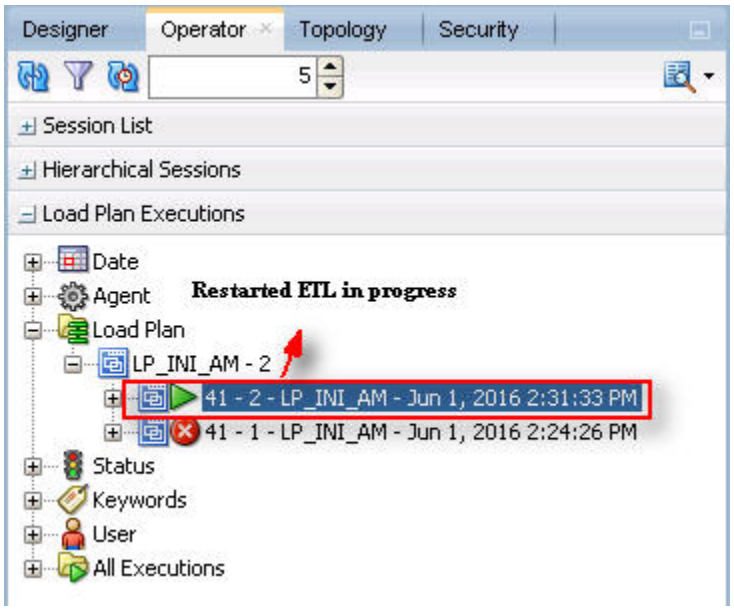
5. Click **OK**.

   The Information dialog box appears with the **Load Plan restarted** message.

6. Click **OK**.

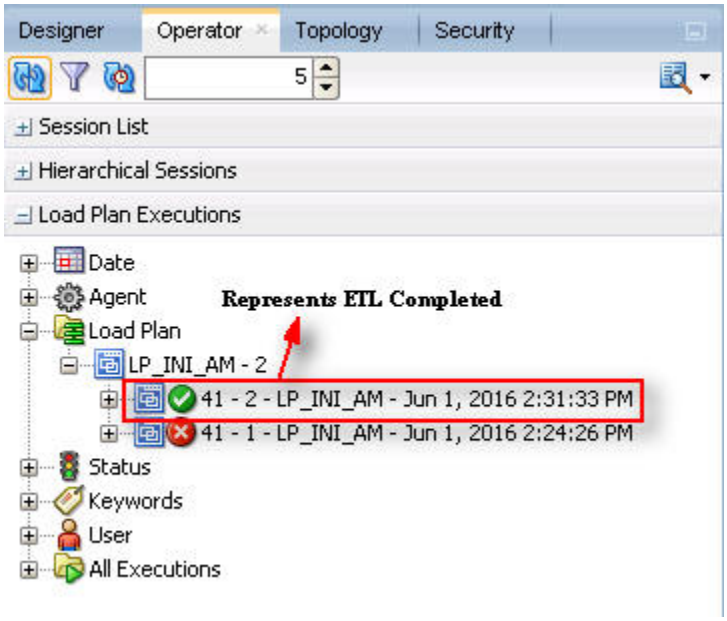
   Another Load Plan is added with the same name as that of the stopped ETL, in the **Load Plan** folder. However, this instance of the ETL Process appears in green color, which signifies that the ETL is in progress.

Figure 7-4 Restarted Load Plan



Once the ETL process is complete, the Load Plan is appear in green color with a check mark.

Figure 7-5 Completed Load Plan



Process a Failed ETL

If an ETL process fails, you have the option of continuing the process from the failed step or executing it again from the beginning of ETL.

This section explains the steps to continue a failed ETL from the failed step and to execute it again from the beginning of ETL.

For more information, see:

- Continue the Failed Initial ETL
  The process to continue the failed Initial ETL from the failed step is exactly the same as that of the process of restarting the Initial ETL after stopping it.
- Restart the Failed Initial ETL (Rerun)
  The process to restart the failed Initial ETL from the beginning is exactly the same as that of the process of running the Initial ETL.

Continue the Failed Initial ETL

The process to continue the failed Initial ETL from the failed step is exactly the same as that of the process of restarting the Initial ETL after stopping it.

See Restart the ETL (Resume) for the step-by-step procedure to continue the failed Initial ETL from the failed step.

Restart the Failed Initial ETL (Rerun)

The process to restart the failed Initial ETL from the beginning is exactly the same as that of the process of running the Initial ETL.

When you have successfully executed the Initial ETL process on a database, you cannot execute it again till the time you reset the mart environment. To facilitate this, you need to execute a Re-initial script. It is a Batch file, which re-initializes the database, so that you can run the Initial ETL on the database again.

> **Note:**
>
> When you run the re-initial ETL, the data of Oracle Argus Mart is truncated and reloaded in RM and SM tables. Revision created due to reference data changes will be lost.

To execute the Re-initial script, execute the following steps:

1. Double-click the `am_environment_reset.bat` file available at the following path:
   `...\ArgusMart\Database\Utils\am_environment_reset.bat`

   This displays a warning message, which serves as a confirmation from you that you want to reset the Mart environment.
2. Enter **Y**, which represents **Yes**, in the `Do You Want to Continue (Y/N)?` field, if you want to continue with resetting the Mart environment to be able to run the Initial ETL on the database again.
   Or

   Enter **N**, which represent **No**, if you want to quit the process of resetting the Mart environment.

   If you have entered **Y**, the **Reset Environment to Re-Run Initial ETL** Screen is displayed.

3. Enter the TNS Name to connect to the Oracle Argus Mart database in the **Enter Database TNS** field and press **Enter**.
4. Enter the following parameters for the user who have administrator rights to access the ETL process.

> **Note:**
>
> This user is referred to as Argus ETL User. If the user is not the database owner with the administrator rights for the ETL process, the system displays an error message.

   a. Enter the Oracle Argus Mart Database Owner in the **Enter Argus ETL User** field, and press **Enter**.
   b. Enter the password in the **Enter Password for User** field, and press **Enter**.
   c. Enter the name of the log file in the **Enter log file name** field, and press **Enter**.
   The system displays a **Connecting** status message and once connected displays **Connected**.
5. Press **Enter** to complete writing the logs.
6. Press **Enter** to exit from the window.

See the Run the ETL section for the step-by-step procedure to restart the failed Initial ETL from the beginning of ETL.

Monitor Initial ETL Process: Oracle Data Integrator Studio

In this section:

- View the Steps of Load Plan
- Monitor the ETL
- Debug the Failed ETL
- Monitor the Restarted ETL (Resume)

View the Steps of Load Plan

Before executing the Initial ETL, you may view the steps of the Load Plan for the Initial and the Incremental ETL.

To view the Load Plan steps, execute the following steps:

1. Open the Oracle Data Integrator Studio, and click **Connect To Repository**.
2. Log on to the ODI Work Repository using the ODI User credentials.
3. Select the **Designer** tab, and expand the Load Plans and Scenarios section.
4. Double-click the **LP_INI_AM** load plan.
5. Select the **Steps** option in the right pane.

   All the steps of the Load Plan appears.

Similarly, you may also view the steps for the Incremental Load Plan by navigating to **Designer** tab > Load Plans and Scenarios section, and double-click LP_INC_AM.

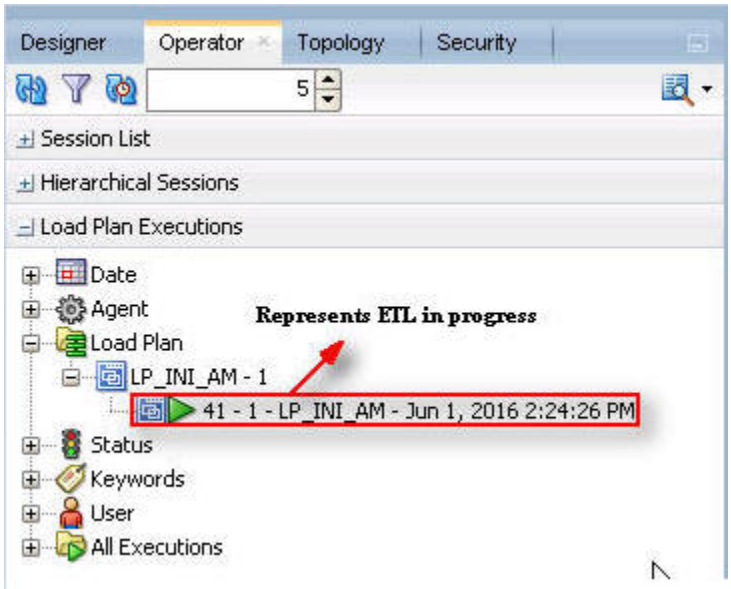
Monitor the ETL

To monitor the progress of the Initial ETL after executing the **LP_INI_AM** Load Plan, execute the following steps:

1. Select the Operator tab, in the Load Plan Executions section expand the **Load Plan** folder.
2. Expand the **LP_INI_AM** load plan to view the ETL process in progress.

   The status of the Load Plan appears in Green color, which signifies that the process is running properly.

Figure 7-6 Viewing the Status of the ETL Process



3. Double-click the ETL session, highlighted in the figure above, and select **Steps** in the right pane.

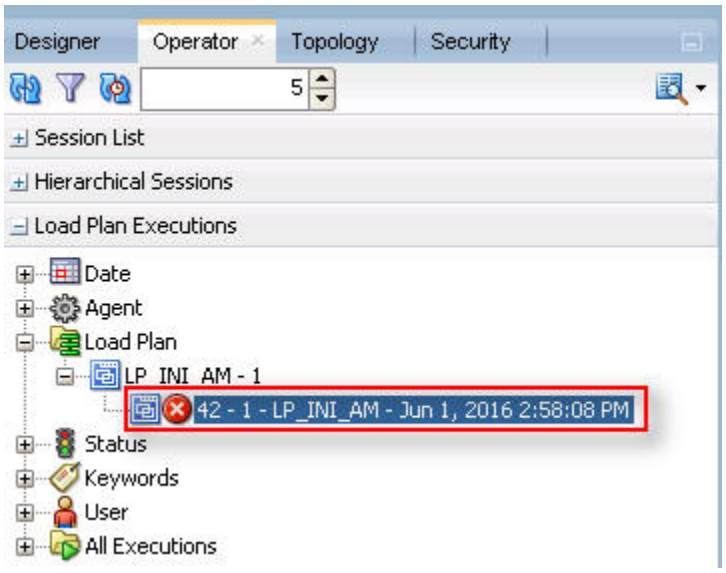
   The list of steps for the Load Plan appears along with the steps that have been completed successfully. The green check mark represents the successful completion of the step.

Debug the Failed ETL

To view the step where the ETL process failed and also the error message related to the ETL process failure, execute the following steps:

1. In the **Operator** tab > **Load Plan Executions** section, expand the **Load Plan** folder to view the current status of the ETL process.

Figure 7-7 Viewing the Failed ETL Process



The status of the Load Plan appears in Red color with the **X** symbol, which signifies that the ETL session is not in progress.

2. Double-click the Load Plan, and select **Steps**.

   The list of steps for the Load Plan appears in the right pane. The step because of which the ETL process has failed, is highlighted in Red color with the **X** symbol.

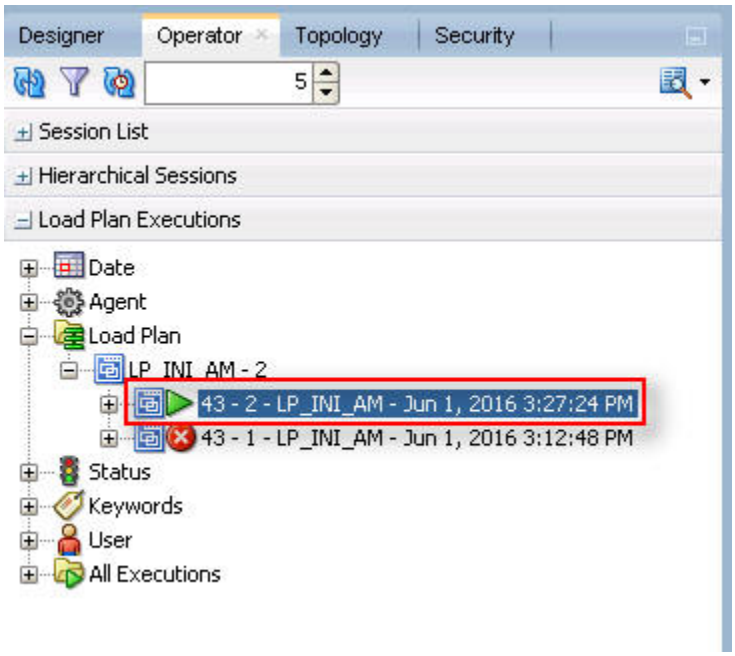
   - Hover over the cursor over the error message to view the complete message.
   - For more information about the error message, click **Execute**.
   - To view the error message, log on to the Oracle SQL Developer using the Argus ETL user credentials, and execute either or both of the following queries:
     - `SELECT * FROM etl_stage_log ORDER BY id DESC;`
     - `SELECT * FROM etl_mart_log ORDER BY id DESC;`

Monitor the Restarted ETL (Resume)

To view the status of the process after restarting a stopped ETL process, execute the following steps:

1. In the **Operator** tab > **Load Plan Executions** section, expand the **Load Plan** folder.

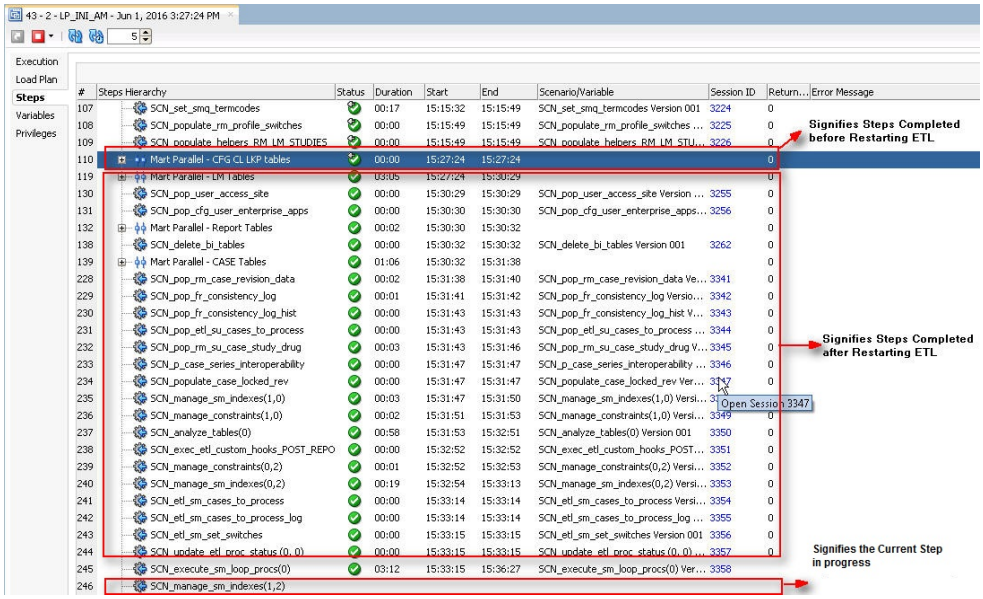
Figure 7-8 Viewing the Restarted ETL Process Status



The status of the restarted ETL process appears in Green color, which signifies that the ETL is in progress again.

2. To view the status of the remaining steps in the process, in the `LP_INI_AM` folder, double-click the Load Plan, and selecting **Steps**.

Figure 7-9 Viewing the Steps of the Restarted ETL



Manage Initial ETL Process: Oracle Data Integrator Console

In this section:

Run the Initial ETL

1. Open the Oracle Data Integrator Console.
   The **Oracle Data Integrator Console Sign In** screen appears.
2. In the Oracle Data Integrator Sign In screen:
   a. From the **Repository** drop-down list, select the ODI Work Repository name.
   b. In the **User Id** field, enter the name of the ODI user.
   c. In the **Password** field, enter the password for the ODI user.
   d. Click **Sign In**.
      The Oracle Data Integrator Console screen appears.
3. Select the **Browse** tab in the left pane.
4. Navigate to **Runtime > Scenarios/Load Plans > Folders > LP_ARGUSMART822 > LP_INI_AM**.
   The **LP_INI_AM** option in this section represents the load plan for the initial ETL process for Oracle Argus Mart.
5. Click **Execute**.

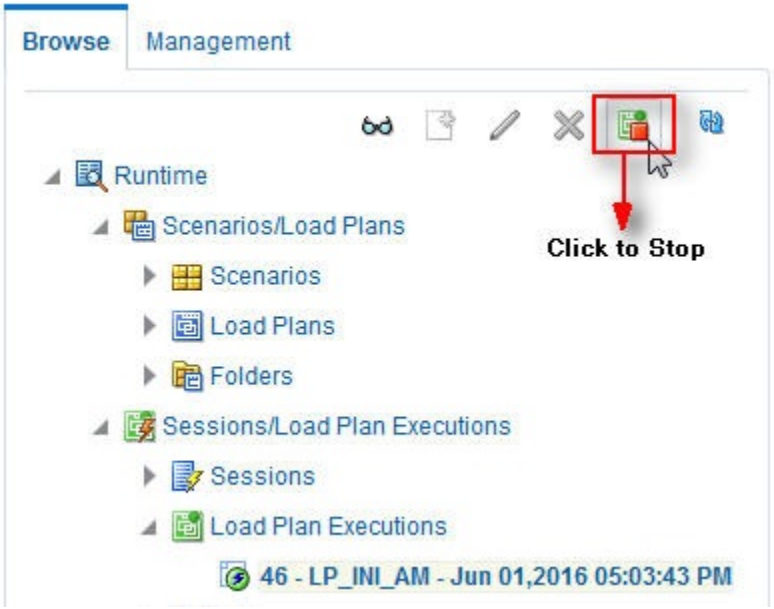
   The **Execute Load Plan** screen appears.
6. In the **Execute Load Plan** screen:
   a. From the **Logical Agent** drop-down list, select **LA_AM**.
   b. From the **Context** drop-down list, select **CTX_ARGUSMART**.
   c. From the **Log Level** drop-down list, select the desired log level.
   d. Click **Execute Load Plan**.
      The Information dialog box appears with confirmation message — Load Plan Execution submitted successfully.
7. Click **OK**.
   To verify the status of the ETL process, in the Sessions/Load Plan Executions section, expand the **Load Plan Executions** folder. The status of the Load Plan

appears in green color with tilted **S**, which signifies that the ETL session is in progress.

Stop the Initial ETL

1. In the **Sessions/Load Plan Executions section > Load Plan Executions** folder, select the Load Plan, which you want to stop, and click **Stop**.

Figure 7-10 Stopping the Initial ETL



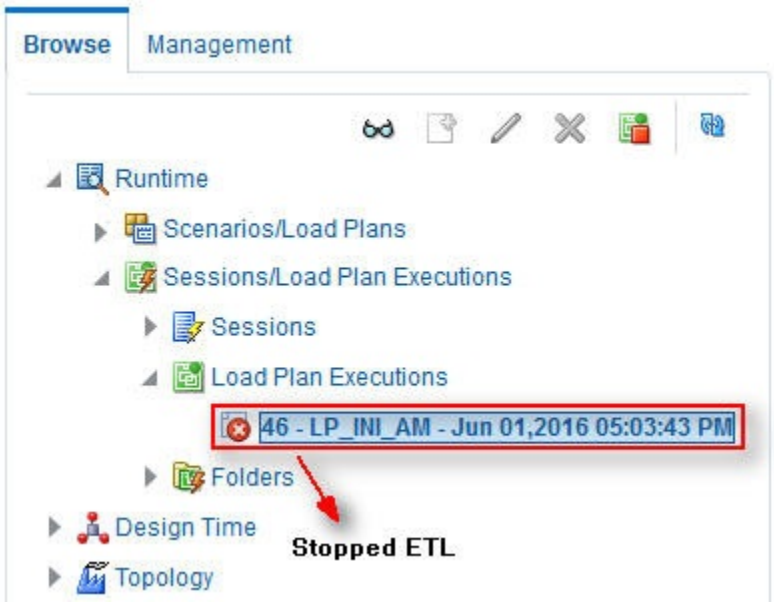
The **Stop Load Plan Execution** dialog box appears.

2. From the **Stop Type** drop-down list, select **Normal**.
3. From the **Physical Agent** drop-down list, select **OracleDIAgent**.
4. Click **Stop**.

   The Information dialog box appears with confirmation message — **Load Plan was Stopped Successfully**.
5. Click **OK**.

   To verify the status of the ETL process, navigate to **Sessions/Load Plan Executions section > Load Plan Executions** folder. The status of the Load Plan appears in red color with the **X** symbol, which signifies that the ETL session is not in progress.

Figure 7-11 Stopped Initial ETL Session



> **Note:**
>
> You must verify in Oracle Argus Mart database if the ETL session has been successfully ended after this step.

Restart the Initial ETL (Resume)

Restarting the Initial ETL process enables you to start the ETL process from the last execution step where it was stopped or failed.

To restart the Initial ETL, execute the following steps:

1. In the **Sessions/Load Plan Executions section > Load Plan Executions** folder, select the Load Plan, which you want to restart, and click **Restart**.

   The Restart Load Plan Execution dialog box appears.

2. From the **Physical Agent** drop-down list, select **OracleDIAgent**.
3. From the **Log Level** drop-down list, select the required log level.
4. Click **Restart**.

The Information dialog box appears with confirmation message—`Load Plan restarted successfully`

5. Click **OK**.

   Another Load Plan is added with the same name as that of the stopped ETL, in the **Sessions/Load Plan Executions section > Load Plan Executions** folder. However, this instance of the Load plan appears in green color, which signifies that the ETL is in progress.

Process a Failed ETL

If an ETL process fails, you have the option of continuing the process from the failed step or executing it again from the beginning of ETL.

This section explains the steps to continue a failed ETL from the failed step and to execute it again from the beginning of ETL.

For more information, see:

- Continue the Failed Initial ETL
- Restart the Failed Initial ETL (Rerun)

Continue the Failed Initial ETL

The process to continue the failed Initial ETL from the failed step is exactly the same as that of the process of restarting the Initial ETL after stopping it.

See the Restart the Initial ETL (Resume) for the step-by-step procedure to continue the failed Initial ETL from the failed step.

Restart the Failed Initial ETL (Rerun)

The process to restart the failed Initial ETL from the beginning is exactly the same as that of the process of running the Initial ETL.

However, you need to execute certain steps before restarting the Failed Initial ETL, refer to the Restart the Failed Initial ETL (Rerun) for the complete details.

See the Run the Initial ETL for the step-by-step procedure to restart the failed Initial ETL from the beginning of ETL.

Monitor Initial ETL Process: ODI Console

In this section:

- View the Steps of Load Plan
- Monitor the ETL
- Debug the Failed ETL
- Monitoring the Restarted ETL (Resume)

View the Steps of Load Plan

Before executing the Initial ETL, you may view the steps of the Load Plan for the Initial and the Incremental ETL.

To view the steps of Load Plan, execute the following steps:

1. Log on the Oracle Data Integrator Console, and select the **Management** tab.
2. Navigate to **Runtime > Scenarios/Load Plans > Folders > LP_ARGUSMART822**.
3. Right-click **LP_INI_AM** (Load Plan for Initial ETL) or **LP_INC_AM** (Load Plan for Incremental ETL), and select **View**.

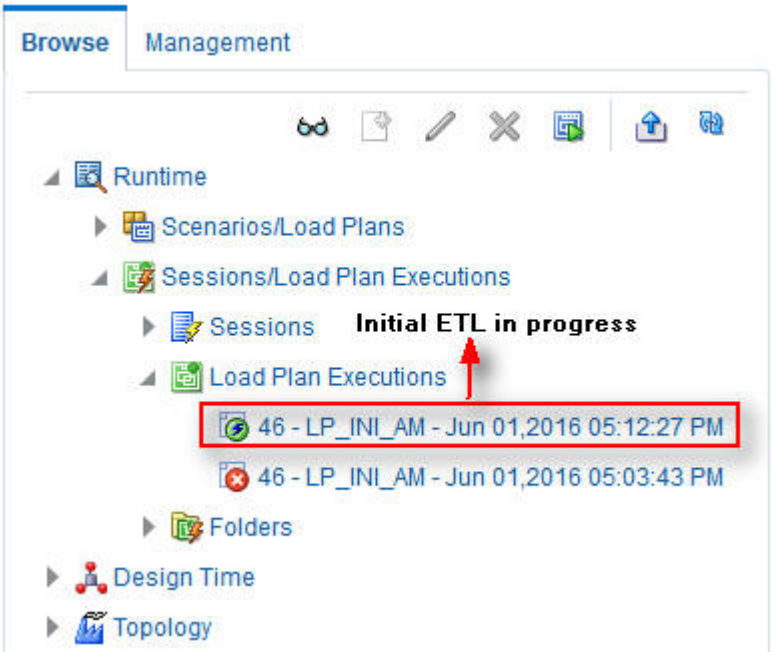
   The steps for the Load Plan appears in the **Relationships** section in the right pane.

Monitor the ETL

To monitor the progress of the initial ETL after executing the **LP_INI_AM** Load Plan, execute the following steps:

1. Select the **Browse** tab, and navigate to **Runtime > Sessions/Load Plan Executions > Load Plan Executions**.

   A tilted **S** in green color appears, which signifies that the ETL process is running properly.



2. In the **Relationships** section, right-click the session, and select **View**, to view the list of all the steps along with the steps that have been completed.

Debug the Failed ETL

To view the step where the ETL process failed and also the error message related to the ETL process failure, execute the following steps:

1. In the **Browse** tab, navigate to **Runtime > Sessions/Load Plan Executions > Load Plan Executions**.

   The status of the Load Plan appears in red color with the **X** symbol, which signifies that the ETL session is not in progress.

2. Double-click the Load Plan.

   The list of steps for the Load Plan appears in the **Relationship** section. The step because of which the ETL process has failed, is highlighted in red color with the **X** symbol.

   - Hover over the error message to view the complete message.
   - Alternatively, navigate to **Runtime > Sessions/Load Plan Executions > Sessions**, right-click the stopped session, highlighted in Red color with the ! symbol, and select **View**.
     The error details appears in the right pane.
   - To view the error message, log on to the Oracle SQL Developer using the Argus ETL user credentials, and execute either or both of the following queries:
     - `SELECT * FROM etl_stage_log ORDER BY id DESC;`
     - `SELECT * FROM etl_mart_log ORDER BY id DESC;`

Monitoring the Restarted ETL (Resume)

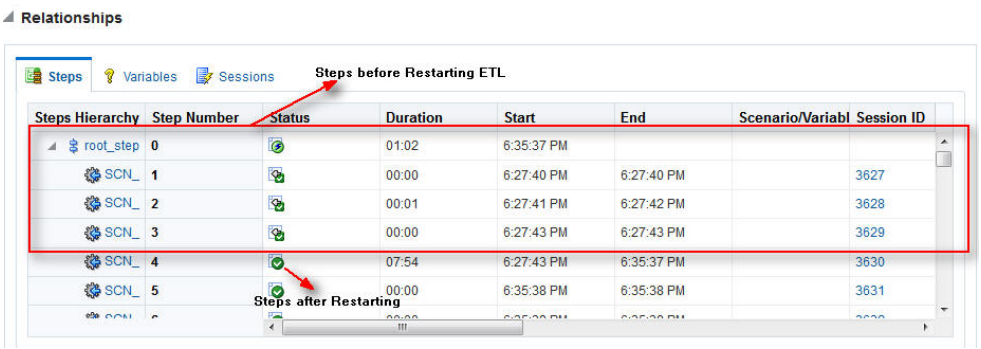
Once you have restarted a stopped ETL process, you can view the status of the process using the following steps:

- In the **Browse** tab, navigate to **Runtime > Sessions/Load Plan Executions > Load Plan Executions** section.

  The status of the restarted ETL process appears in green color, which signifies that the ETL is in progress again.

  To view the status of the steps completed before restarting the ETL, and the steps after restarting the ETL, double-clicking the session in progress.

  The steps appears in the **Relationship** section in the right pane.



Run the Incremental ETL

For step-by-step information related to the Incremental ETL tasks such as Running, Stopping, and Restarting the Incremental ETL through:

- ODI Studio, see Manage the Incremental ETL Process
- ODI Console, see Manage the Incremental ETL Process

8

Work with Incremental ETL in Oracle Data Integrator Studio

This chapter describes the steps required to administer the ETL process using the Oracle Data Integrator Studio.

For more information, see:

- Schedule an Incremental ETL
- Monitor the Incremental ETL Process
- Manage the Incremental ETL Process

Schedule an Incremental ETL

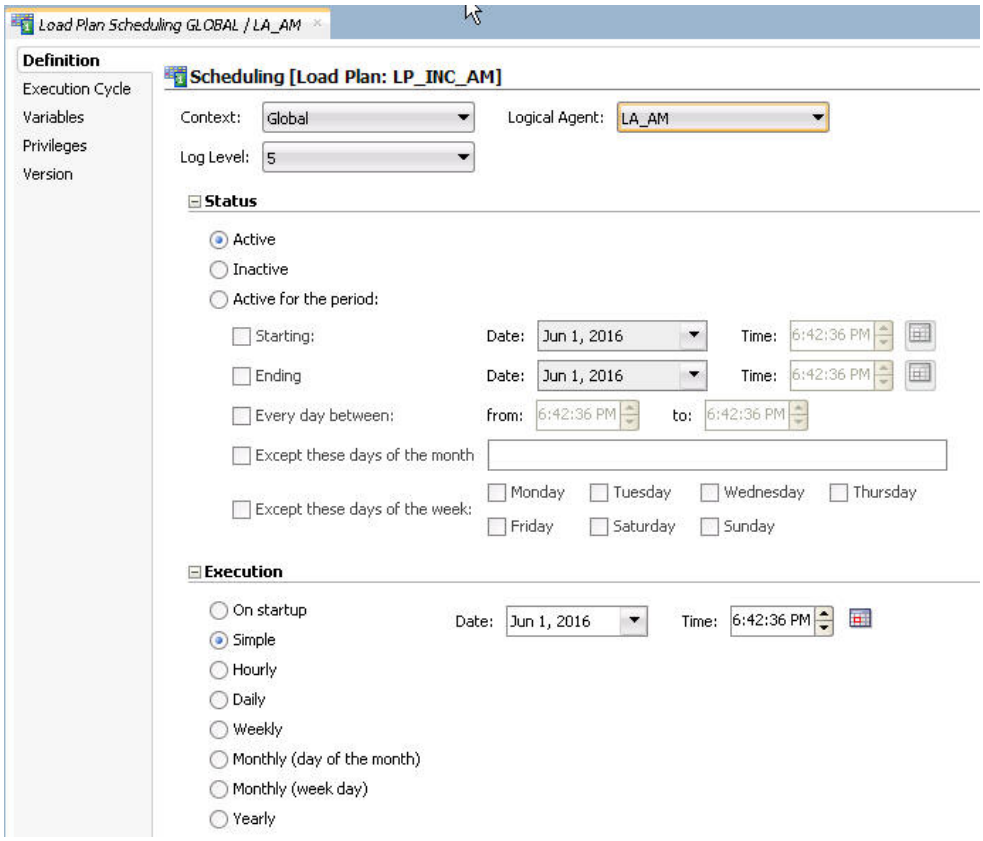
The `AM.zip` file contains pre-configured ETL scheduling in **Inactive** mode.

The Incremental ETL is used to load the delta data. You can execute an Incremental ETL either by executing Load Plan `LP_INC_AM`, or scheduling an ETL to run at the configured time interval.

To schedule a Load Plan, execute the following steps:

1. In the **Designer** tab, navigate to **Load Plans and Scenarios** section and expand **LP_INC_AM** (Load Plan for Incremental ETL).
2. Right-click **Scheduling** and select **New Scheduling**.

   The **Load Plan Scheduling** dialog box appears.



You can set options given in the **Status** and **Execution** sections, according to the requirements to schedule the Load Plan.

Monitor the Incremental ETL Process

The process of monitoring the Incremental ETL using the Oracle Data Integrator Studio is same as the process of monitoring the Initial ETL.

For step-by-step information related to monitoring the Incremental ETL process using the ODI Studio, see Monitor Initial ETL Process: Oracle Data Integrator Studio.

Manage the Incremental ETL Process

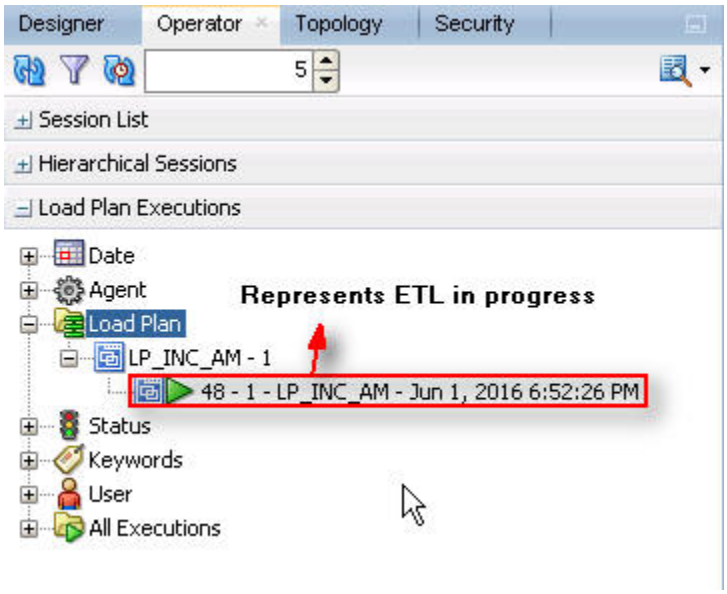
This section describes the steps required to manage the Incremental ETL process using the Oracle Data Integrator Studio.

For more information, see:

- Run the Incremental ETL
- Run the Incremental ETL with Clear Cache
- Stop the Incremental ETL
- Restart the Incremental ETL (Resume)
- Process a Stopped or a Failed ETL

Run the Incremental ETL

1. Open the Oracle Data Integrator Studio, and click **Connect to Repository**.
   The Oracle Data Integrator Login dialog box appears.
2. In the Oracle Data Integrator Login window:
   a. From the **Login Name** drop-down list, select the Oracle Data Integrator Work Repository name.
   b. In the **User** field, enter the name of the ODI user.
   c. In the **Password** field, enter the password for the ODI user.
   d. Click **OK**.
      The Oracle Data Integrator screen.
3. From the left pane, select the **Operator** tab.
4. Expand the Load Plans and Scenarios section.
   The **LP_INC_AM** option represents the load plan for the Incremental ETL process for Oracle Argus Mart.
5. Right-click the **LP_INC_AM** option, and from the drop-down menu, click **Run**.
   The Start Load Plan dialog box appears.
6. Click **Run**.
7. In the Start Load Plan screen:
   a. From the **Context** drop-down list., select **CTX_ARGUSMART**.
   b. From the **Logical Agent** drop-down list, select **LA_AM**.
   c. From the **Log Level** drop-down list, select a user session task log level.
   d. Click **OK**.
      The Information dialog box with the `Load Plan Started` confirmation message appears.
8. Click **OK**.
   You can verify the status of the ETL process by navigating to the Load Plan Executions section and expanding the **Load Plan** folder. You can view the status of the Load Plan in green color with tilted **s**, which signifies that the ETL session is in progress.



Run the Incremental ETL with Clear Cache

> **Note:**
>
> - Execute this procedure only if you require the Oracle Business Intelligence Enterprise Edition Clear Cache option.
> - Oracle Business Intelligence Enterprise Edition Clear Cache option works only when Oracle Business Intelligence Enterprise Edition and Oracle Data Integrator are installed on the same machine.

1. Import the file `AM.zip` as per the steps specified in section 'Import Argus Mart Schema Objects' of section 4.2
2. Refresh the Designer tab and verify that:
   - A new load plan named LP_INC_AM_with_ClearCache is available.
   - PKG_BI_CLEAR_CACHE component is added to this new Load Plan.
   - The following new variables are available:
     - VAR_ALN_BI_DOMAIN_PATH
     - VAR_ALN_BI_SQL_PATH
     - VAR_ALN_BI_USER
     - VAR_ALN_BI_PWD
3. Set up the **bi_clear_cache.sql**.
   a. Copy the **bi_clear_cache.sql** from the ODI folder.
   b. Place the file to a location from where OBIEE can access it.

```
For example:
- Linux: /u01/obieecache/bi_clear_cache.sql- Windows
c:\obieecache\bi_clear_cache.sql
```

c. Make sure the OS user that installs OBIEE has the required permissions for the bi_clear_cache.sql file.

d. Edit the SQL file as required:

To...	Add
Clear the entire cache	call SAPurgeAllCache();
Purge the cache of OPVA_DWH database	call SAPurgeCachebyDatabase('OPVA_DWH');
Purge the cache of AI80_SRC database	call SAPurgeCachebyDatabase('AI80_SRC');
Purge the cache of multiple databases	call SAPurgeCachebyDatabase('OPVA_DWH');call SAPurgeCachebyDatabase('AI80_SRC');

> **Note:**
>
> Here, the OPVA_DWH and AI80_SRC are the database names in the physical architecture inside OBIEE RPD.

4. Configure Oracle Data Integrator for Oracle Business Intelligence Enterprise Edition Clear Cache.

a. Login to Oracle Data Integrator Studio.

b. Connect to Oracle Argus Mart Work Repository.

c. Navigate to the Designer tab.

d. Open the package PKG_BI_CACHE.

e. Navigate to the Diagram sub-tab, and select **odiOSCommand_ClearCache**.

f. Configure the following based on your environment:

Parameter	Action

Command To Execute
(Only for Windows)
	Update the command to have relative folder paths as per the Windows OS convention.
	
	`For example:`
	`#ARGUSMART.VAR_ALN_BI_DOMAIN_PATH/bitools/bin/nqcmd.cmd`
	`-d AnalyticsWeb`
	`-u #ARGUSMART.VAR_ALN_BI_USER`
	`-p #ARGUSMART.VAR_ALN_BI_PWD`
	`-s #ARGUSMART.VAR_ALN_BI_SQL_PATH\bi_clear_cache.sql`

Output File	Update the file location.

Parameter	Action
Error File	Update the file location.

g. Save the changes.

h. Navigate to Overview > Scenarios tab, right-click the **PKG_BI_CACHE Version 001** scenario, and select **Regenerate**.

i. In the Regenerate Scenario pop-up window, click **OK**.

j. In the Scenario Variables window, click **OK**.

5. Login to ODI Studio.
6. Connect to Argus Mart Work Repository.
7. Navigate to the Operator tab.
8. Go to Load Plan and Scenarios > LP_ARGUSMART822 and right-click the load plan **LP_INC_AM_with_ClearCache**.
9. Enter the values for following variables:

Variable	Description	Sample Value
VAR_ALN_BI_DOMAIN_PATH:	Defines Oracle Business Intelligence Enterprise Edition Domain Home Path.	/u01/app/oracle/Middleware/user_projects/domains/bi
VAR_ALN_BI_SQL_PATH:	Defines complete directory path where bi_clear_cache.sql is available.	/u01/obieecache
VAR_ALN_BI_USER:	Defines the Login ID of the Oracle Business Intelligence Enterprise Edition admin user.	weblogic
VAR_ALN_BI_PWD:	Defines password of the Oracle Business Intelligence Enterprise Edition admin user.	—

10. To start the load plan execution click **OK**.

Stop the Incremental ETL

1. Right-click the Load Plan, which you want to stop, in the **Load Plan** folder of the **Load Plan Executions** section.
2. From the drop-down menu, select **Stop Normal**.

   The **Stop Load Plan** dialog box appears.
3. Select **PA_AM** from the **Physical Agent** drop-down list.

4. Click **OK**. This stops the execution of the Load Plan.

   You can verify the status of the ETL process by navigating to the **Load Plan Executions** section and expanding the **Load Plan** folder. You can view the status of the Load Plan in red color with the X symbol, which signifies that the ETL session is not in progress.

> **Note:**
>
> You must verify in Oracle Argus Mart database if the ETL session has been successfully ended after this step.

Restart the Incremental ETL (Resume)

Restarting the Incremental ETL process enables you to start the ETL process from the last execution step where it was stopped or failed.

1. Right-click the Load Plan, which you want to restart, in the **Load Plan** folder of the **Load Plan Executions** section.
2. From the drop-down menu, click **Restart**.

   The Restart Load Plan dialog box appears.
3. Select **PA_AM** from the **Physical Agent** drop-down list.
4. Select the required log level from the **Log Level** drop-down list.
5. Click **OK**. This displays the **Information** dialog box with the **Load Plan restarted** message.
6. Click **OK**.

   This adds another Load Plan, with the same name as that of the stopped ETL, in the **Load Plan** folder of the **Load Plan Executions** section. However, this instance of the ETL Process is in Green color, which signifies that the ETL is in progress.

   Once the ETL process is complete, the Load Plan is displayed in Green color with a check mark.

Process a Stopped or a Failed ETL

The complete ETL process is divided into two major phases: Staging and Mart. The Mart phase starts only when the Staging phase is complete.

If an ETL process fails, you have the option of continuing the process from the failed step or executing it again from the beginning of ETL.

This section explains the steps to resume a failed ETL from the failed step and to execute it again from the beginning of ETL.

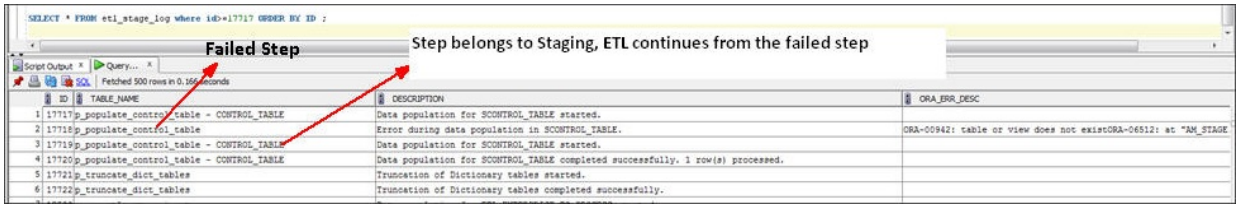
This section comprises the following sub-sections:

- Continue the Failed Incremental ETL
- Restart the Failed Incremental ETL (Rerun)

Continue the Failed Incremental ETL

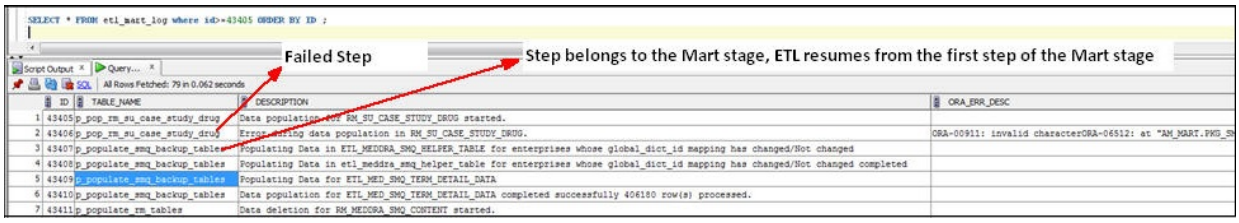
If the last execution step of the failed or stopped ETL belongs to the Staging phase, the ETL resumes from the failed or stopped point, as shown in the following figure:

Figure 8-1 Staging Phase: Incremental ETL Resumes from Failed or Stopped Point



If the last execution step of the failed or stopped ETL belongs to the Mart phase, the ETL resumes from the first step of the Mart phase and not from the failed or stopped point.

Figure 8-2 Mart Phase: Incremental ETL Resumes from the First Step of Mart



The process to continue the failed Incremental ETL from the failed step is exactly the same as that of the process of restarting the Incremental ETL after stopping it.

See the Restart the Incremental ETL (Resume) section for the step-by-step procedure to continue the failed Incremental ETL from the failed step.

Restart the Failed Incremental ETL (Rerun)

The process to restart the failed Incremental ETL from the beginning is exactly the same as that of the process of running the Incremental ETL.

However, before restarting the ETL, you must log on to the Oracle SQL Developer or SQLPlus (or SQL Prompt) using the Argus ETL User credentials and execute the following statements:

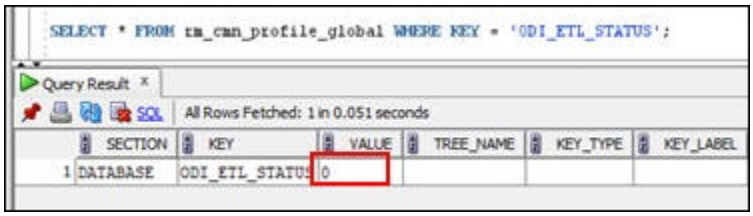
```
EXEC pkg_sm_stage_util.p_set_cmn_profile_value
('DATABASE', 'ODI_ETL_STATUS', '0');EXEC
pkg_sm_stage_util.p_set_cmn_profile_value ('DATABASE',
'ETL_SM_ITERATION_NUMBER', NULL);

COMMIT;
```

To verify the successful execution of these statements, you can execute the following Select statements:

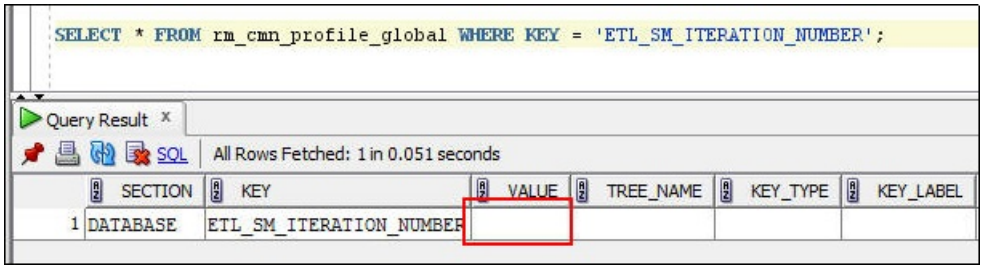
- `SELECT * FROM rm_cmn_profile_global WHERE KEY = 'ODI_ETL_STATUS';`
  The entry for the **Value** column must be **0** after executing this statement.

Figure 8-3 Select Statement 1 to Verify Successful Execution



- `SELECT * FROM rm_cmn_profile_global WHERE KEY = 'ETL_SM_ITERATION_NUMBER';`
  The entry for the **Value** column must be blank after executing this statement.

Figure 8-4 Select Statement 2 to Verify Successful Execution



See the Run the Incremental ETL section for the step-by-step procedure to restart the failed Incremental ETL from the beginning of ETL.

9

Work with Incremental ETL in Oracle Data Integrator Console

This chapter describes the steps required to administer the ETL process using the Oracle Data Integrator Console.

For more information, see:

- Schedule an ETL
- Monitor the Incremental ETL Process
- Manage the Incremental ETL Process

Schedule an ETL

The ETL can be scheduled through Oracle Data Integrator Studio only.

To schedule an ETL, see Schedule an Incremental ETL.

Monitor the Incremental ETL Process

The process of monitoring the Incremental ETL using the Oracle Data Integrator Console is same as the process of monitoring the Initial ETL.

For step-by-step information related to monitoring the Incremental ETL process using the Oracle Data Integrator Console, see Monitor Initial ETL Process: ODI Console.

Manage the Incremental ETL Process

This section describes the steps required to manage the Incremental ETL process using the Oracle Data Integrator Console.

For more information, see:

- Run the Incremental ETL
- Stop the Incremental ETL
- Restart the Incremental ETL (Resume)
- Process a Stopped or a Failed ETL

Run the Incremental ETL

1. Open the Oracle Data Integrator Console. This displays the Oracle Data Integrator Console Sign In window.
2. In the **Oracle Data Integrator Sign In** window:
    a. Select the ODI Work Repository name from the **Repository** drop-down list.

b. Enter the name of the ODI user in the **User Id** field.

c. Enter the password for the ODI user in the **Password** field.

d. Click **Sign In**.
The **Oracle Data Integrator Console** screen appears.

3. Select the **Browse** tab in the left pane.

4. Expand the **Runtime** folder, and navigate to **Runtime > Scenarios/Load Plans > Folder > LP_ARGUSMART822**, and select **LP_INC_AM**.
The **LP_INC_AM** option in this section represents the load plan for the Incremental ETL process for Argus Mart.

5. Click **Execute**.

6. In the Execute Load Plan window:

a. Select **LA_AM** from the **Logical Agent** drop-down list.

b. Select **CTX_ARGUSMART** from the **Context** drop-down list.

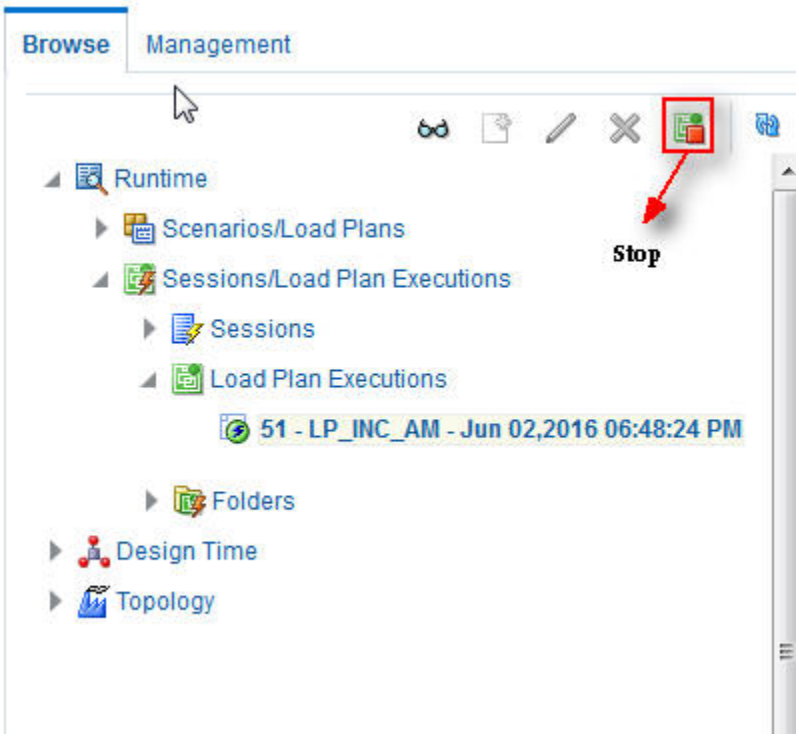
c. Select the desired log level from the **Log Level** drop-down list.

d. Click **Execute**. This displays the **Information** dialog box with the **Load Plan Execution** submitted successfully confirmation message.

7. Click **OK**.
You can verify the status of the ETL process by expanding the **Load Plan Executions** folder in the **Sessions/Load Plan Executions** section. You can view the status of the Load Plan in green color with tilted **s**, which signifies that the ETL session is in progress.

Stop the Incremental ETL

1. Select the Load Plan, which you want to stop, by expanding the **Load Plan Executions** folder of the Sessions/Load Plan Executions section and click **Stop**.



2. In the Stop Load Plan Execution dialog box, from the **Stop Type** drop-down list, select **Normal**.
3. Select **OracleDIAgent** from the **Physical Agent** drop-down list.
4. Click **Stop**.

   The **Information** dialog box appears with the **Load Plan was Stopped Successfully** confirmation message.
5. Click **OK**.

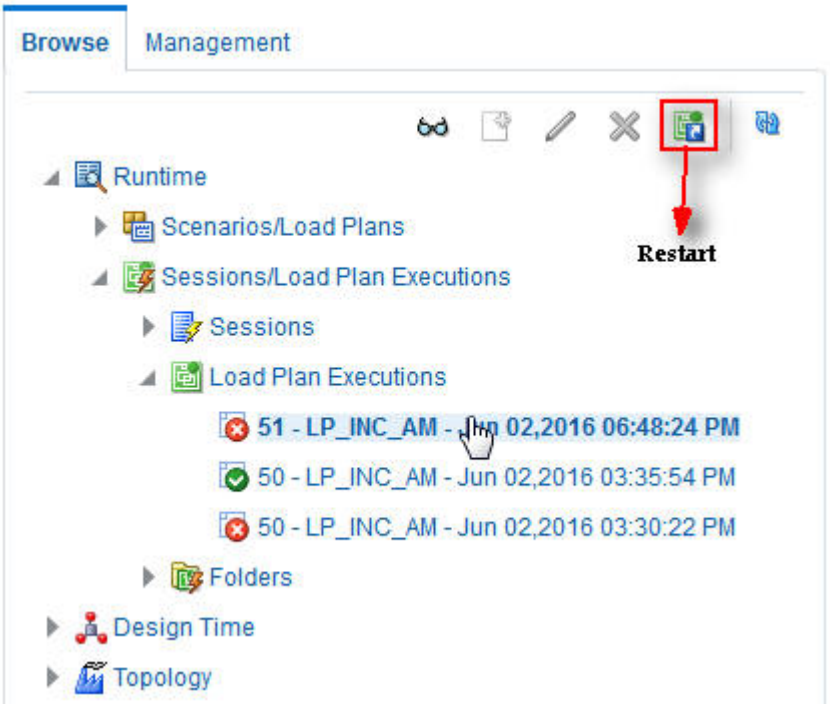
   You can verify the status of the ETL process by navigating to the **Load Plan Executions** folder in the **Sessions/Load Plan Executions** section. You can view the status of the Load Plan in **Red** color with the X symbol, which signifies that the ETL session is not in progress.

> **Note:**
>
> You must verify in Oracle Argus Mart database if the ETL session has been successfully ended after this step.

Restart the Incremental ETL (Resume)

Restarting the Incremental ETL process enables you to start the ETL process from the last execution step where it was stopped or failed.

1. Select the Load Plan, which you want to restart, in the **Load Plan Executions** folder of the **Sessions/Load Plan Executions** section and click **Restart**.



2. In the **Restart Load Plan Execution** dialog box, from the **Physical Agent** drop-down list., select **OracleDIAgent**.
3. Select the required log level from the **Log Level** drop-down list.
4. Click **Restart**. This displays the **Information** dialog box with the **Load Plan restarted** message.
5. Click **OK**.

   This adds another Load Plan, with the same name as that of the stopped ETL, in the **Load Plan Executions** folder of the **Sessions/Load Plan Executions** section. However, this instance of the Load plan is in Green color, which signifies that the ETL is in progress.

Process a Stopped or a Failed ETL

The processing of a stopped or a failed ETL in Oracle Data Integrator Console is same as the processing of a stopped or a failed ETL in Oracle Data Integrator Studio.

For detailed information, see Process a Stopped or a Failed ETL.

10

Uninstall the Oracle Argus Mart Application

To uninstall the Oracle Argus Mart application, execute the following steps:

1. Double-click `Setup.exe` to open the Oracle Universal Installer, available at the following location:
   `<ArgusMart_HOME>\Disk1\install`

   The Welcome screen appears.
2. Click **Deinstall Products**.
   The Inventory screen appears.
3. In Contents tab, expand **Independent Products**.
   The list of Independent Products appears.
4. Select **Oracle Argus Mart <version number>** check box.
   Note the installation location displayed under the **Product Information** frame.

   For example:

   ```
   Location C:\ArgusMart822\oracle.hsgbu.am specifies
   installation path as C:\ArgusMart822
   ```
5. Click **Remove**.
   A confirmation message appears.
6. Click **Yes**.
   A progress bar appears and subsequently removes Oracle Argus Mart from the list of Independent Products.
7. Click **Close** to exit from the Inventory screen.
8. Click **Cancel** in the Oracle Universal Installer screen to exit.
9. Delete the folder, where the Oracle Argus Mart was installed, from the local file system.
   Example: `C:\AM`
10. Navigate to `...\ArgusMart\Database\DBInstaller`.
11. Right-click Oracle Argus Mart, and from the drop-down menu, click **Delete**.
12. To Remove Database Components for Oracle Argus Mart:
    a. Remove Database Schemas from Oracle Argus MartDatabase.
       Connect to SYSTEM or DBA user of Oracle Argus Mart Database, and execute the following commands to drop Oracle Argus Mart Users, Tablespaces, and other objects.

       ```
       connect SYSTEM/<password>@<ArgusMartDB>

       DROP USER "AM_APP_USER" CASCADE;
       DROP USER "AM_BI_USER" CASCADE;
       DROP USER "AM_ETL_USER" CASCADE;
       DROP USER "AM_MART_USER" CASCADE;
       DROP USER "AM_STAGE_USER" CASCADE;
       ```

```
DROP USER "AM_VPD_USER" CASCADE;

DROP ROLE "AM_VPD_ADMIN_ROLE";

DROP PUBLIC SYNONYM "RM_CMN_PROFILE_GLOBAL";

ALTER TABLESPACE "AM_APP_DATA_01" COALESCE;
ALTER TABLESPACE "AM_APP_INDEX_01" COALESCE;
ALTER TABLESPACE "AM_APP_LOB_01" COALESCE;
ALTER TABLESPACE "AM_MART_DATA_01" COALESCE;
ALTER TABLESPACE "AM_MART_INDEX_01" COALESCE;
ALTER TABLESPACE "AM_MART_LOB_01" COALESCE;
ALTER TABLESPACE "AM_STAGE_DATA_01" COALESCE;
ALTER TABLESPACE "AM_STAGE_INDEX_01" COALESCE;
ALTER TABLESPACE "AM_STAGE_LOB_01" COALESCE;

DROP TABLESPACE AM_APP_DATA_01 INCLUDING CONTENTS;
DROP TABLESPACE AM_APP_INDEX_01 INCLUDING CONTENTS;
DROP TABLESPACE AM_APP_LOB_01 INCLUDING CONTENTS;
DROP TABLESPACE AM_MART_DATA_01 INCLUDING CONTENTS;
DROP TABLESPACE AM_MART_INDEX_01 INCLUDING CONTENTS
DROP TABLESPACE AM_MART_LOB_01 INCLUDING CONTENTS;
DROP TABLESPACE AM_STAGE_DATA_01 INCLUDING CONTENTS
DROP TABLESPACE AM_STAGE_INDEX_01 INCLUDING CONTENT
DROP TABLESPACE AM_STAGE_LOB_01 INCLUDING CONTENTS;
```

b. Remove Oracle Argus Mart Schema on Oracle Argus Safety Database (AS_MART_USER) from Argus Safety Database created for Oracle Argus Mart.
Connect to SYSTEM or DBA user of Argus Safety Database.

```
connect SYSTEM/<password>@<ArgusSafetyDB>
DROP USER "AS_MART_USER" CASCADE;
```

13. Remove the TNS entry of the Oracle Argus Mart database from the given Oracle Home path (see `Section 2.2 > Step 6`) located at `..\network\admin\tnsnames.ora`
14. Restart the system.

> **Note:**
>
> If you are re-installing Oracle Argus Mart on the same server, you must provide the same folder path that was specified during the previous installation process.For example, if you installed Argus Mart at `C:\AM` location and uninstall it using the steps mentioned above, you must enter the same folder path (for example, `C:\AM`) that was entered in the previous installation process.

Part II
Administration

This part of the *Oracle Argus Mart Installation and Administration Guide* describes administrative tasks that enables you to manage Oracle Argus Mart.

For more information, see:

- Set Up Context in a Multi-tenant Environment
- Secure Unblinding in Oracle Argus Mart
- Rebuild a Case in Oracle Argus Mart
- Troubleshooting

11

Set Up Context in a Multi-tenant Environment

In a multi-tenant setup, you can view only one enterprise data at a time for which context has been set.

To set the context for an enterprise, execute the following steps:

1. Connect to the Argus Mart User (AM_MART_USER).
2. Execute the following command:

   ```
   pkg_rls.set_context(:LoginUserName, :Enterpriseid, 'ARGUS_MART', NULL);
   ```

   Where,

   - **LoginUserName** refers to the User Name
   - **Enterpriseid** refers to the ID for the enterprise
   - **ARGUS_MART** refers to the Application Name

   This completes the steps to set the context for the enterprise.

Example 11-1 Setting Context for an Enterprise

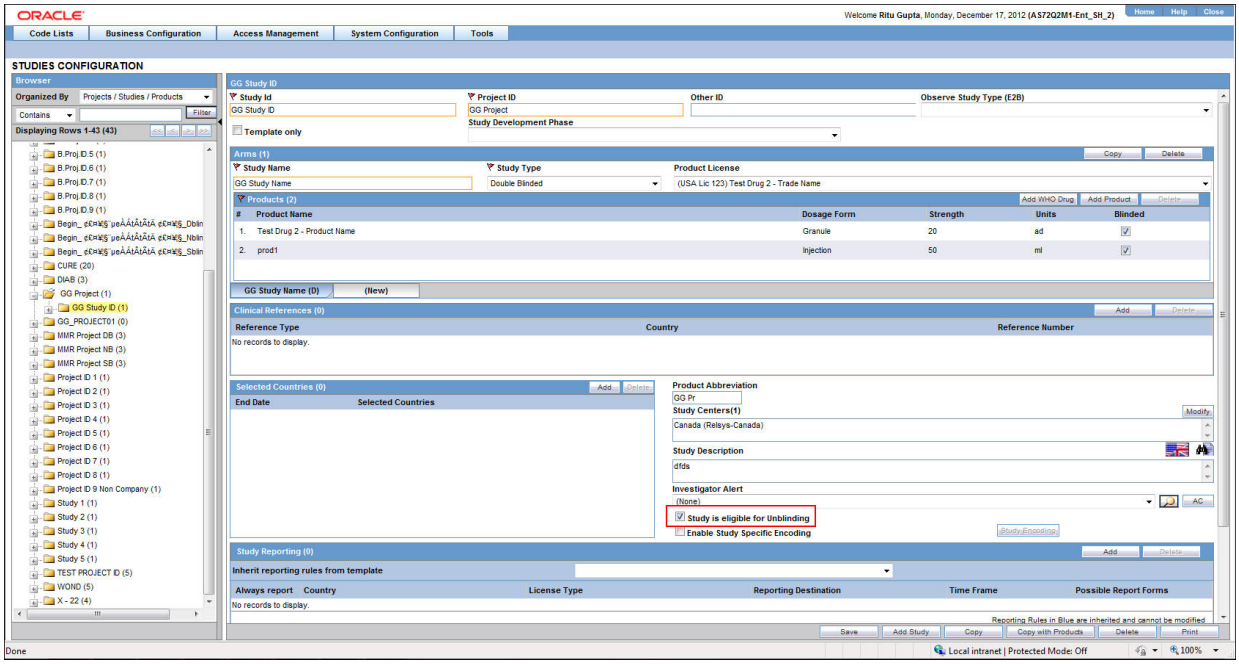
```
Execute pkg_rls.set_context('admin',3,'ARGUS_MART',NULL);
```

12

Secure Unblinding in Oracle Argus Mart

This chapter explains the concept of Blinded Security for certain table columns in Oracle Argus Mart for a drug study.

The value for some of the table columns in Oracle Argus Mart is dependent upon the selection of **Business Configuration > Studies Configuration > Study** is eligible for Unblinding check box, in Oracle Argus Safety.



If the this check box is selected, the actual values for all the blinded columns is displayed in Oracle Argus Mart tables.

However, if this check box is not selected, the actual values for all the blinded columns are replaced by NULL, Blinded, or any other value in the Oracle Argus Mart tables.

In case of the Reporting Mart, there are three views which comprise the Blinded information: v_rm_su_case_product, v_rm_su_case_prod_drugs, and v_rm_su_case_dose_regimens. These views display the actual data only if the **Study is eligible for Unblinding** check box is selected.

Similarly, in case of a Signal Mart, there are certain table columns which comprise the Blinded information. The name of these columns end with _su, which represents Secure Unblinding. These table columns display the actual data only if the **Study is eligible for Unblinding** check box is selected.

13

Rebuild a Case in Oracle Argus Mart

During the incremental ETL execution, you may need to re-populate certain cases from the scratch due to DLP data corruption or migration of cases in chunk.

To rebuild the entire information for the selected cases:

1. Specify ENTERPRISE_ID/CASE_ID of such cases in the table ETL_MANUAL_RBLD_CASE_LIST.
2. During the Incremental ETL, these cases will be deleted from Reporting Mart (RM) and Signal Mart (SM) tables, and rebuilt from the scratch.

   Note that the cases that are not part of this table, will be processed only for delta data as before.
3. When a case that is rebuilt has an effective start date earlier than the current value in switches START_DATE_CURRENT_DATA_SUPPORT and START_DATE_LOCKED_REVISION_SUPPORT, these switch values will be over-written with the rebuild case effective start date.

> **Note:**
>
> When the case is rebuilt, any reference data change that is present in the case revisions will be lost.

> **Note:**
>
> Oracle recommends to use this feature cautiously and on need basis only.

14

Troubleshooting

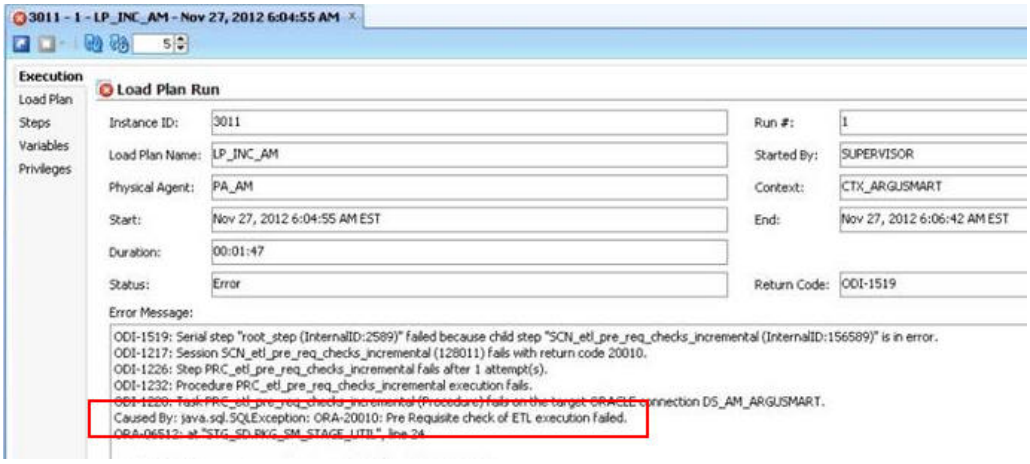
The following is the list of the some error messages that might appear while working with Oracle Argus Mart, the cause for those messages, and the resolution:

ETL Execution Pre-Requisite Check Failed Error

Error Message:

There are some Pre-requisite checks that you must do before the execution of the ETL. The following is the error message, which is displayed if any of the Prerequisites checks are not done:

Figure 14-1 Pre-Requisite Check Failed Error



Cause of Error:

The following are the possible causes of this error message:

- If you are trying to run the Initial ETL on a database again without executing the Re-initial script.
- If you are trying to execute the Incremental ETL prior to the Initial ETL.
- If you have not configured the First Human Language Profile Switch using the Oracle Argus Safety console for the enterprises configured in Oracle Argus Mart. You must not leave the value for the First Human Language Profile Switch, as Blank.

- If the previous instance of the ETL is still not complete for the Load Plan.

Resolution:

To resolve this error message, you must:

- Ensure that you run the Initial ETL on a database again only if you have already executed the Re-initial script. For more information on Re-initial script, see Restart the Failed Initial ETL (Rerun).
- If you are trying to run the Incremental ETL on a database, ensure that the Initial ETL has already been executed on it.
- Ensure that you have not left the value for the First Human Language Profile Switch for the enterprises configured in Oracle Argus Mart, as Blank.
- Ensure that the Previous Instance of the ETL process is complete. You can either resume the ETL process if it is in Stopped state, or you can execute the re-initial script on the database and restart the ETL process from the first step.
  For more information on resuming or restarting the ETL process, see Extract, Transform, and Load Data.

FR Consistency Log Error

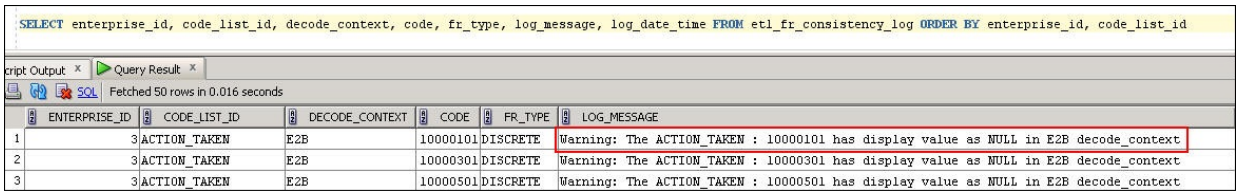
Error Message:

You can run the following query using the SQL developer to view the Flexible Re-categorization (FR) Consistency warning message:

SELECT enterprise_id, code_list_id, decode_context, code, fr_type, log_message, log_date_time FROM etl_fr_consistency_log ORDER BY enterprise_id, code_list_id

The following is the error message:

Figure 14-2 FR Consistency Error



Cause of Error:

The display value for a codelist is NULL in the `rm_code_list_detail_discrete` table in Oracle Argus Safety.

Resolution:

You must update the value for the codelist in the `rm_code_list_detail_discrete` table in Oracle Argus Safety and re-run the ETL.

Multiple Enterprise Creation Messages

The following is the list of validation messages that are displayed while creating multiple enterprises in Oracle Argus Mart:

Source Enterprise Does Not Exist In Mart

Error Message:

Given Source enterprise does not exist in Oracle Argus Mart. Close the window and run application again.

Cause of Error:

While creating multiple enterprises in Oracle Argus Mart, you must enter an enterprise name which can be used as a template to create other enterprises. This enterprise is referred to as the Source Enterprise.

If the name of the Source Enterprise that you have entered while creating multiple enterprises does not exist in Oracle Argus Mart, this validation message is displayed.

Resolution:

The name of the Source Enterprise that you enter while creating multiple enterprises must exist in Oracle Argus Mart.

Enterprise Does Not Exist In Oracle Argus Safety

Error Message:

From the list provided, no enterprise exists in Oracle Argus Safety. Close the window and run application again.

Cause of Error:

The name of the enterprises that you enter while creating multiple enterprises in Oracle Argus Mart must also exist in the Oracle Argus Safety database.

If these enterprise names do not exist in Oracle Argus Safety, this validation message is displayed.

Resolution:

You must ensure that the name of the enterprises that you enter while creating multiple enterprises in Oracle Argus Mart exist in the Oracle Argus Safety database.

Enterprise Does Not Exist For Configuration In Oracle Argus Mart

Error Message:

From the list provided, no enterprise is valid for configuration in Mart. Close the window and run application again.

Cause of Error:

This validation message is displayed if all the enterprise names that you have entered on the Multiple Enterprise Creation screen already exist in the Oracle Argus Mart database.

Resolution:

You must ensure that the enterprise names that you want to create in Oracle Argus Mart using the Multiple Enterprise Creation screen do not already exist in Oracle Argus Mart.

SMQ-CMQ Loop Error

Error Message:

Error in `p_set_Child_Record` while processing term code self referencing parent child relationship leading to an infinite loop

Cause of Error:

There is an SMQ, which is a Parent in the hierarchy, and has also been referenced as a Child in the hierarchy. This is termed as the Self Referencing Parent Child relationship, which leads to an infinite loop.

Resolution:

You must ensure that an SMQ, which serves as a Parent in the hierarchy, must not also be present as a Child in the hierarchy.

A

Configure Standalone Installation Topology for Standalone Agent

In this chapter:

Prerequisite

Oracle Data Integrator Master and Work Repository Schema are already created. For more details, see

https://docs.oracle.com/middleware/1212/odi/ODING/create_schemas.htm#ODING860 > Chapter 3 Creating the Oracle Data Integrator Master and Work Repository Schema.

To configure a standalone agent:

1. Start the configuration wizard.

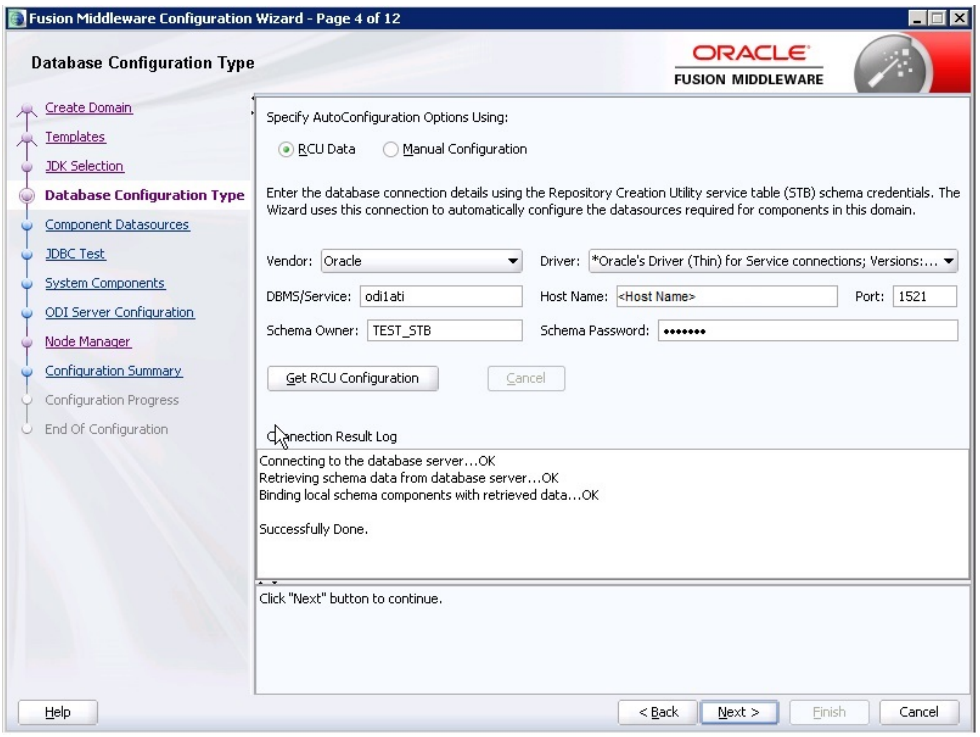
   To begin domain configuration, navigate to the *ORACLE_HOME/oracle_common/common/bin directory*, and start the WebLogic Server Configuration Wizard.

   - On Unix—`./config.sh`
   - On Windows—`config.cmd`

   The Configuration Wizard appears.
2. Create Domain—Select **Create a new Domain**, verify the domain location, and click **Next**.
3. Templates—From the list of available templates, select **Oracle Data Integrator - Standalone Agent - 12.2.1.0 [odi]**, and click **Next**.
4. JDK Selection—Select the **JDK** installed on Host, and click **Next**.
5. Database Configuration Type—Select **RCU**.

   Enter the Repository Details, and click **Get RCU Configuration**.

   When the **Connection Result log** displays the message *Successfully Done*, click **Next**.



6. Component Datasources—The details of schemas created using RCU appears. Verify the schema details, and click **Next**.
7. JDBC Test—Test the database connection, and click **Next**.
8. System Components—Make sure that the System Components is same as the name of the physical agent present in the ODI Studio. That is, the Physical Agent Name in the ODI Studio must be same as System Component (Agent Name).

   Click **Next**.
9. ODI Server Configuration—Select **Server Listen Address** as the IP address of the Host

   Enter **Server Listen Port** as the port number defined for the physical agent in the ODI Studio.
   Click **Next**.
10. Node Manager—Select **Per Domain Custom Location**, verify the path, and click **Next**.
11. Configuration Summary—The Agent Name appears under System Component > ODI.

    Click **Create**.
12. Configuration Progress—The progress of the domain creation process appears.

    On successful completion of the Agent, a message stating *Domain Created Successfully.* appear.
    Click **Next**.
13. End of Configuration—Domain Configuration Succeeded appears with the Domain Name and the Domain Location.

    Click **Finish** to exit the wizard.

B

Configure Standard Installation Topology for Java EE Agent

In this chapter:

Prerequisite

Oracle Data Integrator Master and Work Repository Schema are already created. For more details, see

https://docs.oracle.com/middleware/1212/odi/ODING/create_schemas.htm#ODING860 > Chapter 3 Creating the Oracle Data Integrator Master and Work Repository Schema.

To configure a Java EE agent:

1. Start the configuration wizard.

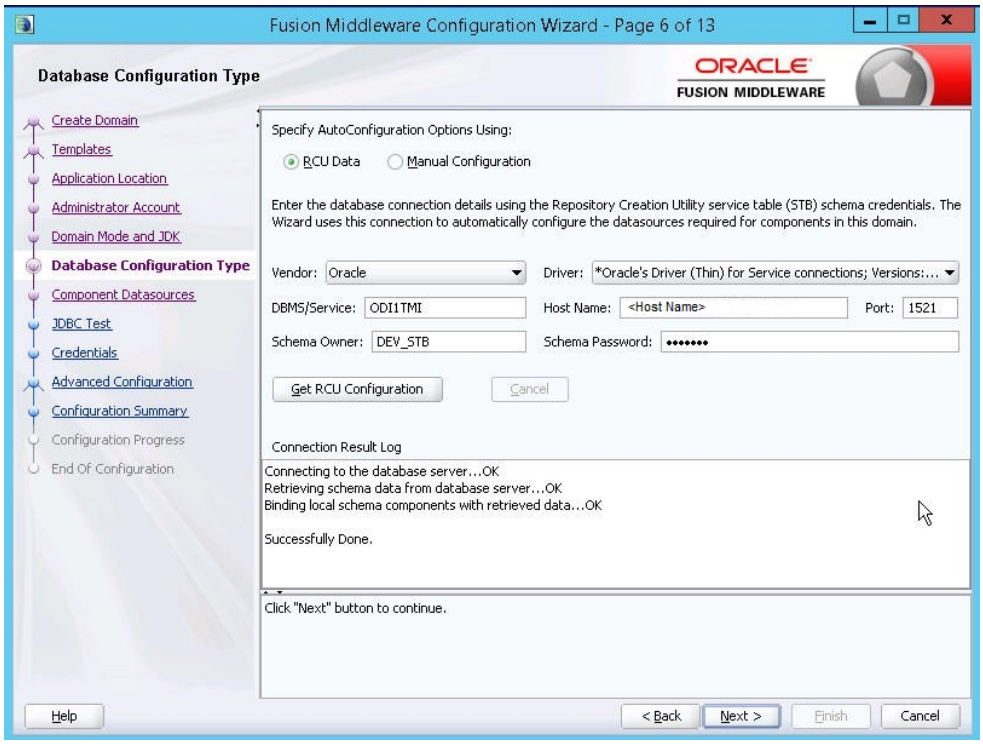
   To begin domain configuration, navigate to the *ORACLE_HOME/oracle_common/common/bin directory*, and start the WebLogic Server Configuration Wizard.

   - On Unix—`./config.sh`
   - On Windows—`config.cmd`

   The Configuration Wizard appears.
2. Create Domain—Select **Create a new Domain**, verify the domain location, and click **Next**.
3. Templates—From the list of available templates, select the following templates, and click **Next**.
   - Oracle Enterprise Manager - 12.2.1 [em]
   - Oracle Data Integrator - Console - 12.2.1.0 [odi]
   - Oracle Data Integrator - Agent - 12.2.1.0 [odi]
   - Oracle Data Integrator - Agent Libraries - 12.2.1.0 [odi]
4. Application Location—Verify the Domain, and the Application location, and click **Next**.
5. Domain Mode and JDK Selection—Specify the Username and Password for the Administrator Account, and click **Next**.
6. Database Configuration Type—Select **RCU**.

   Enter the Repository Details, and click **Get RCU Configuration**.

When the **Connection Result log** displays the message *Successfully Done*, click **Next**.



7. Component Datasources—The details of schemas created using RCU appears. Verify the schema details, and click **Next**.
8. JDBC Test—Test the database connection, and click **Next**.
9. Credentials—Enter the username and password, and click **Next**.
10. Advanced Configuration—Select the following, and click **Next**.
    - Administration Server
    - Node Manager
    - Managed Server, Clusters and Coherence
    - Deployment and Services
11. Administration Server—Change the **Listen Address** to the IP address of the host.
12. Node Manager—Select the Node Manager Type as **Per Domain Custom Location**.

    For Node Manager Credentials, enter the **Username** and **Password**, and click **Next**.
13. Managed Server—Specify the managed server details, and click **Next**.
    - **Server Name:** `<Any Name>`
    - **Port:** `<Port of the Agent as configured in the ODI Studio>`
    - **Server Groups:** Select **JFR-MAN-SVR**
14. (Optional) Clusters—Specify the cluster details, if required, and click **Next**.

15. Coherence Cluster—Make no changes, and click **Next**.
16. Machines—Click **Add**, enter the following details, and click **Next**.
    - Enter Name: <Any Name>
    - Node Manager Listen Address: Select IP Address of the Host
    - Node Manager Listen Port: Any unused Port
17. Assign Server to Machines—Click **>** button to move the **Admin Server** and **ODI_Server** to the Machine, and click **Next**.
18. Deployment Targeting—Click **>** button to move the **Deployments** to **Targets**.

    Similarly, select the **Library** and **Application** folder (one at a time), and move them to the **Targets**.
    Click **Next**.
19. Service Targeting—Click **>** button to move **Services** into **Targets**.

    Move all the available services one by one into Targets.
    Click **Next**.
20. Configuration Summary—Verify the details, and click **Create**.
21. Configuration Progress—The progress of the domain creation process appears.

    On successful completion, click **Next**.
22. End of Configuration—A message appears as Oracle Weblogic Server Configuration Completed with the Domain Location and the URL for the Admin Server.
23. (Optional) To start the Admin Server immediately after exiting the wizard, select the check box **Start Admin Server**.
24. Click **Finish** to exit the wizard.