Oracle Life Sciences Data Management Workbench

Installation Guide

Release 3.5
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Oracle Life Sciences Data Management Workbench Installation Guide, Release 3.5

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Contents

6 Revision History

1

System Requirements and Technology Stack

This section includes the following topics:

- System Requirements
- Technology Stack

System Requirements

This section includes the system requirements for your Oracle Life Sciences Data Management Workbench (Oracle DMW) 3.5 installation. Oracle DMW is built on Oracle Life Sciences Data Hub (Oracle LSH). It contains the following topics:

- Operating Systems

Operating Systems

To get the most current information on the technology stack, see *Oracle Life Sciences Applications Supported Technology Stack*, Document ID KB161006 on My Oracle Support.

For details on the database and middle tier, see these topics:

- Database Tier
- Middle Tier

Database Tier

The requirements are the same as for the Oracle LSH database tier:

> **Note**
>
> To get the most current information on the technology stack, see *Oracle Life Sciences Applications Supported Technology Stack*, Document ID KB161006 on My Oracle Support.

- Linux x86-64 (64-Bit):
  - Oracle Enterprise Linux 8.x
  - Red Hat Enterprise Linux 8.x

Middle Tier

Oracle DMW requires both Oracle LSH middle tier and Oracle DMW middle tier.

> **Note**
>
> To get the most current information on the technology stack, see *Oracle Life Sciences Applications Supported Technology Stack*, Document ID KB161006 on My Oracle Support.

Oracle LSH Middle Tier

- Linux x86-64 (64-Bit):
  - Oracle Enterprise Linux 8
  - Red Hat Enterprise 8.x

Oracle DMW Middle Tier

- Linux x86-64 (64-Bit):
  - Oracle Enterprise Linux 8
  - Red Hat Enterprise Linux 8.x

Technology Stack

To get the most current information on the Oracle DMW technology stack, see *Oracle Life Sciences Applications Supported Technology Stack*, Document ID KB161006 on My Oracle Support.

Oracle DMW has the following requirements:

- Oracle LSH 3.5 and its technology stack
- Oracle WebLogic Server 14.1.2
- Java Development Kit (JDK) 17.x
- Oracle Application Development Framework (ADF) 14.1.2
- One of the following:
  - Oracle InForm Adapter 6.3.x with Oracle InForm 6.3.x.
  - Oracle InForm 7.x

> **Note**
>
> There is no separate Oracle InForm Adapter for Oracle InForm 7.0 and above.

For details on browsers, see the following topic:

- Supported Browsers

Supported Browsers

Oracle DMW supports the following browsers on Microsoft Windows operating systems:

- Google Chrome: Tested using version 143.0.7499.193 (Official Build) (64-bit).

  Version 109.0.5414.120 (Official Build) (64-bit) and later are supported.
- Mozilla Firefox: Tested using version 146.0.1 (64-bit).

Version 109.0.1 (64-bit) and later are supported.

- Microsoft Edge Chromium: Tested using version 143.0.3650.139 (Official Build) (64-bit).

  Version 111.0.5500.0 (Official Build) (64-bit) and later are supported.

> **Note**
>
> For the best performance, use a minimum screen resolution of 1024 x 768.

2

Install Oracle Thesaurus Management System (Optional)

Oracle Thesaurus Management System (Oracle TMS) can be integrated with Oracle Life Sciences Data Management Workbench (Oracle DMW) for use in coding clinical patient data to standard dictionary terms.

> **Note**
>
> If you are using an Oracle TMS release prior to 5.4.1, you must upgrade Oracle TMS to release 5.4.1 by performing the instructions in this chapter.

Install Oracle Thesaurus Management System

Oracle DMW supports Oracle Thesaurus Management System (Oracle TMS) 5.4.1. To install Oracle TMS 5.4.1, see Oracle Thesaurus Management System Installation Guide for release 5.4.1.

Edit setDomainEnv.sh

As directed in Edit setDomainEnv.sh add the parameter `-DhandleDiscEvent` set to `True` on one and only one application server.

This is required to support multiple middle tiers pointing to the same database. Only the server with this parameter set to True will be able to send data from TMS to InForm.

1. Stop the Administration Server.
2. Log in to the system, change to the domain\bin directory, and open setDomainEnv.sh in an editing tool.
3. On only one application server, add a parameter named `-DhandleDiscEvent` to JAVA_OPTIONS and set its value to `TRUE`.

   This is required to support multiple middle tiers pointing to the same database. Only the server with this parameter set to True will be able to send data from Oracle Thesaurus Management System (Oracle TMS) to InForm.

   To add the parameter:

   a. Stop the Administration Server.

   b. Log in to the system, change to the domain\bin directory, and open setDomainEnv.sh in an editing tool.

c. Search for the following text:
```
JAVA_OPTIONS="${JAVA_OPTIONS}"
```

d. Add the parameter and its value within the quotes. For example:

```
if [ "${WEBLOGIC_EXTENSION_DIRS}" != "" ] ; then
JAVA_OPTIONS="${JAVA_OPTIONS} -Dweblogic.ext.dirs=$
{WEBLOGIC_EXTENSION_DIRS}"
export JAVA_OPTIONS

fi

JAVA_OPTIONS="${JAVA_OPTIONS} -DhandleDiscEvent=TRUE"


export JAVA_OPTIONS

# SET THE CLASSPATH
```

Run Script dmetmsseeddata.sql

Run dmetmsseeddata.sql to populate Oracle TMS-related seed data required for Oracle DMW.

1. Make sure that no Oracle LSH session is up and running.
2. Log in to SQL*Plus as tms. (You created a password for this account when you ran the Installer for the Oracle TMS database.)
3. Go to $CDR_TOP/patch/115/sql.
4. Run dmetmsseeddata.sql.

3

Upgrade to Oracle DMW 3.5

To upgrade from Oracle DMW release 3.4.x to Oracle DMW release 3.5, follow instructions in the following topics:

- Upgrade Oracle Life Sciences Data Hub
- Upgrade Oracle WebLogic Server
- Deploy Oracle DMW on the WebLogic Server
- Edit setDomainEnv.sh
- Change the Default Timeout Period (Optional)
- Configure the AppsDataSource in the Administration Console
- Change the Connection Pool Maximum Capacity on DMWServer
- Configure the WebLogic JMS Resources
- Deploy Discrepancies Export and Data Flow Diagram Modules
- Run the Populate Custom Listings Script
- Apply Patch 38943810
- Grant DME_ERR_LOG to Workarea Schemas
  Create a local copy of DME_ERR_LOG in all existing workarea schemas.
- Upgrade Existing Business Area for Custom Listings
- Upgrade File Watcher to Support Archiving Files (Optional)
- Configure for Disaster Recovery
- Install Oracle Thesaurus Management System (Optional)
- Migrate the Editioned Objects

Upgrade Oracle Life Sciences Data Hub

Follow instructions in the *Oracle Life Sciences Data Hub Installation Guide* chapter on upgrading to Release 3.5. The process includes upgrading Oracle database.

Upgrade Oracle WebLogic Server

Before you upgrade to 3.5, you need to upgrade Oracle WebLogic Server by completing the following tasks:

- Create a Backup of the Existing Environment
- Install Oracle Java Development Kit (JDK)
- Install Oracle WebLogic Server 14.1.2
- Update the Datasource Username
  Avoid the invalid WLS component schema owner error during the readiness check.
- Run the Upgrade Assistant for Readiness Check

- Run the Upgrade Assistant to Upgrade Database Schemas
- Run the Reconfiguration Wizard
- Run the Upgrade Assistant to Upgrade Domain Configurations
- Perform the Post-Upgrade Tasks
- Restart the Administration and Managed Servers
- Modify the AppsDataSource in WebLogic Remote Console

Create a Backup of the Existing Environment

Before you upgrade the WebLogic Server, complete these steps to create a complete backup of the existing environment.

1. Log in to the Oracle WebLogic server as a WebLogic Install user.
2. Stop the Administration Server and all Managed Servers.
3. Back up the environment. For example, enter:

   ```
   cd /scratch
   ```

   Then enter:

   ```
   nohup cp -R u02 u02_bkpbfrupg &
   ```

Install Oracle Java Development Kit (JDK)

To download and install the latest version of JDK 17.x:

1. Open My Oracle Support and sign in.
2. In the Search field, type KA961 and press **Enter**. The Supported Java SE Downloads on MOSFS document opens.
3. In the details sections, click the **JDK 17** tab.
4. Click the patch ID link of the latest version of JDK 17.
5. Select the appropriate platform from the left panel.
6. Click **ReadMe** to access the Release Notes and **Download** to download the patch.
7. Follow instructions in Release Notes to apply the patch.

Install Oracle WebLogic Server 14.1.2

Follow the instructions in "Installing the Infrastructure Software" from the *Oracle® Fusion Middleware Installing and Configuring the Oracle Fusion Middleware Infrastructure* to install WebLogic Server 14.1.2, which you can find on the media pack or at Oracle Help Center. (Do not try to upgrade an earlier version of Oracle WebLogic Server.)

See the following sections for details on customizations to the installation procedures. For example, when prompted to enter the Inventory Directory after logging in to Oracle Fusion Middleware, enter a new location to install WebLogic Server 14.1.2 and select **Fusion Middleware Infrastructure** to install it.

> **Note**
>
> The WebLogic Server installation process includes specifying a JDK installation. At this point, specify the Oracle Java Development Kit (JDK) that you installed in Install Oracle Java Development Kit (JDK).

Update the Datasource Username

Avoid the invalid WLS component schema owner error during the readiness check.

To avoid the invalid WLS component schema owner error that might occur during the readiness check, perform the following steps:

1. Access the WebLogic Server Administration Console.
2. Under the Domain Structure section in the left navigation pane, expand Services > Data Sources.
3. Locate and select **WLSSchemaDataSource**.
4. Under the Change Center section on the top left of the screen, click **Lock & Edit**.
5. Under the WLSSchemaDataSource section, click the Configuration tab > Connection Pool subtab.
6. In the Properties field, change the value of the username from <env_prefix>_WLS_RUNTIME to <env_prefix>_WLS.
7. Save and activate the changes.

Run the Upgrade Assistant for Readiness Check

Follow these steps to perform a readiness check on the server.

1. Log in to Oracle Fusion Middleware as a WebLogic Install user.
2. Enter:

   ```
   cd $ORACLE_HOME/oracle_common/upgrade/bin
   ```

3. Enter:

   ```
   ./ua -readiness
   ```

4. At the Welcome dialog box, click **Next**.
5. At the Schemas and Configurations dialog box, select **Domain Based**.
6. At the **Domain Directory** field, click **Browse** to browse to the domain directory and click **Next**.
7. At OPSS Schema [DEV_OPSS] dialog box, enter DBA account information and click **Connect**.
8. Enter the schema account information and click **Next**.
9. Continue to click **Next** to check for a successful connection to the components. A "Success" message appears at the bottom of each dialog box.
10. Click **Continue** to see the Readiness Check list. Successful connections appear with a green checkmark.

11. Click **Close**.

Run the Upgrade Assistant to Upgrade Database Schemas

Follow these steps to update the database schemas.

1. Log in to Oracle Fusion Middleware as a WebLogic Install user.
2. Enter:

   ```
   cd $ORACLE_HOME/oracle_common/upgrade/bin
   ```

3. Enter:

   ```
   ./ua
   ```

4. At the Welcome dialog box, click **Next**.
5. At the All Schemas dialog box, select **All Schemas Used by a Domain** and click **Next**.
6. At the **Prerequisites** dialog box, select all the checkboxes and click **Next**.
7. Enter the appropriate information and continue to click **Next** to check for a successful connection to the components. A "success" message appears at the bottom of each dialog box.
8. Click **Continue** to see the examination list. Successful connections appear with a green checkmark.
9. Click **Finish**.

Run the Reconfiguration Wizard

Follow these steps to reconfigure the Domain and Node Manager:

1. Log in to Oracle Fusion Middleware as a WebLogic Install user.
2. Enter:

   ```
   cd $DOMAIN_HOME/config
   ```

3. Enter:

   ```
   cp config.xml config.xml_orig<date>
   ```

4. Enter:

   ```
   vi config.xml
   ```

5. Remove the EbsRealm section from the config.xml file.
6. Update the "default-realm" parameter in the config.xml file as shown below:

   ```
   From:
   <default-realm>EbsRealm</default-realm>

   To:
   <default-realm>myrealm</default-realm>
   ```

7. Enter:

   ```
   cd $ORACLE_HOME/oracle_common/common/bin
   ```

8. Enter:

   ```
   ./reconfig.sh
   ```

9. At the **Existing Domain Location** field, leave the default and click **Next**.
10. At the Reconfiguration Setup Progress dialog box, click **Next**.
11. Enter the appropriate information and continue to click **Next** until you reach the Database Configuration Type dialog box. Then click **Get RCU Configuration** and click **Next**.
12. Continue to click **Next** until you reach the Advance Configuration dialog box. Then select the following options:
    - **Administration Server**
    - **Topology**
    - **Deployments and Services**
13. Continue to click **Next** until you reach the Deployments Targeting dialog box.
14. Expand AppDeployment and select **wsm-pm** from the Deployments column. From the Deployment Targets column, expand Admin Server and select **AdminServer**.
15. Click **Next**.
16. At the Configuration Summary dialog box, click **Reconfig** and then click **Next**.
17. Click **Finish**.

Run the Upgrade Assistant to Upgrade Domain Configurations

Follow these steps to upgrade the domain configurations.

1. Log in to Oracle Fusion Middleware as a WebLogic Install user.
2. Enter:

   ```
   cd $ORACLE_HOME/oracle_common/upgrade/bin
   ```

3. Enter:

   ```
   ./ua
   ```

4. At the Welcome dialog box, click **Next**.
5. At the All Configurations dialog box, click **All Configurations Used By a Domain**.
6. At the Domain Directory field, click **Browse** to browse to the domain directory and click **Next**.
7. At the Prerequisites dialog box, select all the checkboxes and click **Next**.
8. Enter the appropriate information and continue to click **Next** until you reach the Upgrade Summary dialog box, then click **Upgrade**.
9. Click **Close**.

Perform the Post-Upgrade Tasks

Complete the following tasks after you upgrade the WebLogic Server:

1. Update the setDomainEnv.sh file as described in Edit setDomainEnv.sh.
2. Remove $DOMAIN_HOME/lib/fndext.jar.
3. Remove $DOMAIN_HOME/lib/runtime12.jar.
4. Run $WL_HOME/common/wlst.sh.
5. To rebuild fndext.jar, download the patch 37875071 (p37875071_R12_GENERIC.zip) and follow the READ ME in the zip file.
6. Using SFTP, copy the Oracle database file runtime12.jar located at $ORACLE_HOME/sqlj/lib on the Oracle LSH database server to the WebLogic Server computer, to the lib directory of the domain created when you installed the WebLogic Server.
7. Recreate the desktop dbc file.
   a. Copy the database connection file.
      i. Create a directory on the WebLogic Server.
      ii. On the Oracle Applications Server that you installed for Oracle LSH, from $FND_SECURE copy the .dbc Oracle Applications database connection file to the directory.
   b. Reregister the external node and regenerate the desktop dbc file:

```
java oracle.apps.fnd.security.AdminDesktop <apps user>/<apps pwd> \
DELETE \
NODE_NAME=<node name of the external application server> \
[IP_ADDRESS=<IP address of external application server>] \
DBC=<full name and path of existing standard dbc_file>

java oracle.apps.fnd.security.AdminDesktop <apps user>/<apps pwd> \
CREATE \
NODE_NAME=<node name of the external application server> \
[IP_ADDRESS=<IP address of external application server>] \
DBC=<full name and path of existing standard dbc_file>
```

8. Recreate Oracle DMW SSL Keystore configurations using JDK 17.x. For instructions, see section 3.8.2 Enable SSL for DMW in *Oracle Life Sciences Data Hub and Oracle Life Sciences Data Management Workbench SSO Configuration with IDCS* (Document ID KB457314) on My Oracle Support.

Restart the Administration and Managed Servers

After you complete the post-upgrade tasks, restart the Administration Server and all Managed Servers:

1. Log in to the Oracle WebLogic server as a WebLogic Install user.
2. Enter:

```
cd $DOMAIN_HOME/bin
```

3. Start Node Manager, Administration Servers, and Managed Servers.

Modify the AppsDataSource in WebLogic Remote Console

1. Access the WebLogic Administration Console. The URL is http(s)://host_name.company_domain.com:port/console/.
2. On the Welcome page, click **Download WebLogic Remote Console** and follow the prompts to install it.
3. Open WebLogic Remote Console.
4. Create the provider for the admin server connection.
5. Ensure that the AdminServer and DMWServer are running.
6. Under Edit Tree > Services > Datasources, select each of the <AppsDataSource> datasources, select the Connection Pool tab, and then select the Advanced subtab.
7. Disable the Invoke Begin End Request option for all the data sources, except for lswdbBC4JDS.
8. Save and commit the changes.
9. Stop the WebLogic services.
10. Apply Oracle Critical Patch Update (CPU) October 2025 on WebLogic 14c Oracle Home.
11. Apply ADF bundle patch 38348367. For instructions, search for patch 38348367 on My Oracle Support and refer to the Read Me file.
12. Start the WebLogic services.
13. Under Edit Tree > Security > Realms, click **New**.
14. In the Name field, enter `EbsRealm`.
15. Enable Create Default Providers, and click **Create**.

> **Note**
>
> At this point, only save the changes and DO NOT commit the changes.

16. Under Edit Tree > Security > Realms > EbsRealm > Authentication Providers > DefaultAuthenticator, from the Control Flag drop-down, select **Sufficient**.

> **Note**
>
> At this point, only save the changes and DO NOT commit the changes.

17. Under Edit Tree > Security > Realms > EbsRealm > Authentication Providers, click **Create** and enter the following details:
    - In the Name field, enter `ExtAuthenticator`.
    - From the Type drop-down, select **Ext Authenticator**.
    - From the Control Flag drop-down, select **Sufficient**.

> **Note**
>
> At this point, only save the changes and DO NOT commit the changes.

18. Under Edit Tree > Security > Realms > EbsRealm > Authentication Providers > ExtAuthenticator, select the Custom Parameters tab.
19. In the Connection Reference field, enter `jdbc/lswdbDS`.
20. Save and commit the changes.
21. Restart the WebLogic services.
22. Under Edit Tree > Environment > Domain > Security > General > Default Realm > select EbsRealm as the default realm.
23. Save and commit the changes.
24. Restart the WebLogic services.

Deploy Oracle DMW on the WebLogic Server

Perform the instructions in the following topics to deploy the new version of Oracle DMW on the WebLogic Server.

- Download the Oracle DMW Folder
- Deploy Oracle DMW with Default Support for HTTPS
- Deploy Oracle DMW and Disable HTTPS Support

Download the Oracle DMW Folder

Oracle DMW, Oracle LSH, and their technology stacks are contained on the **Oracle Life Sciences Data Management Workbench 3.5** media pack for various platforms.

To receive a physical media pack with all the required DVDs, contact Life Sciences Support. To expedite your request, you can call Oracle Support directly or open a Service Request (SR) selecting problem category: **Version Update Request**.

To download the media pack from eDelivery:

1. Go to Oracle Software Delivery Cloud, http://edelivery.oracle.com, click **Sign In**, and log in with your user ID.
2. Select **Download Package** from the **All Categories** drop-down list (or leave All Categories selected). Enter **Oracle Life Sciences Data Management Workbench** in the Search field and click **Search**.
3. Select **DLP: Oracle Life Sciences Data Management Workbench 3.5.0.0.0** and click **Add to Cart**.
4. Click **Checkout**. You see a list of the selected software:
   - Oracle Life Sciences Data Management Workbench 3.5.0.0.0 (Oracle Standard Terms and Conditions)
   - Oracle Life Sciences Data Hub 3.5.0.0.0
   - Oracle Life Sciences Data Management Workbench 3.5.0.0.0
5. From the **Platform** drop-down list, select the appropriate operating system.
6. Click **Continue**.
7. Review the Terms and Restrictions and select **I accept the terms in the license agreement** to continue. (Click **Print** from the top-right corner of the screen to print the agreement.) Click **Continue**. You see a list of zipped files for the Oracle Life Sciences Data

Hub <*your operating system*> 3.5 release and Oracle Life Sciences Data Management Workbench <*your operating system*> 3.5 release:

- Oracle Life Sciences Data Hub 3.5
- Oracle Life Sciences Data Management Workbench 3.5

8. Leave the list of zipped files selected to download the package of Oracle Life Sciences Data Management Workbench 3.5.0.0.0 files or only select the files you need.
9. Click **Download**. Then browse to the location where you want to save the Oracle executable.
10. Double-click the Oracle executable. Leave the default destination or click **Browse** to select another one. Click **Next**. Oracle downloads the zipped files.
11. Move the zipped files to a staging area and unzip them. The full release contains a software folder for Oracle DMW (**p37944396_35000_Generic.zip**) and Oracle LSH (**p37944438_R12_GENERIC.zip**).
12. Unzip the Oracle DMW 3.5 ZIP file (**p37944396_35000_Generic.zip**) to a temporary directory on the WebLogic Server, creating the software directory containing the following:
    - `dmwapp.ear` file
    - `plan.xml` file
    - `services` folder: This folder contains `dmw-dfd-app.ear` and `dmw-export-app.ear` files.

    > **Note**
    >
    > For details on installing Oracle LSH and Oracle TMS, see the *Oracle Life Sciences Data Hub Installation Guide*.

13. Deploy the patch, which contains the entire application. Perform one of the following procedures depending on what you use HTTPS or HTTP:
    - To use HTTPS, follow the steps in Deploy Oracle DMW with Default Support for HTTPS. To address the Secure-By-Default security practices, by default, Oracle DMW supports and requires HTTPS.
    - To use HTTP, follow the steps in Deploy Oracle DMW and Disable HTTPS Support

Deploy Oracle DMW with Default Support for HTTPS

Deploy the Oracle DMW application tier on the WebLogic Server.

1. Log in as the admin user to the WebLogic Administration Console. The URL is: http(s)://*host_name.company_domain*.com:*port*/console/

   For example:

   http(s)://machine.example.com:1234/console

> **Note**
>
> **If you have an earlier version of Oracle DMW deployed**, stop it and delete it before deploying the new version.
> In the WebLogic Administration Console, select **Deployments** from **Domain Structure**. A list of all deployed applications appears.
>
> If `dmwapp` is included in the list, select its checkbox and:
>
> a. Stop it by selecting Force Stop Now from the Stop drop-down list.
>
> b. Delete it by clicking **Delete**. It no longer appears in the list.

2. Click **Install**. The Install Application Assistant opens.
3. In the paragraph beginning with **Locate deployment to install and prepare for deployment**, click **upload your file(s)**.
4. In the Deployment Archive line, click **Browse** and select dmwapp.ear from your local computer and click **Open**. The system returns to Install Application Assistant.
5. In the Install Application Assistant, click **Next**. This uploads dmwapp.ear to a server directory. This may take some time. When the process completes, the system displays the path to the server directory.
6. In Install Application Assistant, click **Next**.
7. Select **Install this deployment as an application** and click **Next**. The system displays a list of servers.
8. Select the managed server where you want to install the application (DMWServer) and click **Next**. Optional settings appear.
9. Under General, in the Name field, enter `dmwapp` and click **Finish**. The system displays a summary of your selections.
10. Click **Finish**. The system deploys the Oracle DMW middle tier on the managed server. After a successful deployment ta new page called **Settings for dmwapp** appears with the Overview tab displayed.
11. Click **Deployments** under **Domain Structure** to verify that dmwapp is included in the Deployments list and its state is Active.
12. Go to the login screen to check that the application is running. The URL is: http://*host_name.company_domain*.com:*port*/lsw/dme/faces/DmeLogin.jsf

    For example:

    http://srv123.example.com:1234/lsw/dme/faces/DmeLogin.jsf

Deploy Oracle DMW and Disable HTTPS Support

To address the Secure-By-Default security practices, by default, Oracle DMW uses HTTPS. If you intend to use HTTP, you can deploy Oracle DMW using the deployment plan (Plan.xml) that disables HTTPS for Oracle DMW. For further information, see the *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server 14c (14.1.2.0.0)* at https://docs.oracle.com/en/middleware/fusion-middleware/weblogic-server/14.1.2/depgd/index.html.

1. Log in to the WebLogic Server.
2. Open the software directory.

3. Copy the dmwapp.ear file and the plan.xml file to the tmp directory and delete the software directory. The tmp directory now contains only the dmwapp.ear and plan.xml files.
4. Open a shell window and set up the environment:
   `source WL_HOME/server/bin/setWLSEnv.sh`

   For example:

   ```
   source app/oracle/middleware/Oracle_Home/wlserver/server/bin/setWLSEnv.sh
   ```
5. Change directory to the tmp directory.
6. If you have an earlier version of Oracle DMW deployed, stop it and delete it before deploying the new version by entering the following commands.

   > **Note**
   >
   > If you want to store the username and password in a WebLogic configuration file, omit the username and password parameters in the following commands. For more information, see the WebLogic Scripting Tool Command-Line Reference in the *Oracle Fusion Middleware Deploying Applications to Oracle WebLogic Server 14c (14.1.2.0.0)* at https://docs.oracle.com/en/middleware/fusion-middleware/weblogic-server/14.1.2/depgd/wldeployer.html.

   ```
   java weblogic.Deployer -adminurl t3://host_name.your_company_domain.com:port_number
   -username WLS_USER  -password WLS_PASSWORD  -stop  -targets  DMW_SERVER_NAME -name
   dmwapp


   java weblogic.Deployer -adminurl t3://host_name.your_company_domain.com:port_number
   -username WLS_USER  -password WLS_PASSWORD  -undeploy  -targets DMW_SERVER_NAME  -
   name dmwapp
   ```
7. Deploy the new Oracle DMW release by entering the following command. If you stored the username and password in a configuration file, omit the username and password parameters.

   ```
   java weblogic.Deployer -adminurl t3://host_name.your_company_domain.com:port_number -
   username WLS_USER -password WLS_PASSWORD -targets DMW_SERVER_NAME -deploy dmwapp.ear
   -name dmwapp -upload -plan Plan.xml
   ```
8. Exit the shell by entering:

   ```
   exit
   ```
9. Go to the login screen to check that the application is running. The URL is:
   http://*host_name.company_domain*.com:*port*/lsw/dme/faces/DmeLogin.jsf

   For example:

   http://srv123.example.com:1234/lsw/dme/faces/DmeLogin.jsf

Edit setDomainEnv.sh

> **Note**
>
> Do not perform this task (except step 7 to add parameter `-DapmHost`) if you are upgrading from release 3.4.x to 3.5 as you would have already performed it when you had installed or upgraded to release 3.4.x. However, you must perform step 7 even when you are upgrading from 3.4.x to 3.5 release.

Modify the setDomainEnv.sh to configure the WebLogic Administration Server and DMWServer. Oracle recommends the following settings for production use. Be careful to **insert text as directed before or after the located sections**.

1. Stop the Administration Server.
2. Log in to the system, change to the domain\bin directory, and open setDomainEnv.sh in an editing tool.
3. Add a parameter named `-DdmwWebService` to JAVA_OPTIONS and set its value to:
   - `SSL` if you plan to use HTTPS for InForm adapter web service calls.
   - `NONSSL` if you plan to use HTTP for InForm adapter web service calls.

   Search for the following text:

   ```
   JAVA_OPTIONS="${JAVA_OPTIONS}"
   ```

   Add the parameter and value within the quotes. For example:

   ```
   if [ "${WEBLOGIC_EXTENSION_DIRS}" != "" ] ; then
   JAVA_OPTIONS="${JAVA_OPTIONS} -Dweblogic.ext.dirs=${WEBLOGIC_EXTENSION_DIRS}"
   export JAVA_OPTIONS

   fi

   JAVA_OPTIONS="${JAVA_OPTIONS} -DdmwWebService=SSL"

   export JAVA_OPTIONS

   # SET THE CLASSPATH
   ```
4. On one and only one application server, add a parameter named `-DhandleDiscEvent` to JAVA_OPTIONS and set its value to `TRUE`, following the instructions in the previous step.

   This is required to support multiple middle tiers pointing to the same database. Only the server with this parameter set to True will be able to send data from Oracle Thesaurus Management System (TMS) to InForm.
5. Add a parameter named `-DdrPollingFreq` to JAVA_OPTIONS in all the managed servers and set its value to 6, following the instructions in the step 3.

   This property is added to decide the frequency at which the disaster recovery thread should be run. The default value is 6. The disaster recovery will not be functional if this property is not set.
6. Add a parameter named `-DenableCSP` to JAVA_OPTIONS in all the managed servers and set its value to `TRUE`, following the instructions in the step 3.

   This property is added to set a security header to all the requests. The default value is true.

7. Add a parameter named `-DapmHost` to JAVA_OPTIONS in all the managed servers and set its value to `https://*.oci.oraclecloud.com`, following the instructions in the step 3. Here, `https://*.oci.oraclecloud.com` is just an example for the Application Performance Monitoring (APM) host information. Contact Life Sciences Support or OMCS (CSS) team to get the APM host that is configured for you.

   This property is added to configure the APM host.

8. Synchronize the DMW WebLogic server clock with the InFormAdapter server clock by adding a parameter named `user.timezone` to JAVA_OPTIONS and set its value to the same timezone used by the InForm Adapter server, using a valid format supported by Java 8; for example:

   ```
   -Duser.timezone=GMT
   ```

   or

   ```
   -Duser.timezone=EST
   ```

   Make sure this parameter is contained within the quotes:

   ```
   JAVA_OPTIONS="${JAVA_OPTIONS} -Duser.timezone=VALID_TIMEZONE"
   export JAVA_OPTIONS
   ```

9. Locate the following section:

   ```
   if [ "${USER_MEM_ARGS}" != "" ] ; then
       MEM_ARGS="${USER_MEM_ARGS}"
       export MEM_ARGS
   fi
   ```

   and add the following text (which may continue to the next page) **BEFORE** the text shown above:

   > **Note**
   >
   > If you are using names other than "AdminServer" and "DMWServer," change the text accordingly.
   >
   > ```
   > # Set 1024MB for AdminServer
   > if [ "${SERVER_NAME}" == "AdminServer" ] ; then
   >       USER_MEM_ARGS="-Xms512m -Xmx1024m -XX:MetaspaceSize=256m -
   > XX:MaxMetaspaceSize=512m "
   >       export USER_MEM_ARGS
   > fi
   > #Set 4G for Managed Server
   > if [ "${SERVER_NAME}" == "DMWServer" ] ; then
   >       USER_MEM_ARGS="-Xms8192m -Xmx8192m -XX:MetaspaceSize=1024m -
   > XX:MaxMetaspaceSize=1024m -XX:NewSize=1024m -XX:MaxNewSize=1024m -
   > XX:SurvivorRatio=8"
   >       export USER_MEM_ARGS
   > fi
   > ```

> **Note**
>
> Earlier Oracle DMW releases required different arguments: XX:PermSize instead of XX:MetaspaceSize and XX:MaxPermSize instead of XX:MaxMetaspaceSize. JDK 8 ignores the PermSize arguments and requires the MetaspaceSize arguments.

10. Locate the first occurrence of POST_CLASSPATH and add the following after it:

```
if [ "${POST_CLASSPATH}" != "" ] ; then
      POST_CLASSPATH="${DOMAIN_HOME}/lib/fndext.jar${CLASSPATHSEP}${DOMAIN_HOME}/lib/
runtime12.jar${CLASSPATHSEP}${POST_CLASSPATH}"
      export POST_CLASSPATH
else
      POST_CLASSPATH="${DOMAIN_HOME}/lib/fndext.jar${CLASSPATHSEP}${DOMAIN_HOME}/lib/
runtime12.jar"
      export POST_CLASSPATH
fi
```

11. Set `PRODUCTION_MODE=true` to run in Server mode.

12. If you want to use a date format other than the default format, dd-MMM-yyyy (01-JAN-2016), in the Listings pages, add the parameter `-DlistingDateFormat` to JAVA_PROPERTIES and set it to one of the supported values found in https://docs.oracle.com/javase/8/docs/api/java/text/SimpleDateFormat.html.

    If the date format has space character in it, you must replace the space with an underscore (_) character because WebLogic Server on Linux will not start with spaces in a parameter. For example, the following value:

    ```
    -DlistingDateFormat=yyyy.MM.dd_G_'at'_HH:mm:ss_z"
    ```

    displays dates as:

    ```
    2001.07.04 AD at 12:08:56 PDT
    ```

13. To be ready to integrate DMW with an electronic data capture system other than InForm, add parameter `-DUseSunHttpHandler` to JAVA_PROPERTIES and set it to True. For example:

    ```
    JAVA_PROPERTIES="-Dplatform.home=${WL_HOME} -Dwls.home=${WLS_HOME} -Dweblogic.home=$
    {WLS_HOME} -DUseSunHttpHandler=true"
    ```

14. Locate the first occurrence of EXTRA_JAVA_PROPERTIES and add the following to enable huge pages after it.

    ```
    EXTRA_JAVA_PROPERTIES="${EXTRA_JAVA_PROPERTIES} -XX:+UseLargePages"
    export EXTRA_JAVA_PROPERTIES
    ```

15. Set application module properties:

> **Note**
>
> The setting `-Djbo.ampool.maxinactiveage=1200000"` creates a session timeout value of 20 minutes. If you prefer a different timeout period, see Change the Default Timeout Period (Optional).

```
EXTRA_JAVA_PROPERTIES="${EXTRA_JAVA_PROPERTIES}
-Djbo.ampool.doampooling=true
-Djbo.ampool.maxavailablesize=expected_maximum_number_of_concurrent_users
```

```
-Djbo.ampool.initpoolsize=10
-Djbo.ampool.minavailablesize=10
-Djbo.recyclethreshold=same_as_maximum_number_of_concurrent_users
-Djbo.ampool.timetolive=3600000
-Djbo.ampool.maxinactiveage=1200000"
export EXTRA_JAVA_PROPERTIES
```

Change the Default Timeout Period (Optional)

The default timeout period is 20 minutes. It is set in both setDomainEnv.sh and plan.xml. The values in each place must be equal.

> **Note**
>
> If you change these settings after deploying Oracle DMW, you must redeploy Oracle DMW by following instructions in Deploy Oracle DMW on the WebLogic Server.

To set a different timeout value:

1. Edit plan.xml, which is located in the top level of the DMW release .zip file. Open plan.xml in an editor, search for SessionTimeout, then change its value, which is **in minutes**, from 20 to the number of minutes you want.

   ```
   <variable>
   <name>SessionTimeout</name>
   <value>number_of_minutes</value>
   </variable>
   ```

2. Edit setDomainEnv.sh, which is located in the domain\bin directory, to add a value **in milliseconds** equal to the number of minutes you entered in plan.xml. For example, 20 minutes is 1200000 milliseconds. Find:

   ```
   EXTRA_JAVA_PROPERTIES="${EXTRA_JAVA_PROPERTIES}
   ```

   and add or edit the line:

   ```
   -Djbo.ampool.maxinactiveage=number_of_milliseconds
   ```

Configure the AppsDataSource in the Administration Console

> **Note**
>
> Perform tasks in this section only when you are upgrading from release 3.3.x to release 3.5.

Follow instructions for Step 2.1.5.4 in *Oracle® E-Business Suite Software Development Kit for Java* with the following requirements specific to Oracle DMW for these data sources: lswdbBC4JDS, lswdbDS, lswExtSysDS, lswdbRestDS. See the following sections for details.

- Create Data Source lswdbDfdDS
- Create Data Source lswdbExportDS

Create Data Source lswdbDfdDS

Create data source lswdbDfdDS as described. (For more information, see *Oracle® E-Business Suite Software Development Kit for Java*.)

To create data source lswdbDfdDS:

In Step 5, enter values **exactly** as follows:

- Name for the datasource: `lswdbDfdDS`
- JNDI Name: `jdbc/lswdbDfdDS`
- Database Driver: `Oracle's Driver (Thin) for Instance connections.` (Note that this driver is a non-XA driver.)
- Driver ClassName: oracle.apps.fnd.ext.jdbc.datasource.AppsDataSource

In Step 8, enter values for your environment:

- Database name: dmwebspr (example name)
- Hostname: *your_hostname*
- Port: *database_port_number*
- DB User Name: Enter the username dmwebs@oracle.com, with the assigned role UMX|APPS_SCHEMA_CONNECT, that your would have already created by following instructions in Section 2.1.3, "Set Up Necessary Oracle E-Business Suite Users" in Oracle® E-Business Suite Software Development Kit for Java. This is a proxy user required to pass the authentication messages.
- Password: Enter the password created for that user.

In Step 10, enter values **exactly** as follows:

- Driver Class Name: `oracle.apps.fnd.ext.jdbc.datasource.AppsDataSource`

In Step 11, enter the full path of the desktop dbc file in the Properties field. For example:

- user=dmwebs@*domain.com*
- dbcFile=<Full path to DBC file>/<DBC File Name>.dbc

Select the target server. If you have created the new server, target the datasource to the new server. Else, target the datasource to the existing server.

Create Data Source lswdbExportDS

Create data source lswdbExportDS as described. (For more information, see *Oracle® E-Business Suite Software Development Kit for Java*.)

To create data source lswdbExportDS:

In Step 5, enter values **exactly** as follows:

- Name for the datasource: `lswdbExportDS`
- JNDI Name: `jdbc/lswdbExportDS`
- Database Driver: `Oracle's Driver (Thin) for Instance connections.` (Note that this driver is a non-XA driver.)

- Driver ClassName: oracle.apps.fnd.ext.jdbc.datasource.AppsDataSource

In Step 8, enter values for your environment:

- Database name: dmwebspr (example name)
- Hostname: *your_hostname*
- Port: *database_port_number*
- DB User Name: Enter the username dmwebs@oracle.com, with the assigned role UMX|APPS_SCHEMA_CONNECT, that your would have already created by following instructions in Section 2.1.3, "Set Up Necessary Oracle E-Business Suite Users" in Oracle® E-Business Suite Software Development Kit for Java. This is a proxy user required to pass the authentication messages.
- Password: Enter the password created for that user.

In Step 10, enter values **exactly** as follows:

- Driver Class Name: `oracle.apps.fnd.ext.jdbc.datasource.AppsDataSource`

In Step 11, enter the full path of the desktop dbc file in the Properties field. For example:

- user=dmwebs@*domain.com*
- dbcFile=<Full path to DBC file>/<DBC File Name>.dbc

Select the target server. If you have created the new server, target the data source to the new server. Else, target the data source to the existing server.

Change the Connection Pool Maximum Capacity on DMWServer

In the WebLogic Server Console:

1. Navigate to **Services**, then **Data Sources**, then **lswdbDS**, then the **Connection Pool** tab.
2. Change the **Maximum Capacity** setting from 15 to the number you entered (Edit setDomainEnv.sh, Step 12) for the maximum number of concurrent users during peak time plus 15%.
3. Repeat these steps for these data sources: lwsdbDS (if not done already), lswExtSysDS, lswdbRestDS, lswdbDfdDS, and lswdbExportDS.

> **Note**
>
> - Set **Maximum Capacity** for the lswdbDfdDS and lswdbExportDS data sources higher than the DfdMaxThreadsConstraint and ExportMaxThreadsConstraint values (that were set to 20).
> - Do not perform this task for the lswdbBC4JDS data source.

Configure the WebLogic JMS Resources

> **Note**
>
> Perform tasks in this section only if you are upgrading from release 3.3.x to release 3.5.

The following sections contain instructions to configure the WebLogic JMS resource for the data flow diagram and discrepancies export:

- Configure the WebLogic JMS Resource for Data Flow Diagram
- Configure the WebLogic JMS Resource for Discrepancies Export

Configure the WebLogic JMS Resource for Data Flow Diagram

In the WebLogic Server Console:

1. Configure the JMS server.
   a. Navigate to DMWDomain > Services > Messaging > JMS Servers.
   b. Click **New**.
   c. In the Name field, enter `DfdJMSServer`.
   d. Click **Next**.
   e. From the Leave Persistent Store drop-down, select **(none)**.
   f. Click **Next**.
   g. From the Targets drop-down, select the target server that you had configured for the "lswdbDfdDS" data source.
   h. Click **Finish**.
2. Configure the JMS module.
   a. Navigate to DMWDomain > Services > Messaging > JMS Modules.
   b. Click **New**.
   c. In the Name field, enter `DfdSystemModule`.
   d. Click **Next**.
   e. From the list of Targets options, select the target server that you had configured for the "lswdbDfdDS" data source.
   f. Click **Finish**.
3. Configure the foreign server.
   a. Click DfdSystemModule that you created in step 2.
   b. Click **New**.
   c. Select the Foreign Server option.
   d. Click **Next**.
   e. In the Name field, enter `DfdForeignServer`.

f. Click **Next**.

g. From the list of Targets options, select the target server that you had configured for the "lswdbDfdDS" data source.

h. Click **Finish**.

i. Click **DfdForeignServer**.

j. In the JNDI Initial Context Factory field, enter `oracle.jms.AQjmsInitialContextFactory`.

k. In the JNDI Properties field, enter `datasource=jdbc/lswdbDfdDS`.

l. Click **Save**.

4. Configure the destination.

a. Click DfdForeignServer that you created in step 3.

b. Click the **Destinations** tab.

c. Click **New**.

d. In the Name field, enter `DfdForeignDestination`.

e. In the Local JNDI Name field, enter `aq-jms/DataFlowAQ`.

f. In the Remote JNDI Name field, enter `Queues/CDR_HEALTH_METRICS_Q`.

g. Click **OK**.

5. Configure the connection factory.

a. Click DfdForeignServer that you created in step 4.

b. Click the **Connection Factories** tab.

c. Click **New**.

d. In the Name field, enter `DataFlowConnectionFactory`.

e. In the Local JNDI Name field, enter `aq-jms/DataFlowConnectionFactory`.

f. In the Remote JNDI Name field, enter `ConnectionFactory`.

g. Click **OK**.

6. Configure the maximum thread constraint for the work manager.

a. Navigate to DMWDomain > Environment > Work Managers.

b. Click **New**.

c. Select the Maximum Threads Constraint option.

d. Click **Next**.

e. In the Name field, enter `DfdMaxThreadsConstraint`.

f. In the Count field, enter `20`.

g. Click **Next**.

h. From the list of Targets check boxes, select the target server that you had configured for the "lswdbDfdDS" data source.

i. Click **Finish**.

7. Configure the work manager.

a. Navigate to DMWDomain > Environment > Work Managers.

b. Click **New**.
c. Select the Work Manager option.
d. Click **Next**.
e. In the Name field, enter `DfdWorkManager`.
f. Click **Next**.
g. Select the required server check box.
h. Click **Finish**.
i. Click DfdWorkManager.
j. From the Maximum Threads Constraint drop-down, select **DfdMaxThreadsConstraint** that you created in step 6.
k. Click **Save**.

Configure the WebLogic JMS Resource for Discrepancies Export

In the WebLogic Server Console:

1. Configure the JMS server.
   a. Navigate to DMWDomain > Services > Messaging > JMS Servers.
   b. Click **New**.
   c. In the Name field, enter `ExportJMSServer`.
   d. Click **Next**.
   e. From the Leave Persistent Store drop-down, select **(none)**.
   f. Click **Next**.
   g. From the Targets drop-down, select the target server that you had configured for the "lswdbExportDS" datasource.
   h. Click **Finish**.
2. Configure the JMS module.
   a. Navigate to DMWDomain > Services > Messaging > JMS Modules.
   b. Click **New**.
   c. In the Name field, enter `ExportSystemModule`.
   d. Click **Next**.
   e. From the list of Targets options, select the target server that you had configured for the "lswdbExportDS" datasource.
   f. Click **Finish**.
3. Configure the foreign server.
   a. Click ExportSystemModule that you created in step 2.
   b. Click **New**.
   c. Select the Foreign Server option.
   d. Click **Next**.
   e. In the Name field, enter `ExportForeignServer`.

f. Click **Next**.

g. From the list of Targets options, select the target server that you had configured for the "lswdbExportDS" data source.

h. Click **Finish**.

i. Click **ExportForeignServer**.

j. In the JNDI Initial Context Factory field, enter `oracle.jms.AQjmsInitialContextFactory`.

k. In the JNDI Properties field, enter `datasource=jdbc/lswdbExportDS`.

l. Click **Save**.

4. Configure the destination.

a. Click ExportForeignServer that you created in step 3.

b. Click the **Destinations** tab.

c. Click **New**.

d. In the Name field, enter `ExportForeignDestination`.

e. In the Local JNDI Name field, enter `aq-jms/ExportAQ`.

f. In the Remote JNDI Name field, enter `Queues/DME_DISC_EXP_TO_MT_Q`.

g. Click **OK**.

5. Configure the connection factory.

a. Click ExportForeignServer that you created in step 4.

b. Click the **Connection Factories** tab.

c. Click **New**.

d. In the Name field, enter `ExportConnectionFactory`.

e. In the Local JNDI Name field, enter `aq-jms/ExportConnectionFactory1`.

f. In the Remote JNDI Name field, enter `ConnectionFactory`.

g. Click **OK**.

6. Configure the maximum thread constraint for the work manager.

a. Navigate to DMWDomain > Environment > Work Managers.

b. Click **New**.

c. Select the Maximum Threads Constraint option.

d. Click **Next**.

e. In the Name field, enter `ExportMaxThreadsConstraint`.

f. In the Count field, enter `20`.

g. Click **Next**.

h. From the list of Targets check boxes, select the target server that you had configured for the "lswdbExportDS" datasource.

i. Click **Finish**.

7. Configure the work manager.

a. Navigate to DMWDomain > Environment > Work Managers.

b. Click **New**.

c. Select the Work Manager option.

d. Click **Next**.

e. In the Name field, enter `ExportWorkManager`.

f. Click **Next**.

g. Select the required server check box

h. Click **Finish**.

i. Click ExportWorkManager.

j. From the Maximum Threads Constraint drop-down, select **ExportMaxThreadsConstraint** that you created in step 6.

k. Click **Save**.

Deploy Discrepancies Export and Data Flow Diagram Modules

1. Copy the `services/dmw-dfd-app.ear` and `services/dmw-export-app.ear` files to the tmp directory and delete the software directory.

   The tmp directory now contains `dmw-dfd-app.ear` and `dmw-export-app.ear` files.

2. Open a shell window and set up the environment:

   ```
   source WL_HOME/server/bin/setWLSEnv.sh
   ```

   For example:

   ```
   source app/oracle/middleware/Oracle_Home/wlserver/server/bin/setWLSEnv.sh
   ```

3. Change the directory to the tmp directory.

4. Deploy `dmw-dfd-app.ear` and `dmw-export-app.ear` by entering the following command. If you stored the username and password in a configuration file, omit the username and password parameters.

   > **Note**
   >
   > Deploy both the ear files on the same target where you have targeted the lswdbDfdDS and lswdbExportDS data sources.
   > In the following command, replace the variable DMW_NEW_SERVER_NAME with the recommended new server name DMWServicesServer.

   ```
   java weblogic.Deployer -adminurl t3://
   host_name.your_company_domain.com:port_number -username WLS_USER -password
   WLS_PASSWORD -targets DMW_NEW_SERVER_NAME -deploy dmw-dfd-app.ear -name
   dmw-dfd-app
   java weblogic.Deployer -adminurl t3://
   host_name.your_company_domain.com:port_number -username WLS_USER -password
   WLS_PASSWORD -targets DMW_NEW_SERVER_NAME -deploy dmw-export-app.ear -name
   dmw-export-app
   ```

If you had not created the DMW_NEW_SERVER_NAME (**DMWServicesServer**) due to any constraint, then deploy `dmw-dfd-app.ear` and `dmw-export-app.ear` by entering the following command:

> **Note**
>
> In the following command, replace the variable DMW_SERVER_NAME with the recommended server name DMWServer.

```
java weblogic.Deployer -adminurl t3://
host_name.your_company_domain.com:port_number -username WLS_USER -password
WLS_PASSWORD -targets DMW_SERVER_NAME -deploy dmw-dfd-app.ear -name dmw-
dfd-app
java weblogic.Deployer -adminurl t3://
host_name.your_company_domain.com:port_number -username WLS_USER -password
WLS_PASSWORD -targets DMW_SERVER_NAME -deploy dmw-export-app.ear -name dmw-
export-app
```

5. Exit the shell by entering:

   ```
   exit
   ```

6. Go to the WebLogic console screen to check that the deployments are successful.

Run the Populate Custom Listings Script

> **Note**
>
> Do not perform this task if you are upgrading from release 3.4.x to 3.5 as you would have already performed it when you had installed or upgraded to release 3.4.x.

Run the dmepopqbenablestat.sql script to ensure that Oracle DMW populates the new custom listing status tracking table with the status for the custom listings you created in an earlier versions of Oracle DMW. Plan a maintenance window to run the script.

> **Note**
>
> Run this script only if you are upgrading to Oracle DMW 3.5 from a release prior to 3.3.

Follow these steps to run the script on a computer with an Oracle client that can connect to the Oracle DMW database server using SQLPlus:

1. Download the file from `$CDR_TOP/patch/115/sql/dmepopqbenablestat.sql`.
2. Log in to SQLPlus (not SQLDeveloper) as the APPS database user.
3. Invoke the script from your download directory:

   ```
   <download_directory>/dmepopqbenablestat.sql
   ```

Apply Patch 38943810

Apply patch 38943810 to enhance the blind break reports in Oracle DMW. For instructions, see *Apply the Workaround Fix for Bug 38943810* (Document ID KI55158) on My Oracle Support.

Grant DME_ERR_LOG to Workarea Schemas

Create a local copy of DME_ERR_LOG in all existing workarea schemas.

1. Copy the file $CDR_TOP/patch/115/sql/dmeCrLocalDmeErrTab.sql to a download directory.
2. Log in to SQL*Plus as the APPS database user.
3. Execute the script from the download directory:

   ```
   <download_directory>/dmeCrLocalDmeErrTab.sql
   ```

   When prompted, enter the value for one or more of the following parameters: Therapeutic Area, Study Name, Model Name, and Lifecycle.

   - If you provide input for the Therapeutic Area, Study Name, Model Name, and Lifecycle, the script creates the local dme_err_log table in the specific lifecycle work area of the model.
   - If you provide input for the Therapeutic Area, Study Name, and Model Name, the script creates the local dme_err_log table in all lifecycle work areas of the model.
   - If you provide input for the Therapeutic Area and Study Name, the script creates the local dme_err_log table in all lifecycle work areas of all the models in the specified study.
   - If you provide input for the Therapeutic Area, the script creates the local dme_err_log table in all lifecycle work areas of all the models in all the studies in the specified therapeutic area.
   - If you do not provide input for any of the parameters, the script creates the local dme_err_log table in all lifecycle work areas of all the models in all the studies in all the therapeutic area.

Upgrade Existing Business Area for Custom Listings

> **Note**
>
> Do not perform this task if you are upgrading from release 3.4.x to 3.5 as you would have already performed it when you had installed or upgraded to release 3.4.x.

Business area for the custom listing was redesigned in Oracle DMW 3.3. Existing business area that was created prior to release 3.3 are not compatible. Hence, you must upgrade the business area to align with the redesigned custom listing.

If you are upgrading from an existing Oracle DMW release 3.3.x to Oracle DMW release 3.5, upgrade the existing business area for the custom listing.

1. Copy the file $CDR_TOP/patch/115/sql/cdrupgradeclba.sql to a download directory.
2. Log in to SQL*Plus as the APPS database user.

3. Execute the script from the download directory:

   ```
   <download_directory>/cdrupgradeclba.sql
   ```
   When prompted, enter the application user name. For example, Enter application user name:user1@oracle.com.

   This script submits the CDR_UPGRADE_CLBA job.

4. To track if the CDR_UPGRADE_CLBA job is created:

   ```
   select job_name,state from DBA_SCHEDULER_JOBS where
   job_name='CDR_UPGRADE_CLBA';
   ```

5. To monitor the running status of the job while it is executing:

   ```
   SELECT job_name,session_id,running_instance FROM
   DBA_SCHEDULER_RUNNING_JOBS WHERE JOB_NAME = 'CDR_UPGRADE_CLBA';
   ```

6. After the job execution completes, to check the status of the job:

   ```
   select job_name,status,error#,additional_info from
   dba_scheduler_job_run_details where job_name='CDR_UPGRADE_CLBA'
   order by actual_start_date desc;
   ```

7. To extract the log file from the CDR_EXE_DEBUG table:

   ```
   select logentry from cdr_exe_debug where
   location='CDR_UPGRADE_CLBA' order by seq;
   ```

Upgrade File Watcher to Support Archiving Files (Optional)

File Watcher now supports automatically archiving loaded data files. To archive loaded files, you must set up the folders in which to store them the same way you do the folders where you put files to be loaded: create a specified directory structure and register the path for each as Oracle LSH profile values.

To archive files in an existing, pre-release 3.5 study, edit the study File Watcher and click **Regenerate** to enable archiving for the study.

For more information, see *Oracle Life Sciences Data Management Workbench Administration Guide*.

Configure for Disaster Recovery

For information on how to configure for the disaster recovery, see *Configuration for Disaster Recovery* (Document ID KB638726) on My Oracle Support.

Install Oracle Thesaurus Management System (Optional)

If you plan to use Oracle Thesaurus Management System (TMS) as a coding tool integrated with Oracle DMW, follow instructions in Install Oracle Thesaurus Management System (Optional).

Migrate the Editioned Objects

> **Note**
>
> Do not perform this task if you are upgrading from release 3.4.x to 3.5 as you would have already performed it when you had installed or upgraded to release 3.4.x.

> **Note**
>
> - For fresh installation, migrating the editioned objects is not required.
> - For an upgrade, migrate the editioned objects after Oracle DMW 3.5 upgrade in the next downtime.

For information on how to run the script to migrate the editioned objects, see *Migration Script of Editioned Objects to Non-Editioned Objects* (Document ID KB258029) on My Oracle Support.

4

What's Next

After you have finished all the installation tasks in this book, you must do the following tasks before you can begin to use the Oracle Life Sciences Data Management Workbench (Oracle DMW).

You perform most of the following tasks in Oracle Life Sciences Data Hub (Oracle LSH):

- Set Up System Security
- Set Up User Security
- Set Up Oracle LSH Services
- Assign User Group to InForm Family Adapter
- Set Up OAuth for InForm and Oracle DMW Integration
- Enable rng-tools to Avoid Performance Issues While Sending Discrepancies
- Set Required Profile and Lookup Settings
- Create Study and Library Categories in Oracle LSH
- Set Up File Watcher
- Set Up Logging
- Integrate Other Applications (Optional)

Set Up System Security

For information on securing your system, see *Oracle Life Sciences Warehouse Security Guide* and the *Secure Configuration for Oracle E-Business Suite Release 12.1* (Document ID KB238090) on My Oracle Support.

Set Up User Security

Oracle DMW uses the Oracle LSH security system, which uses the user security features of the Oracle E-Business Suite. See the *Oracle Life Sciences Data Management Workbench Administration Guide*.

Set Up Oracle LSH Services

Define Oracle LSH service locations and service instances to support Oracle DMW features as follows, following instructions in the *Oracle Life Sciences Data Hub System Administrator's Guide*.

This section contains details to do the following:

- Distributed Processing Services for File Watcher
- PLSQL Service Instances

Distributed Processing Services for File Watcher

You need the following service types to support Oracle DMW File Watcher:

- **Text for SQL Loader** if you are loading text files from labs or elsewhere.
- **SAS** if you are loading SAS files from labs or elsewhere.

PLSQL Service Instances

InForm and Clinical One metadata and data loading use the PLSQL service. Oracle LSH installation automatically creates a service location with the database SID as its name and creates the PLSQL service under it in the Oracle LSH user interface with three service instances, which allows concurrent processing of three PL/SQL jobs.

In Oracle DMW, these jobs include:

- Loading metadata and data for InForm and Clinical One studies
- Executing a PL/SQL custom program for a transformation
- Executing a generated transformation
- Executing a validation check batch

Increase the number of PLSQL service instances to support the number of PL/SQL jobs you are likely to run concurrently. Oracle recommends a setting of 100.

Assign User Group to InForm Family Adapter

Assign appropriate user group(s) to the InForm Adapter family as described in the *Oracle Life Sciences Data Hub System Administrator's Guide*.

Set Up OAuth for InForm and Oracle DMW Integration

For information on how to set up the OAuth for InForm and Oracle DMW integration, see *Data Management Workbench and InForm OAuth Configuration Process for InForm Audit Trial API* (Document ID KB636345) on My Oracle Support.

> **Note**
>
> OAuth setup is applicable only for integration of Oracle DMW with InForm 7.0.1 and higher versions.

Enable rng-tools to Avoid Performance Issues While Sending Discrepancies

The rngd service uses multiple entropy sources to constantly refresh the system entropy pool. To avoid any system performance issues while sending discrepancies, install the rng-tools and enable rngd.

1. If rng-tools is not installed on the system, install it by executing the following command using Linux:

```
$ yum install rng-tools
```

2. To check if the rng-tools is enabled, execute the following command:

```
$ systemctl status rngd
```

3. If the rng-tools is disabled, execute the following command to enable it:

```
$ systemctl enable --now rngd
```

Set Required Profile and Lookup Settings

Oracle DMW uses Oracle Applications profiles and lookups to determine some aspects of system behavior. See the *Oracle Life Sciences Data Management Workbench Administration Guide* for information.

Create Study and Library Categories in Oracle LSH

After finishing the installation, create subdomains within the shipped Oracle DMW domain to organize your company's studies and libraries. See the *Oracle Life Sciences Data Management Workbench Administration Guide* for information.

Set Up File Watcher

For details on setting up File Watcher, see the *Oracle Life Sciences Data Management Workbench Administration Guide*.

Set Up Logging

After you deploy the Oracle DMW application (dmwapp), perform the following steps to enable logging for dmwapp at the INFO level.

> **Note**
>
> Ensure that you perform these steps whenever you need to restart the managed server. The system you use depends on where you deployed Oracle DMW (for example, WebLogic Server or Oracle Enterprise Manager). This procedure uses Oracle Enterprise Manager (OEM).

1. Log in to the managed server where you deployed Oracle DMW (for example, OEM).
2. From the Server section, select the managed server where you deployed Oracle DMW.
3. From the **WebLogic Server** menu, select **Logs** > **Log Configuration**.
4. Expand Root Logger, locate **dmwapp**, and select **Notification: <#> (INFO)** from the Oracle Diagnostic Logging Level (Java Level) column.
5. Click **Apply**.
   If you deployed Oracle DMW to more managed servers, repeat steps 2 through 4 for each server.

Integrate Other Applications (Optional)

If you plan to use Oracle or third-party applications with Oracle DMW, follow instructions in the *Oracle Life Sciences Data Hub Installation Guide* and *Oracle Life Sciences Data Hub System Administrator's Guide* to integrate them with Oracle LSH, including defining Distributed Processing Services for them. Applications must be purchased and licensed separately.

You can use Oracle Business Intelligence Enterprise Edition (OBIEE) for data visualizations

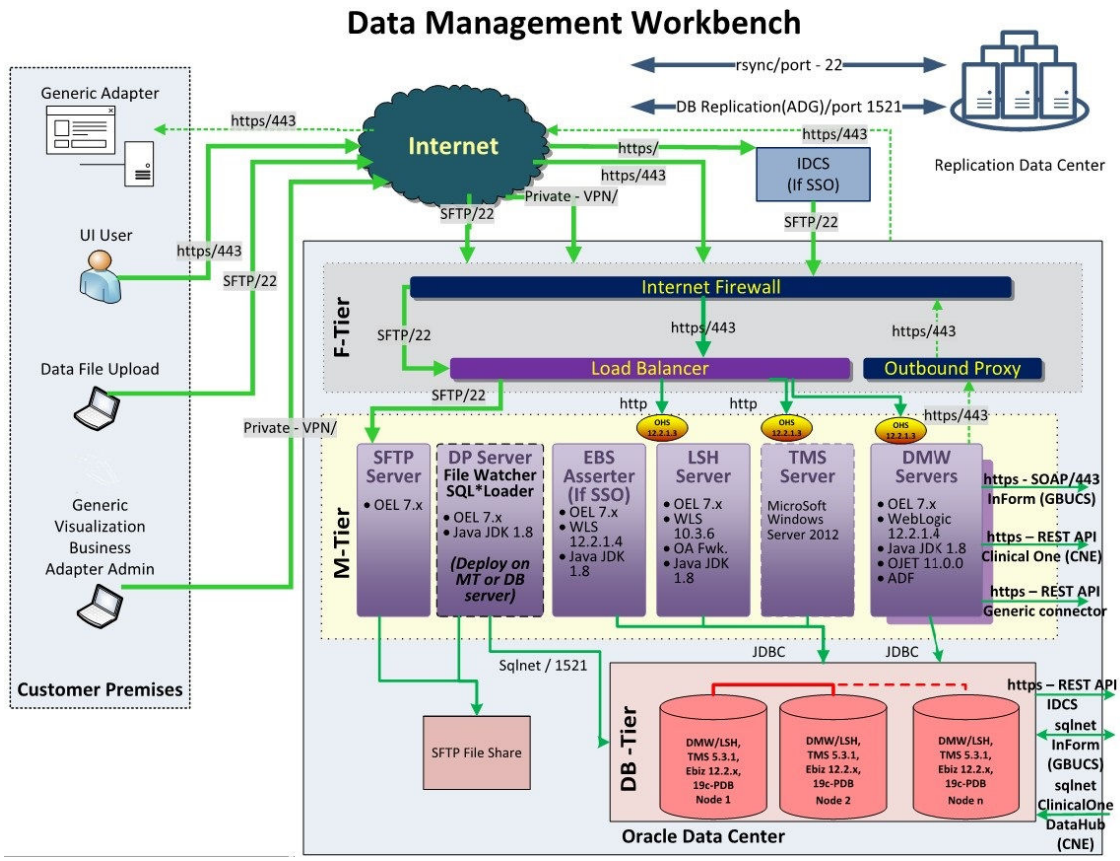
If you plan to integrate with Oracle Identity Cloud Services (IDCS) for the single sign-on solution, follow instructions in *Oracle Life Sciences Data Hub and Oracle Life Sciences Data Management Workbench SSO Configuration with IDCS*, Document ID KB457314 on My Oracle Support.

5

Architecture

The following figure shows the architecture described in this section.

Figure 5-1 Oracle Life Sciences Data Management Workbench Architecture



This section contains the following topics:

- Client Tier
- Application Tier
- Database Tier

Client Tier

There are two ways to set up a client, depending on the type of user:

Most Users: Users who do not write custom programs for transformations and validation checks, require the following on their personal computers:

- A web browser

- Java Virtual Machine (JVM)

Administrators require JVM to use any of the Oracle Forms screens related to security, including setting up user accounts, and to run the post-installation jobs.

Programmers: Users who write custom programs in an integrated development environment from Oracle LSH require additional software:

- One or more integrated development environments, such as PC SAS, SQL*Plus, or SQL Developer
- Oracle LSH plug-in for launching Integrated Development Environments (IDEs)
- WinZip
- Web browser

Application Tier

Oracle DMW has two distinct application tiers:

- Oracle LSH Application Tier
- Oracle DMW Application Tier

Oracle LSH Application Tier

In addition to standard Oracle Applications components, the Oracle LSH application tier includes the following:

Oracle LSH Application Server: The Oracle LSH application server renders the user interface using the Oracle Applications Framework and handles the communication between the user interface and the database using the Java Runtime Environment.

Oracle LSH Distributed Processing (DP) Server: The Oracle LSH DP server handles the communication between Oracle LSH and the external processing systems required to support the IDEs.

Processing Systems: XML Publisher is required for internal Oracle LSH processing. The other systems are required only if you are developing Oracle LSH Programs in those technologies:

- **SAS** executes user-developed SAS Programs.

Oracle DMW Application Tier

The Oracle DMW-specific application tier requires Oracle WebLogic Server and Oracle Applications Developer.

Database Tier

Oracle DMW uses the Oracle LSH database tier that includes:

Oracle Enterprise Edition RDBMS: All of Oracle LSH's database tier components use the Oracle Enterprise Edition database server and database.

Oracle Applications Schema: The Oracle Applications Schema is the schema installed as part of the Oracle Applications installation. It contains the Oracle LSH schema.

Oracle LSH Database Server and Schema: These include Oracle LSH's business logic in PL/SQL packages, internal Oracle LSH tables and views, security, adapters, and APIs; as well as Oracle LSH user-developed metadata tables and packages.

Oracle Thesaurus Management System (Oracle TMS) : Oracle LSH classification system is based on Oracle TMS.

6 Revision History

Release Month, Version	Description
March 2026, Version 2	Performed the following: • Updated step 13 and added step 15 in Modify the AppsDataSource in WebLogic Remote Console. • Added section Apply Patch 38943810 under chapter Upgrade to Oracle DMW 3.5.
February 2026, Version 1	Initial release