

Oracle® Healthcare Foundation

Installation Guide

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Preface

This document explains the installation and initial setup of Oracle Healthcare Foundation. The user installing Oracle Healthcare Foundation should have knowledge of Oracle, Informatica or Oracle Data Integrator, WebLogic, and Linux operating system.

Audience

This document is intended for users who want to install Oracle Healthcare Foundation.

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Related Documents

For more information, see the following documents:

- *Oracle Healthcare Foundation Administrator's Guide*
- *Oracle Healthcare Foundation Application Programming Interface Guide*
- *Oracle Healthcare Foundation Application Toolkit Installation Guide*
- *Oracle Healthcare Foundation Appendix*
- *Oracle Healthcare Foundation Data Dictionary*
- *Oracle Healthcare Foundation Electronic Technical Reference Manual*
- *Oracle Healthcare Foundation Installation Guide*
- *Oracle Healthcare Foundation Mapping Metadata*
- *Oracle Healthcare Foundation New Features Guide*
- *Oracle Healthcare Foundation Programmer's Guide*

- *Oracle Healthcare Foundation Quick Reference Guide*
- *Oracle Healthcare Foundation Release Notes*
- *Oracle Healthcare Foundation Security Guide*
- *Oracle Healthcare Foundation Third Party Licenses and Notices*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

Overview

Oracle Healthcare Foundation provides a platform upon which healthcare organizations, such as providers and research focused organizations, can leverage business intelligence (BI), analytic, and performance management applications to make informed decisions.

The Oracle Healthcare Foundation installer lets you install the following components:

- Oracle Healthcare Foundation Data Model
- Oracle Healthcare Foundation Data Management Assembly for ODI
- Oracle Healthcare Foundation Data Management Assembly for Informatica
- Oracle Healthcare Foundation Data Pipeline Services

This chapter contains the following topics:

- [Section 1.1, "Software Requirements"](#)
- [Section 1.2, "Media Pack Content"](#)
- [Section 1.3, "Installation Types"](#)
- [Section 1.4, "General Guidelines for Installation"](#)

1.1 Software Requirements

The following is a list of software requirements for Oracle Healthcare Foundation:

Table 1–1 Software Requirements

Components	Software Required
Common requirements for all components	<ul style="list-style-type: none"> ■ Oracle Linux 6.5 or 6.6 (64-bit) operating system (OS) ■ Oracle Database 12.1.0.2.0 Enterprise Edition ■ Python 2.6.6
Data Model	No additional requirements
Data Management Assembly (Oracle Data Integrator)	<ul style="list-style-type: none"> ■ Oracle Data Integrator (ODI) 11.1.1.7 ■ Java Development Kit (JDK) 1.6.0_35 ■ Oracle WebLogic server 10.3.6
Data Management Assembly (Informatica)	<ul style="list-style-type: none"> ■ Informatica PowerCenter 9.6.1
Data Pipeline Services	<p>You must install the Data Pipeline Services on a different WebLogic server other than ODI server.</p> <ul style="list-style-type: none"> ■ Oracle Fusion Middleware Infrastructure 12.1.3 with Oracle WebLogic server 12.1.3 ■ Java Development Kit (JDK) 1.8

Table 1–1 (Cont.) Software Requirements

Components	Software Required
Self-Service Analytics	<ul style="list-style-type: none"> ▪ Oracle Business Intelligence Enterprise Edition (OBIEE) 11.1.1.9 ▪ Oracle Business Intelligence Developer Client Tools 11.1.1.9.0 ▪ Java Development Kit (JDK) 1.8

1.2 Media Pack Content

The media pack from the Oracle Software Delivery Cloud (OSDC) contains the installer for:

- Oracle Healthcare Foundation Linux (OHF_V701_Linux-x64.zip)
- Oracle Healthcare Foundation Application Toolkit Linux (OHF_V701_AT_Linux-x64.zip)
- Oracle Healthcare Foundation Application Toolkit Windows (OHF_V701_AT_Windows-x64.zip)

Note: This guide provides the installation of Oracle Healthcare Foundation for Linux.

For Application Toolkit installation, see *Oracle Healthcare Foundation Application Toolkit Installation Guide*.

1.3 Installation Types

The installer supports the following modes:

- **Typical mode:** Requires minimal installation parameters and is used for non-production environments, such as development and testing. This mode only supports fresh installation.
- **Custom mode (Recommended):** Lets you customize the installation parameters.

1.4 General Guidelines for Installation

- Linux X-windows should be used for the Linux Oracle Universal Installer (OUI) installation (Linux Graphical User Interface).
- Before running the installer, make sure that the ORACLE_HOME and PATH environment variables are setup in your session.

For example,

```
export ORACLE_HOME=/u01/app/oracle/product/121020
```

```
export PATH=$PATH:$ORACLE_HOME/bin
```

- When re-executing the installer due to a failure, enter the same details in the question prompting phase at all times. Do not delete any objects in the installation folder.
- Convert the installer execution shell to SH shell as the installer script executes in the SH shell of Linux OS.

- Text enclosed within <> in the following sections, indicate parameters and you must provide an appropriate value.

Oracle Healthcare Foundation Data Model

This chapter explains how to install the Oracle Healthcare Foundation Data Model. It contains the following sections:

- [Section 2.1, "Prerequisites"](#)
- [Section 2.2, "Guidelines"](#)
- [Section 2.3, "Installation Log Files"](#)
- [Section 2.4, "Installing the Oracle Healthcare Foundation Data Model in Typical Mode"](#)
- [Section 2.5, "Installing the Oracle Healthcare Foundation Data Model in Custom Mode"](#)
- [Section 2.6, "Upgrading Healthcare Data Warehouse Foundation to Oracle Healthcare Foundation"](#)
- [Section 2.7, "Data Migration"](#)
- [Section 2.8, "Running the Installer on Pre-created Schemas"](#)
- [Section 2.9, "Revoking Privileges"](#)
- [Section 2.10, "Troubleshooting"](#)
- [Section 2.11, "Uninstalling the Oracle Healthcare Foundation Data Model"](#)

2.1 Prerequisites

The following are the prerequisites to install the Oracle Healthcare Foundation Data Model:

- Oracle Database 12.1.0.2 Enterprise Edition
- Sqlplus utility is available in the installation server.
- Container database with a single pluggable database instance, created with the help of a Database Administrator.
- Java Virtual Machine is installed in the database server.
- Make sure that the password expiry notification message does not display for the Sys and system schemas.
- NLS_LENGTH_SEMANTICS parameter set to either CHAR or BYTE, based on your requirements.

For Oracle Healthcare Foundation Globalization Support information, see *Oracle Database Globalization Support Guide* and set your database character set accordingly.

- Database connection through SERVICE_NAME enabled. Make sure that you are connecting to the pluggable database instance.

You can verify the database connectivity using the following command:

```
SQL>connect <username>@" (DESCRIPTION= (ADDRESS= (PROTOCOL=tcp)
(HOST=<hostname>) (PORT=<port number>)) (CONNECT_DATA= (SERVICE_NAME=<service_
name>))) "
```

- To upgrade to Oracle Healthcare Foundation 7.0.1, back up existing Oracle Healthcare Data Warehouse Foundation (HDWF) 6.1 and Oracle Healthcare Analytics Data Integration (OHADI) 3.1 environment.
- To create an encrypted tablespace during fresh installation, set up your environment for tablespace encryption. For more information, see *Oracle Database Advanced Security Guide 12.1*. The installer only creates the tablespace and does not handle prerequisites like setting up the keystore, opening it, and so on. The installer only checks whether the keystore is open if the sys and system passwords are provided during installation.
- Set the GLOBAL_NAMES database initialization parameter to false.
- For remote installation, make sure the following are available on the client machine:
 - Oracle Linux 6.5 or 6.6 (64-bit) OS
 - Oracle Database 12.1.0.2.0 client

2.2 Guidelines

- If you are installing Oracle Healthcare Foundation on an exadata database machine, see the **Exadata Machine** and **Exadata Implementation** sections in the *Oracle Healthcare Foundation Programmer's Guide*.
- Table compression strategy is decided based on the number of updates in tables. If the number of updates is high, select the **Advanced compression** option instead of HCC (QUERY HIGH).
- For a fresh installation on an exadata environment, selecting the compression type as **HCC (QUERY HIGH)** will slow down the first few incremental loads.
- Make sure that you have an appropriate database license for the compression methods you choose.

2.3 Installation Log Files

While installing Oracle Healthcare Foundation Data Model, the installer generates the following log files:

- installActions<timestamp>.log - Records the action of the installer and can be used to diagnose issues with the installer.
- oraInstall<timestamp>.out -Records the output of the SQL scripts run by the installer. Database objects are installed using the Python framework.

- `oraInstall<timestamp>.err` - Records the errors from the SQL scripts run by the installer.

You can ignore the following error:

```
java.io.FileNotFoundException: /<INSTALL_HOME>/inventory/Components21/oracle.hsgbu.hc.datamodel/7.0.1.0.0/context.xml
```

The log files are time stamped and each installation session creates a new log file.

On a Linux machine, the log files are located at **\$ORACLE_BASE/oraInventory/logs**. For example, `/u01/app/oraInventory/logs`.

- `<INSTALL_HOME>/dm/install.err` - Contains any SQL errors. Database objects are installed using the Python framework and the error logging is redirected to this location.
- `<INSTALL_HOME>/reports/dm_custom_install<timestamp>.html` - Contains installation summary for the Data Model custom installation.
- `<INSTALL_HOME>/reports/dm_typical_install<timestamp>.html` - Contains the installation summary for the Data Model typical installation.

While reporting any problems that occur during installation, make sure that you include all the above log files. Check which components were installed successfully using the following query by connecting to the enterprise schema:

```
Select * from W_EHA_PRODUCT_VERSION
```

Send the result of the query while reporting any problems to the Oracle support.

2.4 Installing the Oracle Healthcare Foundation Data Model in Typical Mode

The installer creates the following schemas with default names:

Table 2–1 Schema Name

Description	Schema Name
Interface layer schema	hdi
Data warehouse schema	hdm
Common data mart schema	hcd
Omics data bank schema	odb
Cohort data mart	cdm
Enterprise schema	ent
Job engine schema	job
Services schema	svc

Note: If the above schemas already exist in the database, the installer updates the existing schemas.

To install the Oracle Healthcare Foundation Data Model in typical mode, perform the following steps:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.

2. Navigate to the `<media_pack_location>/` folder.
3. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```
4. Navigate to the `Disk1/install` folder.
5. Change the protection on files as follows:

```
chmod 755 *
```
6. Start the Oracle Universal Installer (OUI) using the following command:
 - Database server (exadata or non-exadata) is on the machine where the installer is running, execute:

```
sh runInstaller.sh -local
```
 - Database server is on a different machine, execute:

```
sh runInstaller.sh -local remote_installation=true
```where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.
7. Click **Next**. The Select a Product to Install screen appears.
8. Select the **Oracle Healthcare Foundation Data Model 7.0.1.0.0** option and click **Next**.

The Oracle Healthcare Foundation Data Model 7.0.1.0.0 screen appears.
9. Select the **Typical** option and click **Next**.

The Specify Home Details screen appears.
10. Enter the installation home name and location.
11. Click **Next**. The Verify Installation Prerequisites screen appears.
12. Verify if all the prerequisites are met before proceeding.
13. Click **Next**. The Oracle Client Home Configuration screen appears.
14. Specify the Oracle client home path. The installer validates this path.
15. Click **Next**. The Database Configuration screen appears.
16. Enter values for the following fields:
 - Hostname - By default, the system host name appears
 - Port - By default, the port number is 1521. You can edit this field if required.
 - Service name
 - System user password
 - Sys user password
17. Click **Next**. The Data Model Configuration screen appears.
18. Enter values for the following fields:
 - Interface tables schema password (hdi)
 - Data warehouse schema password (hdm)

- Common data mart password (hcd)
 - Omics data bank schema password (odb)
 - Cohort data mart password (cdm)
 - Enterprise schema password (ent)
 - Job engine schema password (job)
 - Services schema password (svc)
19. Click **Next**. The Data Model Configuration Verification screen appears.
 20. Click **Next**. The Tablespace Data File Location screen appears.
 21. Specify the location of the tablespace data files. This is the directory on the database server where data files are created during installation.

For example,

Unix: /u01/oradata/dbname

ASM: +DATA_EX02/hasahas01/datafile

Note:

- ASM location must always start with +.
 - Path should not end with /.
 - The installer does not validate the data file location. Make sure the location physically exists if the database server is on the remote server. Else, the installer will fail.
-
-

22. Click **Next**. The Summary screen appears.
23. Click **Install**.
24. After the installation is complete, the End of Installation screen appears.
25. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
26. See the log file located in `<oraInventory>/logs/InstallActions<current_timestamp>.log`
27. Review the generated installation log files for errors. For details, [Section 2.10](#).
28. Contact Oracle support, if necessary, to resolve any errors.

2.5 Installing the Oracle Healthcare Foundation Data Model in Custom Mode

To install the Oracle Healthcare Foundation Data Model in custom mode, perform the following steps:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the `<media_pack_location>/` folder.
3. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```

4. Navigate to the **Disk1/install** folder.
5. Change the protection on files as follows:


```
chmod 755 *
```
6. Start the Oracle Universal Installer (OUI) using the following command:
 - Database server (exadata or non-exadata) is on the machine where the installer is running, execute:


```
sh runInstaller.sh -local
```
 - Database server is on a different machine, execute:


```
sh runInstaller.sh -local remote_installation=true
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.
7. Click **Next**. The Select a Product to Install screen appears.
8. Select the **Oracle Healthcare Foundation Data Model 7.0.1.0.0** option and click **Next**.

The Oracle Healthcare Foundation Data Model 7.0.1.0.0 screen appears.
9. Select the **Custom (Recommended)** option and click **Next**.

The Specify Home Details screen appears.
10. Enter the installation home name and location.
11. Click **Next**. The Verify Installation Prerequisites screen appears.
12. Verify if all the prerequisites are met before proceeding.
13. Click **Next**. The Oracle Client Home Configuration screen appears.
14. Specify the Oracle client home path. The installer validates this path.
15. Click **Next**. The Database Configuration screen appears.
16. Enter values for the following fields:
 - Hostname - By default, the system host name appears
 - Port - By default, the port number is 1521. You can edit this field if required.
 - Service name
 - System user password
 - Sys user password
17. Click **Next**. The Table Compression screen is displayed.
18. Select the compression option for the following schemas from the corresponding drop-down list:

| Schema Name | Compression Options for Non-Exadata | Compression Options for Exadata |
|-------------------------|--|---|
| Interface tables schema | No Compression (default)
Advanced Compression | Hybrid columnar compression (default)
No Compression |

| Schema Name | Compression Options for Non-Exadata | Compression Options for Exadata |
|-------------------------|--|--|
| Data warehouse schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression: Preferred if updates are high
Hybrid columnar compression |
| Common data mart schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression |
| Cohort data mart schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression |
| Omics Data Bank schema | No Compression (default)
Advanced Compression | Hybrid columnar compression (default) |

19. Click **Next**. The Data Model Configuration screen appears.

20. Enter values for the following fields:

- Interface tables schema name
- Interface tables schema password
- Data warehouse schema name
- Data warehouse schema password
- Common data mart schema name
- Common data mart schema password
- Omics data bank schema name
- Omics data bank schema password

21. Click **Next**. The Data Model Configuration screen appears.

22. Enter values for the following fields:

- Cohort data mart schema name
- Cohort data mart password
- Enterprise schema name
- Enterprise schema password
- Job engine schema name
- Job engine schema password
- Services schema name
- Services schema password

23. Click **Next**. The Data Model Configuration Verification screen appears.

24. Click **Next**. The Tablespace Data file Location screen appears.

25. Specify the location of the Tablespace data files. This is the directory on the database server where the data files are created during the installation.

For example,

Unix: /u01/oradata/dbname

ASM: +DATA_EX02/hasas01/datafile

Note:

- ASM location must always start with +.
- Path should not end with /.
- The installer does not validate the data file location. Make sure the location physically exists if the database server is on the remote server. Else, the installer will fail.

26. Click **Next**. The Tablespace Details screen appears.

27. The installer creates the following tablespaces for fresh schema. Make sure that these tablespace do not exist in the database.

Enter a tablespace name for each schema. You can edit the default tablespace name, initial size, max size, and tablespace encryption for these schemas.

| Tablespace Details | Tablespace Name |
|---|-----------------|
| Default tablespace used for Interface tables (hdi) schema | hdi_ts |
| Default tablespace used for Data Warehouse (hdm) schema | hdm_ts |
| Default tablespace used for Common Data Mart (hcd) schema | hcd_ts |
| Default tablespace for Omics Data Bank (odb) schema | odb_data_ts |
| Used for indexes of the Omics Data Bank (odb) schema | odb_index_ts |
| Used for LOB columns in the Omics Data Bank (odb) schema | odb_lob_ts |
| Default tablespace used for Cohort Data Mart (cdm) schema | cdm_data_ts |
| Used for indexes of the Cohort Data Mart (cdm) schema | cdm_index_ts |
| Default tablespace used for Enterprise (ent) schema | ent_ts |
| Default tablespace for Job Engine (job) schema | job_data_ts |
| Used for indexes of the Job Engine (job) schema | job_index_ts |
| Database File System (DBFS) store is created as part of the Job Engine installation | job_store_ts |
| Name of the tablespace to store LOB data in the DBFS store created for the JOB ENGINE schema user | job_lob_ts |
| Name of the tablespace to be used for the DBFS store created for the JOB_ENGINE schema | job_tbs_ts |
| Default tablespace used for services schema (svc) | svc_ts |

28. Click **Next**. The Temporary Tablespace Details screen appears.

The installer creates the following temporary tablespaces for fresh schema. Make sure that these tablespace do not exist in database.

You can edit the temporary tablespace name, initial size, and max size for these schemas.

| Temporary Tablespace Details | Temporary Tablespace |
|-------------------------------|----------------------|
| Interface tables schema (hdi) | hdi_temp |

| Temporary Tablespace Details | Temporary Tablespace |
|-------------------------------|----------------------|
| Data warehouse schema (hdm) | hdm_temp |
| Common data mart schema (hcd) | hcd_temp |
| Omics Data bank schema (odb) | odb_temp |
| Cohort data mart schema (cdm) | cdm_temp |
| Enterprise schema (ent) | ent_temp |
| Job Engine schema (job) | job_temp |
| Services schema (svc) | svc_temp |

29. Click **Next**. The Omics Data Bank and Cohort Data Mart Parameters screen appears.
30. Enter values for the following fields:
 - Result Partition - Used to partition result tables in the ODB schema. The available options are:
 - GENE (Default)
 - STUDY
 - Promoter Offset - Numerical value to specify a portion of the gene used as a promoter in the ODB schema. The default value is 200.
 - Flanking Offset - Numerical value to specify the region before and after a gene to link results to a gene in the ODB schema. The default value is 200.
 - Max Parallel Degree - An option to specify the maximum degree of parallelism to be set on tables or used in the SQL statements for the CDM or ODB schema. It is dependent on the machine configuration of the database server. The default value is 2.
31. Click **Next**. The Summary screen appears.
32. Click **Install**.
33. After the installation is complete, the End of Installation screen appears.
34. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
35. Review the generated installation log files for errors. For details on troubleshooting, [Section 2.10](#).
36. Contact Oracle support, if necessary, to resolve any errors.

2.6 Upgrading Healthcare Data Warehouse Foundation to Oracle Healthcare Foundation

Before upgrading Healthcare Data Warehouse Foundation (HDWF) 6.1 to Oracle Healthcare Foundation, you must have installed Oracle Healthcare Analytics Data Integration (OHADI) 3.1.

Note: After upgrading, follow [Section 2.7](#) for data migration from HDWF 6.1 to Oracle Healthcare Foundation 7.0.1.

1. Upgrade the HDWF 6.1 database instance to Oracle Database 12.1.0.2 Enterprise Edition.
2. If you are upgrading for an exadata HDWF 6.1 user, make sure that you drop the non-unique FK indexes on the Data Warehouse schema using the script `OHADI_FK_INDEX_DROP_DDL.sql` if it is not done as a part of the initial data load. You can find this script in OHADI 3.1 package.
3. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
4. Navigate to the `<media_pack_location>/` folder.
5. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:


```
unzip -a OHF_V701_Linux-x64.zip
```
6. Navigate to the `Disk1/install` folder.
7. Change the protection on files as follows:


```
chmod 755 *
```
8. Make sure that all existing user schemas are disconnected from the database.
9. Start the Oracle Universal Installer (OUI) using the following command:
 - Database server (exadata or non-exadata) is on the machine where the installer is running, execute:


```
sh runInstaller.sh -local
```
 - Database server is on a different machine, execute:


```
sh runInstaller.sh -local remote_installation=true
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.
10. Click **Next**. The Select a Product to Install screen appears.
11. Select the **Oracle Healthcare Foundation Data Model 7.0.1.0.0** option and click **Next**.

The Oracle Healthcare Foundation Data Model 7.0.1.0.0 screen appears.
12. Select the **Custom (Recommended)** option and click **Next**.

The Specify Home Details screen appears.
13. Enter the installation home name and location.
14. Click **Next**. The Verify Installation Prerequisites screen appears.
15. Verify if all the prerequisites are met before proceeding.
16. Click **Next**. The Oracle Client Home Configuration screen appears.
17. Specify the Oracle client home path. The installer validates the path.
18. Click **Next**. The Database Configuration screen appears.
19. Enter values for the following fields:
 - Hostname - By default, the system host name appears
 - Port - By default, the port number is 1521. You can edit this field if required.

- Service name
- System user password
- Sys user password

20. Click **Next**. The Table Compression screen is displayed.

21. Select the compression option for the following schemas from the corresponding drop-down list:

| Schema Name | Compression Options for Non-Exadata | Compression Options for Exadata |
|-------------------------|--|--|
| Interface tables schema | No Compression (default)
Advanced Compression | Hybrid columnar compression (default)
No Compression |
| Data warehouse schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression: Preferred if updates are high
Hybrid columnar compression |
| Common data mart schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression |
| Cohort data mart schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression |
| Omics Data Bank schema | No Compression (default)
Advanced Compression | Hybrid columnar compression (default) |

22. Click **Next**. The Data Model Configuration screen appears.

23. Enter the existing schema details (HDWF 6.1) for the following fields:

- Interface tables schema name
- Interface tables schema password
- Data warehouse schema name
- Data warehouse schema password
- Common data mart schema name
- Common data mart schema password
- Omics data bank schema name - Enter a new schema name
- Omics data bank schema password

24. Click **Next**. The Data Model Configuration screen appears.

25. Enter values for the following fields:

- Cohort data mart schema name
- Cohort data mart password
- Enterprise schema name
- Enterprise schema password
- Job engine schema name
- Job engine schema password
- Services schema name

- Services schema password

26. Click **Next**. The Data Model Configuration Verification screen appears.

27. Click **Next**. The Tablespace Data File Location screen appears.

28. Specify the location of the tablespace data files. This is the directory on the database server where the data files are created during the installation.

For example,

Unix: /u01/oradata/dbname

ASM: +DATA_EX02/hasahas01/datafile

Note:

- ASM location must always start with +.
 - Path should not end with /.
 - The installer does not validate the data file location. Make sure the location physically exists if the database server is on the remote server. Else, the installer will fail.
-
-

29. Click **Next**. The Tablespace Details screen appears.

30. The installer creates the following default tablespaces if they do not exist. It also creates tablespace for Services schema.

You can edit the default tablespace name, initial size, max size, and tablespace encryption for these schemas. Enter a tablespace name that does not exist in the database.

| Tablespace Details | Tablespace Name |
|---|-----------------|
| Default tablespace for Omics Data Bank (odb) schema | odb_data_ts |
| Used for indexes of the Omics Data Bank (odb) schema | odb_index_ts |
| Used for LOB columns in the Omics Data Bank (odb) schema | odb_lob_ts |
| Default tablespace used for Cohort Data Mart (cdm) schema | cdm_data_ts |
| Used for indexes of the Cohort Data Mart (cdm) schema | cdm_index_ts |
| Default tablespace used for Enterprise (ent) schema | ent_ts |
| Default tablespace for Job Engine (job) schema | job_data_ts |
| Used for indexes of the Job Engine (job) schema | job_index_ts |
| A Database File System (DBFS) store is created as part of the Job Engine installation | job_store_ts |
| Name of the tablespace to store LOB data in the DBFS store created for the JOB ENGINE schema user | job_lob_ts |
| Name of the tablespace to be used for the DBFS store created for the JOB_ENGINE schema | job_tbs_ts |
| Default tablespace used for services schema (svc) | svc_ts |

31. Click **Next**. The Temporary Tablespace Details screen appears.

The installer creates the following temporary tablespaces if they do not exist. It also creates temporary tablespace for Services schema.

You can edit the default tablespace name, initial size, max size, and tablespace encryption for these schemas. Enter a tablespace name that does not exist in the database.

| Temporary Tablespace Details | Temporary Tablespace |
|---|----------------------|
| Temporary tablespace used for Omics Data bank schema (odb) | odb_temp |
| Temporary tablespace used for Cohort data mart schema (cdm) | cdm_temp |
| Temporary tablespace used for Enterprise schema (ent) | ent_temp |
| Temporary tablespace used for Job Engine schema (job) | job_temp |
| Temporary tablespace used for Services schema (svc) | svc_temp |

32. Click **Next**. The Omics Data Bank and Cohort Data Mart Parameters screen appears.

33. Enter the values in the following fields:

- Result Partition - Used to partition result tables in the ODB schema. The available options are:
 - GENE (Default)
 - STUDY
- Promoter Offset - Numerical value to specify a portion of the gene used as a promoter in the ODB schema. The default value is 200.
- Flanking Offset - Numerical value to specify the region before and after a gene to link results to a gene in the ODB schema. The default value is 200.
- Max Parallel Degree - An option to specify the maximum degree of parallelism to be set on tables or used in the SQL statements for the CDM or ODB schema. It is dependent on the machine configuration of the database server. The default value is 2.

34. Click **Next**. The Tablespace Parameters screen appears.

35. Enter values for the following fields from the existing CDM, ODB, and Job engine schemas:

Note: Make sure that these tablespaces exist before the installation and which was used to create these schemas.

- cdm_index_ts_name
- odb_index_ts_name
- odb_lob_ts_name
- job_index_ts_name
- job_lob_ts_name
- job_tbs_ts_name
- job_store_ts_name

36. Click **Next**. The Summary screen appears.

37. Click **Install**.

38. After the installation is complete, the End of Installation screen appears.
39. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
40. Review the generated installation log files for errors. For details on troubleshooting, [Section 2.10](#).
41. Contact Oracle support, if necessary, to resolve any errors.

2.7 Data Migration

To upgrade from a previous version of the product, follow this migration process.

Data migration for interface tables and data warehouse schema does not occur as a part of the installer. You need to review the data migration scripts in `<INSTALL_HOME>/dm/hdi_install/post_ddl_upgrade.sql` and `<INSTALL_HOME>/dm/hdm_install/post_ddl_upgrade.sql` (note that there are references to other script within the main script). You can modify the scripts before executing them.

Note: Migration scripts execution is mandatory and needs to be completed before the ETL execution begins.

Data migration summary:

- Specimen.Intervention ID/VN is deprecated and data is migrated to Intervention Specimen.
- Specimen Processing Procedure. Specimen Processing Procedure Subtype is added as a mandatory attribute to Specimen Processing Procedure. This is initialized with the appropriate seed data coded value 'SPP_SUBTYP_GEN' during the migration.
- Schedule Block.Schedule Block Subtype is added as a mandatory attribute to Schedule Block. This is initialized with the appropriate seed data coded value 'SCH_BLCK_SUBTYP_GEN' during the migration.
- Schedule.Service Provider is deprecated and data is transferred to Schedule Service Provider.
- Observation. Specimen ID/VN is deprecated and data is transferred to Observation Specimen. On the interface tables schema, data is transferred from Observation, Assessment, and Image Instance to Observation Specimen.
- Migrate data from Encounter Service Provider to Encounter.Responsible Service Provider for Encounter Service Provider Relationship Type="Responsible Service Provider". If the same encounter is associated to multiple service providers for a given value of Encounter and Relationship Type="Responsible Service Provider", the service provider that was inserted last will be migrated to Encounter.
- The integration ID of the parent table is used wherever a new table is being populated based on an existing table.
- The migration scripts use the seed data values given below provided by Oracle. If you have used a different set of seed data values in Encounter Service Provider to represent a Responsible Service Provider relationship, change it in the migration script for both Interface Tables and Data Warehouse schema, and run `post_ddl_upgrade.sql`.

- The following are the seed data values that are used for filtering Encounter Service Provider. Encounter Service Provider Relationship Type in the migration scripts:
 - HDI_ENC_SVCPRV.ENC_SVCPRV_RLTYP_CD='ENC_SVCPRV_RLSHPTYP_RSPNSBL_SVCPRV' (CD_NM='Responsible Service Provider' AND INTEGRATION_ID='ENC_SVCPRV_RLSHPTYP_RSPNSBL_SVCPRV~EHA_CUSTOM_CD_SYS~1.0' AND SYS_INT_ID='EHA_CUSTOM_CD_SYS~1.0' AND SYS_DAT_SRC_NUM_ID=1 AND CREATED_BY_USER_ID='EHA_USER' AND CREATED_BY_USER_DS_NUM_ID=1)
 - On the Data Warehouse schema, it corresponds to HDM_ENC_SVCPRV.ENC_SVCPRV_RLSHPTYP_ID/VN resolving to the following code:


```
CD='ENC_SVCPRV_RLSHPTYP_RSPNSBL_SVCPRV' AND CD_NM='Responsible Service Provider' AND INTEGRATION_ID='ENC_SVCPRV_RLSHPTYP_RSPNSBL_SVCPRV~EHA_CUSTOM_CD_SYS~1.0'
```
- The values mentioned above are presented in a logical way and is not the exact physical representation of the values present in the migration scripts. See **sql files** <INSTALL_HOME>/dm/hdi_install/pkb/hdi_upgrade_7_0.pkb and <INSTALL_HOME>/dm/hdm_install/pkb/hdm_upgrade_7_0.pkb for the exact seed data values.
- HDM_INTVN_SPCMN. INTVN_SPCMN_RLSHPTYP_ID/VN is populated with the value -1 corresponding to the default value of CODEID_NAV configured in the HMC schema. If you have modified the seed data, change the script <INSTALL_HOME>/dm/hdm_install/post_ddl_upgrade.sql accordingly.
 - It is assumed that the time stamps for SRC_CHANGED_ON_DT, match from the parent to the child reference on the interface schema. For example, the value of HDI_ENC_SVCPRV.ENC_SRC_CHANGED_ON_DT should be same as that of the parent, that is, HDI_ENC.SRC_CHANGED_ON_DT for the same record being referred in both tables right up to the seconds. If it is not the same, change the migration script accordingly.
- Key steps related to data migration are logged into the HDI_RSLT_LOG and HDM_RSLT_LOG tables in the respective schemas.

The following are the steps to execute the schema migration scripts after modifications:

Interface tables schema migration:

1. Open the command prompt and navigate to the <INSTALL_HOME>/dm/hdi_install/ folder.
2. Connect to the interface tables schema through command prompt using the SQL*Plus utility.
3. Execute the script using the command '@post_ddl_upgrade.sql'.

Data warehouse schema migration:

1. Open the command prompt and navigate to the <INSTALL_HOME>/dm/hdm_install/ folder.
2. Connect to the data warehouse schema through command prompt using the SQL*Plus utility.
3. Execute the script using the command '@post_ddl_upgrade.sql'.

2.8 Running the Installer on Pre-created Schemas

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the `<media_pack_location>/` folder.
3. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```
4. Create the following default tablespaces and provide an appropriate tablespace name. The table provides an example tablespace name.

Table 2–2 Default Tablespaces

| Tablespace Details | Tablespace Name | BIG File Tablespace |
|---|-----------------|---------------------|
| Default tablespace used for Interface tables (hdi) schema | hdi_ts | Yes |
| Default tablespace used for Data Warehouse (hdm) schema | hdm_ts | Yes |
| Default tablespace used for Common Data Mart (hcd) schema | hcd_ts | Yes |
| Default tablespace for Omics Data Bank (odb) schema | odb_data_ts | Yes |
| Used for indexes of the Omics Data Bank (odb) schema | odb_index_ts | Yes |
| Used for LOB columns in the Omics Data Bank (odb) schema | odb_lob_ts | Yes |
| Default tablespace used for Cohort Data Mart (cdm) schema | cdm_data_ts | Yes |
| Used for indexes of the Cohort Data Mart (cdm) schema | cdm_index_ts | Yes |
| Default tablespace used for Enterprise (ent) schema | ent_ts | No |
| Default tablespace for Job Engine (job) schema | job_data_ts | No |
| Used for indexes of the Job Engine (job) schema | job_index_ts | No |
| Database File System (DBFS) store created as part of the Job Engine installation | job_store_ts | No |
| Name of the tablespace to store LOB data in the DBFS store created for the JOB ENGINE schema user | job_lob_ts | No |
| Name of the tablespace to be used for the DBFS store created for the JOB_ENGINE schema | job_tbs_ts | No |
| Default tablespace used for services (svc) schema | svc_ts | No |

5. Create the following temporary tablespaces. The table provides an example tablespace name.

Table 2–3 Temporary Tablespaces

| Tablespace Details | Tablespace Name | BIG File Tablespace |
|---|-----------------|---------------------|
| Temporary tablespace used for Interface tables (hdi) schema | hdi_temp | Yes |
| Temporary tablespace used for Data warehouse (hdm) schema | hdm_temp | Yes |
| Temporary tablespace used for Common data mart (hcd) schema | hcd_temp | Yes |
| Temporary tablespace used for Omics Data bank (odb) schema | odb_temp | Yes |
| Temporary tablespace used for Cohort data mart (cdm) schema | cdm_temp | Yes |
| Temporary tablespace used for Enterprise (ent) schema | ent_temp | No |
| Temporary tablespace used for Job Engine (job) schema | job_temp | No |
| Temporary tablespace used for Services (svc) schema | svc_temp | No |

6. Navigate to the directory `<media_pack_location>/Disk1/stage/Components/oracle.hsgbu.hc.datamodel/7.0.1.0.0/1/DataFiles/Expanded/filegroup1`.
7. Unzip the `master_install.zip` file.
8. Connect to Oracle SYS from the extracted content and create database roles by executing the `roles.sql` script.
9. Create the following user schemas with an appropriate default tablespace and temporary tablespace.
 - Interface layer schema (hdi)
 - Data warehouse schema (hdm)
 - Common data mart schema (hcd)
 - Omics data bank schema (odb)
 - Cohort data mart (cdm)
 - Enterprise schema (ent)
 - Job engine schema (job)
 - Services schema (svc)
10. Execute the following scripts/commands as a DBA user. When prompted, enter the respective schema names.
 - `@hdi_install/grant_schema_priv.sql`
 - `@hdm_install/grant_schema_priv.sql`
 - `@hcd_install/grant_schema_priv.sql`
 - `@odb_install/grant_schema_priv.sql`

Execute the following commands:

```
> ALTER USER <odb> QUOTA UNLIMITED on <odb_index_ts>
```

```
> ALTER USER <odb> QUOTA UNLIMITED on <odb_lob_ts>
```

- @cdm_install/grant_schema_priv.sql

Execute the following command:

```
> ALTER USER <cdm> QUOTA UNLIMITED on <cdm_index_ts>
```

- @enterprise_install/grant_schema_priv.sql

- @job_install/grant_schema_priv.sql

Execute the following commands:

```
> ALTER USER <job> QUOTA UNLIMITED on <job_index_ts>
```

```
> ALTER USER <job> QUOTA UNLIMITED on <job_store_ts>
```

```
> ALTER USER <job> QUOTA UNLIMITED on <job_lob_ts>
```

```
> ALTER USER <job> QUOTA UNLIMITED on <job_tbs_ts>
```

- @svc_install/grant_schema_priv.sql

11. Make sure that all the pre-created user sessions are disconnected from the database.

12. Navigate to the **<media_pack_location>/Disk1/install** folder.

13. Change the protection on files as follows:

```
chmod 755 *
```

14. Start the Oracle Universal Installer (OUI) using the following command:

- Database server is on the machine where the installer is running and is an exadata instance, execute:

```
sh runInstaller.sh -local dba_tasks=false db_platform=exadata
```

- Database server is on the machine where the installer is running and is a non-exadata instance, execute:

```
sh runInstaller.sh -local dba_tasks=false db_platform=default
```

- Database server is on a different machine and is an exadata instance, execute:

```
sh runInstaller.sh -local remote_installation=true dba_tasks=false  
db_platform=exadata
```

- Database server is on a different machine and is a non-exadata instance, execute:

```
sh runInstaller.sh -local dba_tasks=false db_platform=default  
remote_installation=true
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

15. Click **Next**. The Select a Product to Install screen appears.

16. Select the **Oracle Healthcare Foundation Data Model 7.0.1.0.0** option, and click **Next**.

The Oracle Healthcare Foundation Data Model 7.0.1.0.0 screen appears.

17. Select the **Custom (Recommended)** option and click **Next**.

The Specify Home Details screen appears.

18. Enter the installation home name and location.
19. Click **Next**. The Verify Installation Prerequisites screen appears.
20. Verify if all the prerequisites are met before proceeding.
21. Click **Next**. The Oracle Client Home Configuration screen appears.
22. Specify the Oracle client home path. The installer validates this path.
23. Click **Next**. The Database Configuration screen appears.
24. Enter values for the following fields:
- Hostname - By default, the system host name appears
 - Port - By default, the port number is 1521. You can edit this field if required.
 - Service name

Note: The installer will not validate the database connectivity. Make sure that you are able to connect to the database from SQLPlus.

25. Click **Next**. The Table Compression screen is displayed.
26. Select the compression option for the following schemas from the corresponding drop-down list:

| Schema Name | Compression Options for Non-Exadata | Compression Options for Exadata |
|-------------------------|--|--|
| Interface tables schema | No Compression (default)
Advanced Compression | Hybrid columnar compression (default)
No Compression |
| Data warehouse schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression: Preferred if updates are high
Hybrid columnar compression |
| Common data mart schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression |
| Cohort data mart schema | No Compression (default)
Advanced Compression | No Compression (default)
Advanced Compression |
| Omics Data Bank schema | No Compression (default)
Advanced Compression | Hybrid columnar compression (default) |

27. Click **Next**. The Data Model Configuration screen appears.
28. Enter the respective pre-created schema details for the following:
- Interface tables schema name
 - Interface tables schema password
 - Data warehouse schema name
 - Data warehouse schema password
 - Common data mart schema name

- Common data mart schema password
 - Omics data bank schema name
 - Omics data bank schema password
29. Click **Next**. The Data Model Configuration screen appears.
30. Enter the pre-created schema details for the following:
- Cohort data mart schema name
 - Cohort data mart password
 - Enterprise schema name
 - Enterprise schema password
 - Job engine schema name
 - Job engine schema password
 - Services schema name
 - Services schema password
31. Click **Next**. The Data Model Configuration Verification screen appears.
32. Click **Next**. The Tablespace Details screen appears.
33. Click **Next**. The Temporary Tablespace Details screen appears.
34. Click **Next**. The Omics Data Bank and Cohort Data Mart Parameters screen appears.
35. Enter the values in the following fields:
- Result Partition - Used to partition result tables in the ODB schema. The available options are:
 - GENE (Default)
 - STUDY
 - Promoter Offset - Numerical value to specify a portion of the gene used as a promoter in the ODB schema. The default value is 200.
 - Flanking Offset - Numerical value to specify the region before and after a gene to link results to a gene in the ODB schema. The default value is 200.
 - Max Parallel Degree - An option to specify the maximum degree of parallelism to be set on tables or used in the SQL statements for the CDM or ODB schema. It is dependent on the machine configuration of the database server. The default value is 2.
36. Click **Next**. The Tablespace Parameters screen appears.
37. Enter values for the following fields from the existing CDM, ODB, and Job engine schemas:

Note: Make sure that these tablespaces exist before the installation and which was used to create these schemas.

- cdm_index_ts_name
- odb_index_ts_name

- odb_lob_ts_name
 - job_index_ts_name
 - job_lob_ts_name
 - job_tbs_ts_name
 - job_store_ts_name
38. Click **Next**. The Summary screen appears.
 39. Click **Install**.
 40. After the installation is complete, the End of Installation screen appears.
 41. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
 42. Review the generated installation log files for errors. For details on troubleshooting, [Section 2.10](#).
 43. Contact Oracle support, if necessary, to resolve any errors.

2.9 Revoking Privileges

After the CDM and ODB data model installation, connect to the database user with DBA privilege, and execute the following scripts to revoke privileges:

```
REVOKE CREATE ANY DIRECTORY FROM <odb user>
```

```
REVOKE CREATE ANY CONTEXT FROM <cdm user>
```

where,

<odb_user> is the ODB schema name.

<cdm_user> is the CDM schema name.

2.10 Troubleshooting

If the installation fails, open the log file for errors. For the log file details, see [Section 2.3](#).

You must fix the issues and rerun the installer from the installation home location.

2.10.1 Seed Data Troubleshooting

Seed data scripts are executed as part of the installation process for both HDI schema and HDM schema. The seed data that is loaded in each schema is identical although the format is specific to each of the two schemas.

2.10.1.1 Error Logging and Debugging

These errors that occur while populating seed data using the seed data load procedures are logged in the HDM_X_SEED_DATA_ERR_LOG table for the HDM schema and the HDI_X_SEED_DATA_ERR_LOG table for the HDI schema.

The following are the key columns in the error log table (HDM_X_SEED_DATA_ERR_LOG or HDI_X_SEED_DATA_ERR_LOG):

- **ERR_ID** - Unique identifier for a record in the error log table.

- **ERR_TBL_NM** - Specifies the table name for which the error record was logged. For example, for an error in the HDM code repository will have a value **HDM_CD_REPOSITORY** in this column.
- **ERR_TYP** - Indicates the type of error that is logged. There are five types of errors that can be logged. For the different types of errors, see [Section 2.10.1.2](#).
- **ERR_DESC** - A short description of the error.
- **ERR_INT_ID** - Indicates the integration ID of the record for which the error was logged. This column along with the error table name (ERR_TBL_NM) can be used to debug the error. The Integration ID for tables that are populated with seed data has the following pattern:

Table 2–4 Integration ID Pattern for Tables Populated with Seed Data

| Table Name | Columns to be Concatenated to Generate the Integration ID |
|--------------------------|---|
| HDM_USER | LOGIN |
| HDM_CD_SYS | SYS_CD~SYS_VERSION |
| HDM_CD_REPOSITORY | CD~SYS_CD~SYS_VERSION |
| HDM_CD_TYP | TYP_CD |
| HDM_CD_REPOSITORY_CD_TYP | CD~SYS_CD~ SYS_VERSION~ TYP_CD |

2.10.1.2 Seed Data Error Types

The following section describes the different error types that can be logged and the approach to understand and resolve them:

Note: In the following section, non-EHA user refers to individuals using the application.

- **Error Type - EHA_WARNING: Code name exists**
- **Error Type - EHA_ERROR: Insert failed: Creation of version failed**
- **Error Type - EHA_ERROR: Update failed**
- **Error Type - EHA_ERROR: Insert failed: Duplicate integration ID**
- **Error Type - EHA_ERROR: PL/SQL_ERROR**

2.10.1.2.1 Error Type - EHA_WARNING: Code name exists

Error Description

Code name: <CODE NAME> exists. New Oracle seed data record inserted with same code name.

Resolution for HDM Identification

Search Code Repository for the record having the code name specified in the Error Description.

```
select * from HDM_CD_REPOSITORY where CD_NM = '<CODE NAME SPECIFIED IN THE ERROR STATEMENT>';
```

For example,

```
SQL> select * from HDM_CD_REPOSITORY where CD_NM = 'Patient Withdrew';
```

Resolution

After identifying the code name, you can select one of the following options:

- Delete the conflicting seed data record inserted by the Oracle seed data procedure (identified by the EHA user) and use your own seed data.
- Delete the data record that you have inserted which caused the code clash and instead use the Oracle seed data record.

Resolution for HDI Identification

Search Code Repository for the record having the code name as specified in the Error Description.

```
select * from HDI_CD_REPOSITORY where CD_NM = '<CODE NAME SPECIFIED IN THE
ERROR STATEMENT>';
```

For example,

```
SQL> select * from HDI_CD_REPOSITORY where CD_NM = 'Patient Withdrew';
```

Resolution

After identifying the code name, you can select one of the following options:

- Delete the conflicting seed data record inserted by the Oracle seed data procedure (identified by the EHA User) and use your own seed data.
- Delete the data record that you have inserted which caused the code clash and instead use the Oracle seed data record.

2.10.1.2.2 Error Type - EHA_ERROR: Insert failed: Creation of version failed

Error Description

Non-EHA user has versioned a record. Unable to create a new version of the record.

Resolution for HDM Identification

Navigate to the table identified in HDM_X_SEED_DATA_ERR_LOG.ERR_TBL_NM and use HDM_X_SEED_DATA_ERR_LOG.ERR_INT_ID to identify the error record.

```
select * from <HDM_X_SEED_DATA_ERR_LOG.ERR_TBL_NM> where INTEGRATION_ID =
'<HDM_X_SEED_DATA_ERR_LOG.ERR_INT_ID>' and CURRENT_FLG='Y';
```

For example,

```
SQL> select * from HDM_CD_REPOSITORY where INTEGRATION_ID = 'SPCMN_TYP_CD_
IVFEHA_CUSTOM_CD_SYS1.0' and CURRENT_FLG='Y';
```

Resolution

This error occurs when Oracle provided seed data was previously updated and versioned by a non-EHA user. This indicates that you have taken "ownership" of the data and any subsequent updates through the Oracle seed data process are rejected with this error message. The normal resolution is to ignore the Oracle provided seed data.

Resolution for HDI Identification

Navigate to the table identified in HDI_X_SEED_DATA_ERR_LOG.ERR_TBL_NM and use HDI_X_SEED_DATA_ERR_LOG.ERR_INT_ID to identify the error record.

```
select * from <HDI_X_SEED_DATA_ERR_LOG.ERR_TBL_NM> t1 where INT_ID = <HDI_
X_SEED_DATA_ERR_LOG.ERR_INT_ID> and SRC_CHANGED_ON_DT = (select max(SRC_
CHANGED_ON_DT) from <HDI_X_SEED_DATA_ERR_LOG.ERR_TBL_NM> t2 where t1.int_
id = t2.int_id);
```

For example,

```
SQL> select *from HDI_CD_REPOSITORY cr1 where INT_ID = 'SPCMN_TYP_CD_IVFEHA_CUSTOM_CD_SYS1.0' and SRC_CHANGED_ON_DT = (select max(SRC_CHANGED_ON_DT) from HDI_CD_REPOSITORY cr2 where cr1.int_id = cr2.int_id);
```

Resolution

This error occurs when Oracle provided seed data was previously updated and versioned by a non-EHA user. This indicates that you have taken "ownership" of the data and any subsequent updates through the Oracle seed data process are rejected with this error message. The normal resolution is to ignore the Oracle provided seed data.

2.10.1.2.3 Error Type - EHA_ERROR: Update failed

Error Description

Non-EHA user has changed the record. Unable to update the record.

Resolution for HDM Identification

Navigate to the table identified in HDM_X_SEED_DATA_ERR_LOG.ERR_TBL_NM and use HDM_X_SEED_DATA_ERR_LOG.ERR_INT_ID to identify the error record.

```
select * from <HDM_X_SEED_DATA_ERR_LOG.ERR_TBL_NM> where INTEGRATION_ID=<HDM_X_SEED_DATA_ERR_LOG.ERR_INT_ID> and CURRENT_FLG='Y';
```

For example,

```
SQL> select *from HDM_CD_REPOSITORY where INTEGRATION_ID = 'SPCMN_TYP_CD_IVFEHA_CUSTOM_CD_SYS1.0' and CURRENT_FLG='Y';
```

Resolution

This error occurs when Oracle provided seed data has previously been updated by a non-EHA user. This indicates that you have taken "ownership" of the data and any subsequent updates via the Oracle seed data process are rejected with this error message. The normal resolution is to ignore the Oracle provided seed data.

Resolution for HDI

This error will not occur in HDI as no updates are supported in HDI.

2.10.1.2.4 Error Type - EHA_ERROR: Insert failed: Duplicate integration ID

Error Description

Non-EHA user has created a record with the same integration ID. Unable to create a new record.

Resolution for HDM Identification

Navigate to the table identified in HDM_X_SEED_DATA_ERR_LOG.ERR_TBL_NM and use HDM_X_SEED_DATA_ERR_LOG.ERR_INT_ID to identify the error record.

```
select * from <HDM_X_SEED_DATA_ERR_LOG.ERR_TBL_NM> where INTEGRATION_ID = <HDM_X_SEED_DATA_ERR_LOG.ERR_INT_ID> and CURRENT_FLG='Y';
```

For example,

```
SQL> select * from HDM_CD_REPOSITORY where INTEGRATION_ID = 'SPCMN_TYP_CD_IVFEHA_CUSTOM_CD_SYS1.0' and CURRENT_FLG='Y';
```

Resolution

After examining the conflicting data, you can select one of the following options:

- To insert Oracle seed data, modify the integration ID of the conflicting record that you have inserted and run the seed data procedure again.
- If the Oracle supplied seed data is not required then ignore the Oracle provided seed data.

Resolution for HDI Identification

Navigate to the table identified in HDI_X_SEED_DATA_ERR_LOG.ERR_TBL_NM and use HDI_X_SEED_DATA_ERR_LOG.ERR_INT_ID to identify the error record.

```
select * from <HDI_X_SEED_DATA_ERR_LOG.ERR_TBL_NM> t1 where INT_ID=<HDI_X_SEED_DATA_ERR_LOG.ERR_INT_ID> and SRC_CHANGED_ON_DT=(select max(SRC_CHANGED_ON_DT) from <HDI_X_SEED_DATA_ERR_LOG.ERR_TBL_NM> t2 where t1.int_id = t2.int_id);
```

For example,

```
SQL> select * from HDI_CD_REPOSITORY cr1 where INT_ID = 'SPCMN_TYP_CD_IVFEHA_CUSTOM_CD_SYS1.0' and SRC_CHANGED_ON_DT = (select max(SRC_CHANGED_ON_DT) from HDI_CD_REPOSITORY cr2 where cr1.int_id = cr2.int_id);
```

Resolution

After examining the conflicting data, you can select one of the following options:

- To insert Oracle seed data, modify the integration ID of the conflicting record that you have inserted and run the seed data procedure again.
- If the Oracle supplied seed data is not required then ignore the Oracle provided seed data.

2.10.1.2.5 Error Type - EHA_ERROR: PL/SQL_ERROR

Resolution for HDM

Other PL SQL errors that are encountered when inserting seed data.

Resolution for HDI

Other PL SQL errors that are encountered when inserting seed data.

2.11 Uninstalling the Oracle Healthcare Foundation Data Model

Note: Oracle recommends that you uninstall Data Model only from the development environment.

1. Execute the following commands to drop user schemas by connecting to the system user. If you have installed the Data Model in the custom mode, replace the user schema names and tablespace names with the values provided during the installation.

```
drop user <hdi> cascade;
drop user <hdm> cascade;
drop user <hcd> cascade;
drop user <odb> cascade;
drop user <cdm> cascade;
drop user <ent> cascade;
drop user <job> cascade;
drop user <svc> cascade;
drop tablespace <hdi_temp> INCLUDING CONTENTS and datafiles;
```

```
drop tablespace <hdm_temp> INCLUDING CONTENTS and datafiles;
drop tablespace <hcd_temp> INCLUDING CONTENTS and datafiles;
drop tablespace <odb_temp> INCLUDING CONTENTS and datafiles;
drop tablespace <cdm_temp> INCLUDING CONTENTS and datafiles;
drop tablespace <ent_temp> INCLUDING CONTENTS and datafiles;
drop tablespace <job_temp> INCLUDING CONTENTS and datafiles;
drop tablespace <svc_temp> INCLUDING CONTENTS and datafiles;
drop tablespace <hdi_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <hdm_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <hcd_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <odb_data_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <odb_index_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <odb_lob_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <cdm_data_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <cdm_index_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <ent_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <job_data_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <job_index_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <job_store_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <job_lob_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <job_tbs_ts> INCLUDING CONTENTS and datafiles;
drop tablespace <svc_ts> INCLUDING CONTENTS and datafiles;
```

2. Connect to Sys user, verify the following table records, and delete the entries for <job> schema and where STORE_OWNER=<job schema>.

For example,

```
delete from DBFS_SFS$_FS cascade;
delete from DBFS$_MOUNTS cascade;
delete from DBFS$_STORES cascade;
delete from DBFS_SFS$_VOL cascade;
delete from DBFS_SFS$_TAB cascade;

commit;
```

Oracle Healthcare Foundation Data Management Assembly for Oracle Data Integrator

This chapter explains how to install the Oracle Healthcare Foundation Data Management Assembly for Oracle Data Integration (ODI). It contains the following sections:

- [Section 3.1, "Prerequisites"](#)
- [Section 3.2, "Guidelines"](#)
- [Section 3.3, "Installation Log Files"](#)
- [Section 3.4, "Installing the Oracle Healthcare Foundation Data Management Assembly in Typical Mode"](#)
- [Section 3.5, "Installing the Oracle Healthcare Foundation Data Management Assembly in Custom Mode"](#)
- [Section 3.6, "Creating a New ODI Repository Login"](#)
- [Section 3.7, "Upgrading OHADI, Application Toolkit, and Cohort Data Mart Loaders to Oracle Healthcare Foundation"](#)
- [Section 3.8, "Running the Installer on Pre-created Schemas"](#)
- [Section 3.9, "Revoking Privileges"](#)
- [Section 3.10, "Troubleshooting"](#)
- [Section 3.11, "Uninstalling the Oracle Healthcare Foundation Data Management Assembly"](#)

3.1 Prerequisites

Before installing Oracle Healthcare Foundation, complete the following pre-installation tasks. The user should be familiar with the Oracle Database (DB), ODI, and Linux OS.

- Install Oracle Healthcare Foundation Data Model (fresh or upgrade). Follow the instructions in [Chapter 2](#).
- Make sure that the ODI services can connect to the Data Model 7.0.1 database mentioned in the Oracle TNS file (that is, TNS entries of the required database must be available in the installation server tnsnames.ora file).
- Make sure that the password expiry notification message does not display for the pre-created schemas, system user, or existing schemas (in case of upgrade).

- Installer must run on the system where ODI server is installed for the Data Management Assembly installation.
- The terminology loaders source file location should exist before the installation starts. The installer creates an archive directory. For example,
`/scratch/home/oemora/TL_Source` is the source file location specified during installation, which already exists.
`/scratch/home/oemora/TL_Archive_Files` is created by the installer as the archive directory.
- Make sure that the path of the data file (Configuration schema/Repository schema tablespace) mentioned while creating the tablespace is correct. Make sure that the database user should have write privileges.
- Make sure that there is enough space in the installation directory and Oracle Home directory.
- Sqlplus utility is available in the installation server and the impdp utility in the repository database server.
- Make sure that the installation user should have read, write, and execute privileges to the following folder:
`$ODI_HOME/bin`
The installer creates product specific files under this location.
- For remote installation (where the installation server and ODI Repository Database server are different machines), make sure that the:
 - Remote database server directory is mounted to the installation server with an appropriate read and write privileges.
 - Remote directories are accessible after mounting from the installation server.
 - Linux user of the remote server, who executes the Oracle process, has the privilege of 755 to the directory (datapump).
 - If the repository DB exists on an Exadata machine, repository DB single node (the node which is being mounted) TNSENTRY, should be added to the tnsnames.ora file in the installation server. After installing, revert the TNSENTRY to the original entry.
- Set the GLOBAL_NAMES database initialization parameter to false.

3.2 Guidelines

- OUI installer does not fix any issues automatically. If the installation fails, you must manually verify, and fix the issues before restarting the installer.
- You must provide unique repository schema names. The installer imports the ETL metadata into these schemas. However, upon restarting the installer for any failures, you must specify the same values that you entered for the previous execution.
- Back up the following csv files under `$ODI_HOME/bin` if it exists:
 - `bus_susp_day.csv`
 - `daylght_svngs_day.csv`

- hosp_hol_day.csv
- time_odi.csv
- If the Terminology Loaders source folder is a shared folder, make sure you take a back up of the following files:
 - Code Axes.txt
 - Code Descriptions.txt
 - Code Hierarchy.txt
 - Code.txt
 - Related Entity.txt
 - Relations Type.txt
 - Relations.txt
 - Relationship Type.txt
 - time.txt

Note: If any file exists with the same name, installer will overwrite this file.

- Installer auto-populates some of the user parameters and lets you edit them.

3.3 Installation Log Files

While installing Oracle Healthcare Foundation Data Management Assembly, the installer generates the following log files. When the installer is running the python script, the execution log is redirected to the below log files:

- installActions<timestamp>.log - Records the action of the installer and can be used to diagnose issues with the installer.
- oraInstall<timestamp>.out - Records the output of SQL scripts run by the installer.
- oraInstall<timestamp>.err -Records the errors from the SQL scripts run by the installer.

The log files are time stamped and each installation session creates a new log file.

On a Linux machine, the log files are located at **\$ORACLE_BASE/oraInventory/logs**.

For example, /u01/app/oraInventory/logs.

When the installer is running the ksh script, the execution log is redirected to the below log files:

- <INSTALL_HOME>/dma_odi_master_install/dmalogs/dma_etl_install.log - Contains a consolidated log file that is archived to <INSTALL_HOME>/dma_odi_master_install/dmalogs/tmplogs/ with the time stamp for next execution of the installer. In case of restart, logs are appended to the existing dma_etl_install.log file.
- <INSTALL_HOME>/dma_odi_master_install/dmalogs/tmplogs/<script_name>.error - Contains an error file if the script is not executed successfully.

- `<INSTALL_HOME>/dma_odi_master_install/dmalogs/tmplogs/<script_name>.done` - Indicates that the script is executed successfully.

The installer generates the following reports:

- `<INSTALL_HOME>/reports/dma_odi_custom_install<time_stamp>.html` - Contains the installation summary of the Data Management Assembly for ODI custom installation.
- `<INSTALL_HOME>/reports/dma_odi_typical_install<time_stamp>.html` - Contains the installation summary of the Data Management Assembly for ODI typical installation.

While reporting any problems that occur during installation, make sure that you include all the above log files. Check which components were installed successfully using the following query by connecting to the enterprise schema:

```
Select * from W_EHA_PRODUCT_VERSION
```

Send the result of the query while reporting any problems to the Oracle support.

3.4 Installing the Oracle Healthcare Foundation Data Management Assembly in Typical Mode

To install the Oracle Healthcare Foundation Data Management Assembly in typical mode, perform the following:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the `<media_pack_location>/` folder.
3. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```

4. Navigate to the `Disk1/install` folder.
5. Change the protection on files as follows:

```
chmod 755 *
```

6. Start the Oracle Universal Installer by running the following command:
 - Database server is on the machine where the installer is running, execute:


```
sh runInstaller.sh -local
```
 - Database server is on a different machine, execute:


```
sh runInstaller.sh -local remote_installation=true
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

7. Click **Next**. The Select a Product to Install screen appears.
8. Select the **Oracle Healthcare Foundation Data Management Assembly for ODI 7.0.1.0.0** option, and click **Next**.

The Select Installation Type screen appears.

9. Select the **Typical** option and click **Next**.

The Specify Home Details screen appears.

10. Enter the installation home location.
11. Click **Next**. The Verify Installation Prerequisites screen appears.
12. Verify if all the prerequisites are met before proceeding.
13. Click **Next**. The Oracle Home Configuration screen appears.
14. Specify the Oracle client home location.
15. Click **Next**. The Select the ODI home location screen appears.
16. Specify the ODI home location.

Note: ODI home should be one level above the **/bin** directory and should point to **/agent** directory. For example, <path>/Oracle_ODI1/oracledi/agent/.

17. Click **Next**. The Select database server for ODI repository schemas screen appears.
18. Select one of the following options for the ODI repository schemas:
 - If ODI repository database server exist on the installation server, select the **Installation database server** option, and go to **step 20**.
 - Else, select the **Remote database server** option, and go to **step 19**.
19. (Applicable only for Remote installation) Click **Next**. The Specify mount path details screen appears.

Enter the following mounted directory configuration details in which remote server directory is being mounted:

- Mount path in repository database server
- Mount path in installation server

To obtain the available storage drives in the Linux machine, execute the `df -h` command. If the remote server directory is mounted on the installation server, the mounting is displayed as follows:

```
<Remote Server name>:<Remote server path>
    <total size> <used up space> <Available space> <use%> <Path in
installation server where mounting was done>
```

For example,

```
abc:/scratch/dump
    191G 138G 44G 76% /installation server
```

Note:

- (datapump) directory of the remote database server should be mounted to the installation server with an appropriate read and write privileges.
 - Make sure that the remote directories are accessible after mounting from the installation server.
 - If the remote server mounted path is displayed as /, provide the absolute mounted path of the remote server.
 - The remote server Linux user that executes the Oracle process, must have minimum privilege of 755 to the directory.
-
-

20. Click **Next**. The Specify Healthcare Data Model database instance details screen appears.
21. Enter values for the following fields:
 - Hostname - By default, the system host name appears
 - Port number
 - Service name
 - System user password
22. Click **Next**. The Specify ODI Supervisor password screen appears.
23. Specify the supervisor password used to log in to the ODI console.
24. Click **Next**. The Select Terminology loaders source location screen appears.
25. Specify the Terminology loaders source file location.

Note: This location is used to read the terminology loaders source data files. You can change this location when required.

The installer creates an archive directory at the same level as that of the source directory. Make sure that the create directory privileges exist for the installation user.

26. Click **Next**. The Specify Healthcare Data Model schema details screen appears.
27. Enter values for the following fields:
 - Interface table schema name
 - Interface table schema password
 - Data warehouse schema name
 - Data warehouse schema password
 - Common data mart (hcd) schema name
 - Common data mart (hcd) schema password
 - Cohort data mart (cdm) schema name
 - Cohort data mart (cdm) schema password
28. Click **Next**. The Specify Healthcare Data Model schema details screen appears.

29. Enter values for the following fields:

- Enterprise schema name
- Enterprise schema password.

30. Click **Next**. The Specify Terminology loader details screen appears.

31. Enter values for the following fields:

- Master repository schema password
- Work repository schema password

Note: The installer creates the repository schema (**tl_master_rep_701**) and work repository schema (**tl_work_rep_701**), and imports loaders into it.

32. Click **Next**. The Specify Warehouse Integration loader details screen appears.

33. Enter values for the following fields:

- Configuration schema password
- Master repository schema password
- Work repository schema password

Note: The installer creates the configuration schema (**wil_hmc**), master repository schema (**wil_master_rep_701**), and work repository schema **wil_work_rep_701**, and imports loaders into it.

34. Click **Next**. The Specify Healthcare common data mart loader details screen appears.

35. Enter values for the following fields:

- Configuration schema password
- Master repository schema password
- Work repository schema password

Note: The installer creates the configuration schema (**hcd_hmc**), master repository schema (**hcd_master_rep_701**), and work repository schema **hcd_work_rep_701**, and imports loaders into it.

36. Click **Next**. The Specify Healthcare cohort data mart loader details screen appears.

37. Enter values for the following fields:

- Master repository schema password
- Work repository schema password

Note: The installer creates the master repository schema (**cdm_master_rep_701**) and work repository schema (**cdm_work_rep_701**), and imports loaders into it.

The configuration schema is not required for CDM.

38. Click **Next**. The Specify tablespace location for configuration schema screen appears.
39. Specify the tablespace location for configuration schema and go to **step 41**.

Note: The location should be present in the data model database server with write privileges.

40. Click **Next**. The Verify Configuration Parameters screens appear.
41. Click **Next**. The Summary screen appears.
42. Click **Install**.
43. After the installation is complete, the End of Installation screen appears.
44. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
45. Review the generated installation log files for errors. For details on troubleshooting, [Section 3.10](#).
46. Contact Oracle support, if necessary, to resolve any errors.

3.5 Installing the Oracle Healthcare Foundation Data Management Assembly in Custom Mode

To install the Oracle Healthcare Foundation Data Management Assembly in custom mode, perform the following:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the **<media_pack_location>/** folder.
3. Unzip the **OHF_V701_Linux-x64.zip** file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```

4. Navigate to the **Disk1/install** folder.
5. Change the protection on files as follows:

```
chmod 755 *
```

6. Start the Oracle Universal Installer by running the following command:
 - If the ODI repository schemas (master and work) to be created is on the database instance of the installation server, execute:

```
sh runInstaller.sh -local
```
 - If the ODI repository schemas (master and work) to be created is on the database instance of other server, execute:

```
sh runInstaller.sh -local remote_installation=true
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

7. Click **Next**. The Select a Product to Install screen appears.
8. Select the **Oracle Healthcare Foundation Data Management Assembly for ODI 7.0.1.0.0** option and click **Next**.

The Select Installation Type screen appears.

9. Select the **Custom (Recommended)** option and click **Next**.

The Specify Home Details screen appears.

10. Enter the installation home path.
11. Click **Next**. The Verify Installation Prerequisites screen appears.
12. Verify if all the prerequisites are met before proceeding.
13. Click **Next**. The Select the Oracle Home Configuration screen appears.
14. Specify the Oracle client home location.
15. Click **Next**. The Select the ODI home location screen appears.
16. Specify the ODI home location.

Note: ODI home should be one level above the `/bin` directory and should point to the `/agent` directory. For example, `<path>/Oracle_ODI1/oracledi/agent/`.

17. Click **Next**. The Select database server for ODI repository schemas screen appears.
18. Select one of the following options for the ODI repository schemas:
 - If ODI repository database server exist on the installation server, select the **Installation database server** option, and go to **step 20**.
 - Else, select the **Remote database server** option, and go to **step 19**.
19. (Applicable only for Remote installation) Click **Next**. The Specify mount path details screen appears.

Enter the following mounted directory configuration details in which remote server directory is being mounted:

- Mount path in repository database server
- Mount path in installation server

To obtain the available storage drives in the Linux machine, execute the `df -h` command. If the remote server directory is mounted on the installation server, the mounting is displayed as follows:

```
<Remote Server name>:<Remote server path>
    <total size> <used up space> <Available space> <use%> <Path in
installation server where mounting was done>
```

For example,

```
abc:/scratch/dump
    191G 138G 44G 76% /installation server
```

Note:

- (datapump) directory of the remote database server should be mounted to the installation server with an appropriate read and write privileges.
 - Make sure that the remote directories are accessible after mounting from the installation server.
 - If the remote server mounted path is displayed as /, provide the absolute mounted path of the remote server.
 - The remote server Linux user that executes the Oracle process, must have minimum privilege of 755 to the directory.
-
-

20. Click **Next**. The Specify Healthcare Data Model database instance details screen appears.

21. Enter values for the following fields:

- Host name - By default, the system host name appears
- Port number
- Service name
- System user password
- Select this database instance for repository schema creation

If you select **Yes**, the installer uses the same Data Model database instance for ODI repository schema creation. Go to **step 23**.

If you select **No**, **step 22** is displayed.

22. Click **Next**. The Specify ODI repository database instance details screen appears.

Enter values for the following fields:

- Host name - By default, the system host name appears
- Port
- Service name
- System user password

23. Click **Next**. The Specify ODI Supervisor password screen appears.

24. Specify the supervisor password used for the ODI console login.

25. Click **Next**. The Select Terminology loaders source location screen appears.

26. Specify the Terminology loaders source file location.

Note: This location is used to read the terminology loaders source data files. You can change this location when required.

The installer creates an archive directory at the same level as that of the source directory. Make sure that the create directory privileges exist for the installation user.

27. Click **Next**. The Specify Healthcare Data Model schema details screen appears.

28. Enter values for the following fields:
 - Interface table schema name
 - Interface table schema password
 - Data warehouse schema name
 - Data warehouse schema password
 - Common data mart (hcd) schema name
 - Common data mart (hcd) schema password
 - Cohort data mart (cdm) schema name
 - Cohort data mart (cdm) schema password
29. Click **Next**. The Specify Healthcare Data Model schema details screen appears.
30. Enter values for the following fields:
 - Enterprise schema name
 - Enterprise schema password.
31. Click **Next**. The Specify Terminology loader details screen appears.
32. Enter values for the following fields:
 - Master repository schema name
 - Master repository schema password
 - Work repository schema name
 - Work repository schema password

Note: The installer creates the master repository schema and work repository schema, and imports loaders into it.

33. Click **Next**. The Specify Warehouse Integration loader details screen appears.
34. Enter values for the following fields:
 - Configuration schema name
 - Configuration schema password
 - Master repository schema name
 - Master repository schema password
 - Work repository schema name
 - Work repository schema password

Note: Provide the repository schemas that are not present in the repository database instance. The installer creates these schemas and imports loaders into it.

The installer creates the configuration schema if it does not exist. To upgrade, enter an existing hmc schema name.

35. Click **Next**. The Specify Healthcare common data mart loader details screen appears.

36. Enter values for the following fields:

- Configuration schema name
- Configuration schema password
- Master repository schema name
- Master repository schema password
- Work repository schema name
- Work repository schema password

Note: Provide the repository schemas that are not present in the repository database instance. The installer creates these schemas and imports loaders into it.

The installer creates the configuration schema if it does not exist. To upgrade, enter an existing hmc schema name.

37. Click **Next**. The Specify Healthcare cohort data mart loader details screen appears.

38. Enter values for the following fields:

- Master repository schema name
- Master repository schema password
- Work repository schema name
- Work repository schema password

Note: Provide the repository schemas that are not present in the repository database instance. The installer creates these schemas and imports loaders into it.

The configuration schema is not required for CDM.

39. Click **Next**. The Specify Tablespace details screen appears.

40. Enter values for the following fields:

- Repository schema default tablespace name
- Repository schema temporary tablespace name
- Configuration schema default tablespace name
- Configuration schema temporary tablespace name

Note: The installer creates these tablespaces if they do not exist.

41. Click **Next**. The Specify tablespace location for configuration schema screen appears.

42. Specify the tablespace location for configuration schema and go to **step 45**.

Note: The location should be present in the data model database server with write privileges.

43. Click **Next**. If you have selected **No** in the **Select this database instance for repository schema creation** field (step 21), this step is displayed.

The Specify tablespace location for repository schema screen appears.

44. Specify the tablespace location for the ODI repository schema.

Note: The location should be present in the repository database server with write privileges.

45. Click **Next**. The Verify Configuration Parameters screens appear.
46. Click **Next**. The Summary screen appears.
47. Click **Install**.
48. After the installation is complete, the End of Installation screen appears.
49. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
50. Review the generated installation log files for errors. For details on troubleshooting, see [Section 3.10](#).
51. Contact Oracle support, if necessary, to resolve any errors.

3.6 Creating a New ODI Repository Login

Perform the following steps to create a new ODI repository login:

1. Navigate to **ODI > File > New > Create a New ODI Repository Login**.
2. Click **OK**. The Repository Connection Information screen is displayed.
3. Enter the following values:
 - Login Name - For example, WIL_REPOSITORY_LOGIN
 - User - SUPERVISOR
 - Password - Provide the ODI Login password that was entered during installation (see [Section 3.5](#), step 24.)
 - User - <database schema created for the master repository>
 - Password - <database schema password created for the master repository>
 - Driver List - Select **OracleJDBC Driver** from the drop-down list
 - Driver Name - oracle.jdbc.oracledriver
 - Url - Set appropriate values based on your database details
 - Work Repository - Select the **Work Repository** option, browse to select the work repository shown (for example, for Warehouse Integration loader, select **OHADI_WORK_REPOSITORY**), and click **OK**.
4. Click **OK**. The login name is created with the name specified in step 3.
5. Navigate to **ODI > Connect > ODI Studio**.
6. Enter the following details:
 - Login Name - Select **WIL_REPOSITORY_LOGIN**
 - User - Supervisor

- Password - Provide the ODI login password that was entered during installation (see [Section 3.5](#), step 24).

Similarly, follow the above steps to create the login for Terminology loaders, common data mart loader, and cohort data mart loader.

3.7 Upgrading OHADI, Application Toolkit, and Cohort Data Mart Loaders to Oracle Healthcare Foundation

To upgrade existing OHADI 3.1, Application Toolkit 3.1, and CDM 3.1 to Oracle Healthcare Foundation Data Management Assembly 7.0.1, perform the following steps:

1. If any previous ETLs are in the failed status, make sure that they are executed successfully before upgrading.
2. Make sure that the data models of OHADI, Application Toolkit, and CDM are upgraded to Oracle Healthcare Foundation 7.0.1.
3. Modify the default configuration schema names to the existing configuration schema (hmc) names of OHADI and Application Toolkit.

The installer upgrades the configuration schemas to Oracle Healthcare Foundation 7.0.1.

4. The loader jobs (ETLs) are imported into a fresh repository. Therefore, enter unique names for the repository schema names.

Note: If an existing repository schema name is entered, the installer may terminate or delete the objects.

5. Run the installer in the custom mode. Follow the instructions in [Section 3.5](#).
6. Delete all E\$_ tables under HCD schema.

3.8 Running the Installer on Pre-created Schemas

1. Create the following default and temporary tablespaces with an appropriate quota. The following table shows an example tablespace name:

Table 3–1 Default Tablespaces

| Tablespace Details | Tablespace Name | BIG File Tablespace |
|--|-----------------|---------------------|
| Repository schema default tablespace name | odirep_ts | Yes |
| Repository schema temporary tablespace name | odirep_temp | Yes |
| Configuration schema default tablespace name | hmc_ts | Yes |
| Configuration schema temporary tablespace name | hmc_temp | Yes |

2. Create the following database users and associate them with the tablespaces created above:

- Terminology loader Master repository schema (tl_master_rep_701)
- Terminology loader Work repository schema (tl_work_rep_701)
- Warehouse Integration loader Configuration schema (wil_hmc)
- Warehouse Integration loader Master repository schema (wil_master_rep_701)
- Warehouse Integration loader Work repository schema (wil_work_rep_701)
- Healthcare common data mart Configuration schema (hcd_hmc)
- Healthcare common data mart Master repository schema (hcd_master_rep_701)
- Healthcare common data mart Work repository schema (hcd_work_rep_701)
- Healthcare cohort data mart Master repository schema (cdm_master_rep_701)
- Healthcare cohort data mart Work repository schema (cdm_work_rep_701)

Table 3–2 Schema Names and Associated Default and Temporary Tablespaces

| Schema Name | Default Tablespace | Temporary Tablespace |
|--------------------|--------------------|----------------------|
| wil_hmc | hmc_ts | hmc_temp |
| hcd_hmc | hmc_ts | hmc_temp |
| tl_master_rep_701 | odirep_ts | odirep_temp |
| tl_work_rep_701 | odirep_ts | odirep_temp |
| wil_master_rep_701 | odirep_ts | odirep_temp |
| wil_work_rep_701 | odirep_ts | odirep_temp |
| hcd_master_rep_701 | odirep_ts | odirep_temp |
| hcd_work_rep_701 | odirep_ts | odirep_temp |
| cdm_master_rep_701 | odirep_ts | odirep_temp |
| cdm_work_rep_701 | odirep_ts | odirep_temp |

3. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
4. Navigate to the `<media_pack_location>/` folder.
5. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```
6. Navigate to the `<media_pack_location>/Disk1/stage/Components/oracle.hsgbu.hc.dma.odi/7.0.1.0.0/1/DataFiles/Expanded/filegroup1` directory.
7. Unzip the `dma_odi_master_install.zip` file.
8. Navigate to the `dma_odi_master_install/hmc_odi_install/` directory.
9. Connect to the system user and execute the following scripts:
 - `@odi_hdi_user_privilege.sql <HDI_SCHEMA_NAME>`
 - `@odi_hmc_user_privilege.sql <WIL_HMC_SCHEMA_NAME> <HCD_HMC_SCHEMA_NAME>`

- @odi_rep_user_privilege.sql <HLI_MASTER_REP_USR> <WIL_MASTER_REP_USR> <AT_MASTER_REP_USR> <HLI_WORK_REP_USR> <WIL_WORK_REP_USR> <AT_WORK_REP_USR> <CDM_MASTER_REP_USR> <CDM_WORK_REP_USR>

10. Navigate to the **<media_pack_location>/Disk1/install** folder.

11. Change the protection on files as follows:

```
chmod 755 *
```

12. Start the Oracle Universal Installer by running the following command:

- If the ODI repository schemas (master and work) to be created is on the database instance of the installation server, execute:

```
sh runInstaller.sh -local dba_tasks=false
```

- If the ODI repository schemas (master and work) to be created is on the database instance of other server, execute:

```
sh runInstaller.sh -local remote_installation=true dba_tasks=false
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

13. Click **Next**. The Select a Product to Install screen appears.

14. Select the **Oracle Healthcare Foundation Data Management Assembly for ODI 7.0.1.0.0** option, and click **Next**.

The Select Installation Type screen appears.

15. Select the **Custom (Recommended)** option and click **Next**.

The Specify Home Details screen appears.

16. Enter the installation home path.

17. Click **Next**. The Verify Installation Prerequisites screen appears.

18. Verify if all the prerequisites are met before proceeding.

19. Click **Next**. The Select the Oracle Home Configuration screen appears.

20. Specify the Oracle client home location.

21. Click **Next**. The Select the ODI home location screen appears.

22. Specify the ODI home location.

Note: ODI home should be one level above the **/bin** directory and should point to the **/agent** directory. For example, `<path>/Oracle_ODI1/oracledi/agent/`.

23. Click **Next**. The Select database server for ODI repository schemas screen appears.

24. Select one of the following options for the ODI repository schemas:

- If ODI repository database server exist on the installation server, select the **Installation database server** option, and go to **step 26**.
- Else, select the **Remote database server** option, and go to **step 25**.

25. (Applicable only for Remote installation) Click **Next**. The Specify mount path details screen appears.

Enter the following mounted directory configuration details in which remote server directory is being mounted:

- Mount path in repository database server
- Mount path in installation server

To obtain available storage drives in the Linux machine, execute the `df -h` command. If the remote server directory is mounted on the installation server, the mounting is displayed as follows:

```
<Remote Server name>:<Remote server path>
      <total size> <used up space> <Available space> <use%> <Path in
installation server where mounting was done>
```

For example,

```
abc:/scratch/dump
      191G 138G 44G 76% /installation server
```

Note:

- (datapump) directory of the remote database server should be mounted to the installation server with an appropriate read and write privileges.
 - Make sure that the remote directories are accessible after mounting from the installation server.
 - If the remote server mounted path is displayed as `/`, provide the absolute mounted path of the remote server.
 - The remote server Linux user that executes the Oracle process, must have minimum privilege of 755 to the directory.
-
-

26. Click **Next**. The Specify Healthcare Data Model database instance details screen appears.

27. Enter values for the following fields:

- Host name - By default, the system host name appears
- Port number
- Service name
- Select this database instance for repository schema creation

If you select **Yes**, the installer uses the same Data Model database instance for the ODI repository schema creation. Go to **step 29**.

If you select **No**, **step 28** is displayed.

28. Click **Next**. The Specify ODI repository database instance details screen appears.

Enter values for the following fields:

- Host name - By default, the system host name appears
- Port
- Service name

29. Click **Next**. The Specify ODI Supervisor password screen appears.

30. Specify the supervisor password used for the ODI console login.

31. Click **Next**. The Select Terminology loaders source location screen appears.
32. Specify the Terminology loaders source file location.

Note: This location is used to read the terminology loaders source data files. You can change this location when required.

The installer creates an archive directory at the same level as that of the source directory. Make sure that the create directory privileges exist for the installation user.

33. Click **Next**. The Specify Healthcare Data Model schema details screen appears.

34. Enter values for the following fields:

- Interface table schema name
- Interface table schema password
- Data warehouse schema name
- Data warehouse schema password
- Common data mart (hcd) schema name
- Common data mart (hcd) schema password
- Cohort data mart (cdm) schema name
- Cohort data mart (cdm) schema password

35. Click **Next**. The Specify Healthcare Data Model schema details screen appears.

36. Enter values for the following fields:

- Enterprise schema name
- Enterprise schema password.

37. Click **Next**. The Specify Terminology loader details screen appears.

38. Enter values for the following fields:

- Master repository schema name
- Master repository schema password
- Work repository schema name
- Work repository schema password

Note: Installer imports loaders into pre-created terminology loaders repository schemas.

39. Click **Next**. The Specify Warehouse Integration loader details screen appears.

40. Enter the pre-created schema values for the following parameters:

- Configuration schema name
- Configuration schema password
- Master repository schema name
- Master repository schema password

- Work repository schema name
- Work repository schema password

Note: Enter the pre-created or existing configuration schema details.

The installer imports loaders into the pre-created warehouse integration loaders repository schemas.

41. Click **Next**. The Specify Healthcare common data mart loader details screen appears.

42. Enter the pre-created schema values for the following parameters:

- Configuration schema name
- Configuration schema password
- Master repository schema name
- Master repository schema password
- Work repository schema name
- Work repository schema password

Note: Enter the pre-created or existing configuration schema details.

The installer imports loaders into the pre-created warehouse integration loaders repository schemas.

43. Click **Next**. The Specify Healthcare cohort data mart loader details screen appears.

44. Enter the pre-created schema values for the following parameters:

- Master repository schema name
- Master repository schema password
- Work repository schema name
- Work repository schema password

Note: The installer imports loaders into the pre-created cohort data mart loaders repository schemas.

The configuration schema is not required for CDM.

45. Click **Next**. The Specify Tablespace details screen appears.

46. Enter values for the following fields:

- Repository schema default tablespace name
- Repository schema temporary tablespace name

47. Click **Next**. The Verify Configuration Parameters screens appear.

48. Click **Next**. The Summary screen appears.

49. Click **Install**.

50. After the installation is complete, the End of Installation screen appears.

51. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
52. Review the generated installation log files for errors. For details on troubleshooting, [Section 3.10](#).
53. Contact Oracle support, if necessary, to resolve any errors.

3.9 Revoking Privileges

After the Data Management Assembly for ODI installation, run the following scripts from the user with DBA privileges:

```
@<OHC_Install_Home>/dma_odi_master_install/hmc_odi_install/dma_directory_drop.sql
```

```
@<OHC_Install_Home>/dma_odi_master_install/hmc_odi_install/dma_revoke_privilege.sql <WIL_MASTER_REP_USR> <HCD_MASTER_REP_USR> <CDM_MASTER_REP_USR> <HLI_MASTER_REP_USR>
```

where,

<OHC_Install_Home> is Oracle Healthcare Foundation installation home directory

<WIL_MASTER_REP_USR> is Warehouse integration loader master repository schema name

<HCD_MASTER_REP_USR> is Healthcare common data mart loader master repository schema name

<CDM_MASTER_REP_USR> is Cohort data mart loader master repository schema name

<HLI_MASTER_REP_USR> is Terminology loader master repository schema name

3.10 Troubleshooting

For details on installation log files, see [Section 3.3](#).

- If the installer fails while executing the python script:
 - a. Review the logs.
 - b. Analyze and fix the issue.
 - c. Restart the installer with same installation home parameters.

For example, if the password expiry notification is displayed, reset the password and restart the installer.

- If the installer fails while executing the ksh script:
 - a. Review the logs.
 - b. Analyze and fix the issue.
 - c. Restart the installer with same installation home parameters.

For example, if a particular directory does not have the write permission, provide the permission and restart the installer.

- To skip any execution process, create a zero byte **done** file in the temp directory using the following steps:
 - a. Navigate to the following folders and select the appropriate script:

```
<INSTALL_HOME>/dma_odi_master_install/dmascripts/
```


- b. Remove **.ksh** from the file, append **.done** to the file, and place a zero byte file in the temp log folder.

```
<INSTALL_HOME>/dma_odi_master_install/dmalogs/tmplogs
```

To perform a fresh installation with a new set of parameters, create a separate installer home directory and start the installer.

3.11 Uninstalling the Oracle Healthcare Foundation Data Management Assembly

Note: This section is applicable to uninstall Data Management Assembly only from the development environment.

- Execute the following commands to drop user schemas by connecting to the system user. If you have installed Data Model Assembly in the custom mode, replace the user schema name and tablespace names with the values provided during the installation.

```
drop user <HCD_WORK_REP_701> cascade;
drop user <HCD_MASTER_REP_701> cascade;
drop user <WIL_WORK_REP_701> cascade;
drop user <TL_MASTER_REP_701> cascade;
drop user <CDM_WORK_REP_701> cascade;
drop user <TL_WORK_REP_701> cascade;
drop user <WIL_MASTER_REP_701> cascade;
drop user <CDM_MASTER_REP_701> cascade;
drop user <WIL_HMC701> cascade;
drop user <HCD_HMC701> cascade;
drop tablespace <hmc_temp701> INCLUDING CONTENTS and datafiles;
drop tablespace <odirep_temp701> INCLUDING CONTENTS and datafiles;
drop tablespace <odirep_ts701> INCLUDING CONTENTS and datafiles;
drop tablespace <hmc_ts701> INCLUDING CONTENTS and datafiles;
commit;
```

- You must clean up the log files at **\$ORACLE_BASE/oraInventory/logs**. For example, `/u01/app/oraInventory/logs`.

Oracle Healthcare Foundation Data Management Assembly for Informatica

This chapter explains how to install the Oracle Healthcare Foundation Data Management Assembly for Informatica. It contains the following sections:

- [Section 4.1, "Prerequisites"](#)
- [Section 4.2, "Guidelines"](#)
- [Section 4.3, "Installation Log Files"](#)
- [Section 4.4, "Installing the Oracle Healthcare Foundation Data Management Assembly in Typical Mode"](#)
- [Section 4.5, "Installing the Oracle Healthcare Foundation Data Management Assembly in Custom Mode"](#)
- [Section 4.6, "Upgrading OHADI, Application Toolkit, and Cohort Data Mart Loaders to Oracle Healthcare Foundation"](#)
- [Section 4.7, "Running the Installer on Pre-created Schemas"](#)
- [Section 4.8, "Revoking Privileges"](#)
- [Section 4.9, "Troubleshooting"](#)
- [Section 4.10, "Uninstalling the Oracle Healthcare Foundation Data Management Assembly"](#)

4.1 Prerequisites

Before installing Oracle Healthcare Foundation, complete the following pre-installation tasks. The user should be familiar with the Oracle Database (DB), Informatica, and Linux OS.

- Install Oracle Healthcare Foundation Data Model (fresh or upgrade). Follow the instructions in [Chapter 2](#).
- Make sure that the Informatica domain is running and no user is connected to the Informatica Admin Console.
- Make sure that the Informatica services can connect to the Data Model 7.0.1 database mentioned in the Oracle TNS file (that is, TNS entries of the required database must be available in the installation server tnsnames.ora file).
- Make sure that you can connect the database using EZCONNECT syntax. For example, `sqlplus <user>/<password>@<hostname>:<port>/<service name>`

- Make sure that the password expiry notification message does not display for the pre-created schemas, system user, or existing schemas (in case of upgrade).
- Installer must run on the system where Informatica Server is installed for Data Management Assembly installation.
- The terminology loaders source file location should exist before the installation starts. The installer creates an archive directory. For example,
`/scratch/home/oemora/TL_Source` is the source file location specified during installation, which already exists.
`/scratch/home/oemora/TL_Archive_Files` is created by the installer as the archive directory at the same level as the `TL_Source` folder.
- Make sure that the path of the data file (Configuration schema/Repository schema tablespace) mentioned while creating the tablespace is correct. Make sure that the database user should have write privileges.
- Make sure that there is enough space in the installation directory and Oracle Home directory.
- Sqlplus utility is available in the installation server and the `impdp` utility in the repository database server.
- Make sure that the installation user should have read, write, and execute privileges to the following folder:
`$INFA_HOME/server/infa_shared/SrcFiles`
The installer creates product-specific folders and parameter files under this location.
- For remote installation (where the installation server and Informatica Repository Database are on different machines), make sure that the:
 - Remote database server directory is mounted to the installation server with an appropriate read and write privileges.
 - Remote directories are accessible after mounting from the installation server.
 - Linux user of the remote server, who executes the Oracle process, has the privilege of 755 to the directory (datapump).
 - If the repository DB exists on an Exadata machine, repository DB single node (the node which is being mounted) `TNSENTRY`, should be added to the `tnsnames.ora` file in the installation server. After installing, revert the `TNSENTRY` to the original entry.
- Set the `GLOBAL_NAMES` database initialization parameter to false.

4.2 Guidelines

- OUI installer does not fix any issues automatically. If the installation fails, you must manually verify, and fix the issues.
- You must provide unique repository schema names. The installer imports the ETL metadata into these schemas. However, upon restarting the installer for any failures, you must specify the same values that you entered for the previous execution.

- Back up the following csv files under \$INFROMATICA_HOME/server/infra_shared/SrcFiles if it exists:
 - bus_susp_day.csv
 - daylight_svngs_day.csv
 - hosp_hol_day.csv
 - time_am.csv
 - time_pm.csv
- If the Terminology Loaders source folder is a shared folder, make sure you take a back up of the following files:
 - Code Axes.txt
 - Code Descriptions.txt
 - Code Hierarchy.txt
 - Code.txt
 - Related Entity.txt
 - Relations Type.txt
 - Relations.txt
 - Relationship Type.txt
 - time.txt

Note: If any file exists with the same name, installer will overwrite this file.

4.3 Installation Log Files

While installing Oracle Healthcare Foundation Data Management Assembly, the installer generates the following log files. When the installer is running the python script, the execution log is redirected to the below log files:

- installActions<timestamp>.log - Records the action of the installer and can be used to diagnose issues with the installer.
- oraInstall<timestamp>.out - Records the output of SQL scripts run by the installer.
- oraInstall<timestamp>.err -Records the errors from the SQL scripts run by the installer.

The log files are time stamped and each installation session creates a new log file.

On a Linux machine, the log files are located at **\$ORACLE_BASE/oraInventory/logs**.

For example, /u01/app/oraInventory/logs.

When the installer is running the ksh script, the execution log is redirected to the below log files:

- <INSTALL_HOME>/dma_infa_master_install/dmalogs/dma_etl_install.log - Contains a consolidated log file that is archived to <INSTALL_HOME>/dma_infa_master_install/dmalogs/tmplogs/ with the time stamp for next execution of

the installer. In case of restart, logs are appended to the existing `dma_etl_install.log` file.

- `<INSTALL_HOME>/dma_infa_master_install/dmalogs/tmplogs/<script_name>.error` - Contains an error file if the script is not executed successfully.
- `<INSTALL_HOME>/dma_infa_master_install/dmalogs/tmplogs/<script_name>.done` - Indicates that the script is executed successfully.

The installer generates the following reports:

- `ORACLE_HOME/reports/dma_infa_custom_install<time_stamp>.html` - Contains the installation summary of the Data Management Assembly for Informatica custom installation.
- `ORACLE_HOME/reports/dma_infa_typical_install<time_stamp>.html` - Contains the installation summary of the Data Management Assembly for Informatica typical installation.

While reporting any problems that occur during installation, make sure that you include all the above log files. Check which components were installed successfully using the following query by connecting to the enterprise schema:

```
Select * from W_EHA_PRODUCT_VERSION
```

Send the result of the query while reporting any problems to the Oracle support.

4.4 Installing the Oracle Healthcare Foundation Data Management Assembly in Typical Mode

To install the Oracle Healthcare Foundation Data Management Assembly in typical mode, perform the following:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the `<media_pack_location>/` folder.
3. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```

4. Navigate to the `Disk1/install` folder.
5. Change the protection on files as follows:

```
chmod 755 *
```

6. Start the Oracle Universal Installer by running the following command:
 - Database server is on the machine where the installer is running, execute:


```
sh runInstaller.sh -local
```
 - Database server is on a different machine, execute:


```
sh runInstaller.sh -local remote_installation=true
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

7. Click **Next**. The Select a Product to Install screen appears.

8. Select the **Oracle Healthcare Foundation Data Management Assembly for Informatica 7.0.1.0.0** option.
9. Select the **Typical** option and click **Next**.
The Specify Home Details screen appears.
10. Enter or select the path where you want to install.
11. Click **Next**. The Verify Installation Prerequisites screen appears.
12. Verify if all the prerequisites are met before proceeding.
13. Click **Next**. The Oracle Home Configuration screen appears.
14. Enter the Oracle client home location.
15. Click **Next**. The Select the Informatica home location screen appears.
16. Specify the Informatica home location.

Note: Informatica home should be one level above the /server directory. For example, <path>/Informatica/961/.

17. Click **Next**. The Select database server for Informatica repository schemas screen appears.
18. Select one of the following options for the Informatica repository schemas:
 - If Informatica repository database server exist on the installation server, select the **Installation database server** option, and go to **step 20**.
 - Else, select the **Remote database server** option, and go to **step 19**.
19. (Applicable only for remote installation) Click **Next**. The Specify mount path details screen appears.

Enter the following mounted directory configuration details in which remote server directory is being mounted:

- Mount path in repository database server
- Mount path in installation server

To obtain available storage drives in the Linux machine, execute the `df -h` command. If the remote server directory is mounted on the installation server, the mounting is displayed as follows:

```
<Remote Server name>:<Remote server path>
    <total size> <used up space> <Available space> <use%> <Path in
installation server where mounting was done>
```

For example,

```
abc:/scratch/dump
    191G 138G 44G 76% /installation server
```

Note:

- (datapump) directory of the remote database server should be mounted to the installation server with an appropriate read and write privileges.
 - Make sure that the remote directories are accessible after mounting from the installation server.
 - If the remote server mounted path is displayed as /, provide the absolute mounted path of the remote server.
 - The remote server Linux user that executes the Oracle process, must have a minimum privilege of 755 to the directory.
-
-

20. Click **Next**. The Specify Healthcare Data Model database instance details screen appears.

21. Enter values for the following fields:

- Hostname - By default, the system host name appears
- Port number
- Service name
- System user password

22. Click **Next**. The Select Terminology loaders source location screen appears.

23. Specify the Terminology loaders source file location.

Note: This location is used to read the terminology loaders source data files. You can change this location when required.

The installer creates an archive directory at the same level as that of the source directory. Make sure that the create directory privileges exist for the installation user.

24. Click **Next**. The Specify Healthcare Data Model schema details screen appears.

25. Enter values for the following fields:

- Interface table schema name
- Interface table schema password
- Data warehouse schema name
- Data warehouse schema password
- Common data mart (hcd) schema name
- Common data mart (hcd) schema password
- Cohort data mart (cdm) schema name
- Cohort data mart (cdm) schema password

26. Click **Next**. The Specify Healthcare Data Model schema details screen appears.

27. Enter values for the following fields:

- Enterprise schema name

- Enterprise schema password.
28. Click **Next**. The Specify Warehouse Integration loader details screen appears.
29. Enter values for the following fields:
- Configuration schema password
 - Repository schema password

Note: The installer creates a configuration schema (**wil_hmc**) and repository schema (**wil_rep_701**), and imports loaders into it.

The installer creates a repository service with Warehouse_Integration_Loaders_701 and integration service with Is_Warehouse_Integration_Loaders_701.

30. Click **Next**. The Specify Healthcare common data mart loader details screen appears.
31. Enter values for the following fields:
- Configuration schema password
 - Repository schema password

Note: The installer creates a configuration schema (**hcd_hmc**) and repository schema (**hcd_rep_701**), and imports loaders into it.

Installer creates a repository service with Common_Datamart_Loaders_701 and integration service with Is_Common_Datamart_Loaders_701.

32. Click **Next**. The Specify Healthcare cohort data mart loader details screen appears.
33. Enter value for the following parameter:
- Repository schema password

Note: The installer creates a repository schema (**cdm_rep_701**) and imports loaders into it.

The installer creates a repository service with Cohort_Datamart_Loaders_701 and integration service with Is_Cohort_Datamart_Loaders_701.

The configuration schema is not required for CDM.

34. Click **Next**. The Specify tablespace location for configuration schema screen appears.
35. Specify the tablespace location for configuration schema.

Note: The location should be present in the data model database server with write privileges.

36. Click **Next**. The Specify Informatica Domain Details.

- Domain name
- Domain code page ID
- Node name
- License name
- Informatica host name
- Informatica port number
- Informatica administrator user name
- Informatica administrator password

Contact your Informatica administrator for Domain Code Page ID and provide a valid Code Page ID. Make sure that code page is compatible with the domain code page for creating the integration service. For a domain compatible code page, see any existing and active integration service code pages from the Informatica admin console. A list of sample code pages and their IDs are as follows:

Table 4–1 Sample Code Pages and their IDs

| Name | Description | ID |
|----------|--|------|
| US-ASCII | 7-bit ASCII | 1 |
| Latin1 | ISO 8859-1 Western European | 4 |
| JapanEUC | Japanese Extended UNIX Code (including JIS X 0212) | 18 |
| UTF-8 | Unicode Transformation Format, multibyte | 106 |
| MS932 | MS Windows Japanese, Shift-JIS | 2024 |
| MS1252 | MS Windows Latin1 (ANSI), superset of Latin1 | 2252 |

37. Click **Next**. The Verify Configuration Parameters screens appear.
38. Click **Next**. The Summary screen appears.
39. Click **Install**.
40. After the installation is complete, the End of Installation screen appears.
41. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
42. Review the generated installation log files for errors. For details on troubleshooting, [Section 4.9](#).
43. Contact Oracle support, if necessary, to resolve any errors.

4.5 Installing the Oracle Healthcare Foundation Data Management Assembly in Custom Mode

To install the Oracle Healthcare Foundation Data Management Assembly in custom mode, perform the following:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the `<media_pack_location>/` folder.
3. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```

4. Navigate to the **Disk1/install** folder.
5. Change the protection on files as follows:

```
chmod 755 *
```
6. Start the Oracle Universal Installer by running the following command:
 - If the Informatica repository schemas to be created is on the database instance of the installation server, execute:

```
sh runInstaller.sh -local
```
 - If the Informatica repository schemas to be created is on the database instance of other server, execute:

```
sh runInstaller.sh -local remote_installation=true
```where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.
7. Click **Next**. The Select a Product to Install screen appears.
8. Select the **Oracle Healthcare Foundation Data Management Assembly for Informatica 7.0.1.0.0** option.
9. Select the **Custom** option and click **Next**.

The Specify Home Details screen appears.
10. Enter or select the path where you want to install.
11. Click **Next**. The Verify Installation Prerequisites screen appears.
12. Verify if all the prerequisites are met before proceeding.
13. Click **Next**. The Oracle Home Configuration screen appears.
14. Enter the Oracle client home location.
15. Click **Next**. The Select the Informatica home location screen appears.
16. Specify the Informatica home location.

Note: Informatica home should be one level above the `/server` directory. For example, `<path>/Informatica/961/`.

17. Click **Next**. The Select database server for Informatica repository schemas screen appears.
18. Select one of the following options for the Informatica repository schemas:
 - If Informatica repository database server exist on the installation server, select the **Installation database server** option, and go to **step 20**.
 - For remote installation, select the **Remote database server** option, and go to **step 19**.
19. (Applicable only for Remote installation) Click **Next**. The Specify mount path details screen appears.

Enter the following mounted directory configuration details in which remote server directory is being mounted:

- Mount path in repository database server - Remote server path
- Mount path in installation server - Path in the installation server where the mounting is performed

To obtain available storage drives in the Linux machine, execute the `df -h` command. If the remote server directory is mounted on the installation server, the mounting is displayed as follows:

```
<Remote Server name>:<Remote server path>  
    <total size> <used up space> <Available space> <use%> <Path in  
installation server where mounting was done>
```

For example,

```
abc:/scratch/dump  
    191G 138G 44G 76% /installation server
```

Note:

- (datapump) directory of the remote database server should be mounted to the installation server with an appropriate read and write privileges.
 - Make sure that the remote directories are accessible after mounting from the installation server.
 - If the remote server mounted path is displayed as `/`, provide the absolute mounted path of the remote server.
 - The remote server Linux user that executes the Oracle process, must have minimum privilege of 755 to the directory.
-
-

20. Click **Next**. The Specify Healthcare Data Model database instance details screen appears.

21. Enter values for the following fields:

- Host name - By default, the system host name appears
- Port number
- Service name
- System user password
- Select this database instance for repository schema creation

If you select **Yes**, the installer uses the same Data Model database instance for Informatica repository schema creation. Go to **step 24**.

If you select **No**, the Specify Informatica repository database instance details screen is displayed (**step 22**).

22. Click **Next**. The Specify Informatica repository database instance details screen appears.

23. Enter values for the following fields:

- Host name - By default, the system host name appears
- Port number
- Service name
- System user password

24. Click **Next**. The Select Terminology loaders source location screen appears.
25. Specify the Terminology loaders source file location.

Note: This location is used to read the terminology loaders source data files. You can change this location when required.

The installer creates an archive directory at the same level as that of source directory. Make sure that the create directory privileges exist for the installation user.

26. Click **Next**. The Specify Healthcare Data Model schema details screen appears.
27. Enter values for the following fields:
 - Interface table schema name
 - Interface table schema password
 - Data warehouse schema name
 - Data warehouse schema password
 - Common data mart (hcd) schema name
 - Common data mart (hcd) schema password
 - Cohort data mart (cdm) schema name
 - Cohort data mart (cdm) schema password
28. Click **Next**. The Specify Healthcare Data Model schema details screen appears.
29. Enter values for the following fields:
 - Enterprise schema name
 - Enterprise schema password.
30. Click **Next**. The Specify Warehouse Integration loader details screen appears.
31. Enter values for the following fields:
 - Configuration schema name
 - Configuration schema password
 - Repository name
 - Repository schema name
 - Repository schema password

Note: Provide a repository schema that is not present in the repository database instance. The installer creates repository schema and imports loaders into it.

The installer creates a repository service (<Repository name>) and integration service (Is_<Repository name>).

The installer creates a configuration schema if it does not exist.

For upgrade, provide an existing HMC schema.

32. Click **Next**. The Specify Healthcare common data mart loader details screen appears.

33. Enter values for the following fields:

- Configuration schema name
- Configuration schema password
- Repository name
- Repository schema name
- Repository schema password

Note: Provide a repository schema that is not present in the repository database instance. The installer creates a repository schema and imports loaders into it.

The installer creates a repository service (<Repository name>) and integration service (Is_<Repository name>).

The installer creates a configuration schema if it does not exist.

For upgrade, provide an existing HMC schema.

34. Click **Next**. The Specify Healthcare cohort data mart loader details screen appears.

35. Enter value for the following parameter:

- Repository name
- Repository schema name
- Repository schema password

Note: Provide a repository schema that is not present in the repository database instance. The installer creates a repository schema and imports loaders into it.

The installer creates a repository service (<Repository name>) and integration service (Is_<Repository name>).

The configuration schema is not required for CDM.

36. Click **Next**. The Specify Tablespace details screen appears.

37. Enter value for the following parameter:

- Repository schema default tablespace name
- Repository schema temporary tablespace name
- Configuration schema default tablespace name
- Configuration schema temporary tablespace name

Note: The installer creates these tablespaces if they do not exist in the database.

38. Click **Next**. The Specify tablespace location for configuration schema screen appears.

39. Specify the configuration schema tablespace location.

40. Click **Next**. If you have selected **No** in the **Select this database instance for repository schema creation** field (step 21), this step is displayed.

The Specify tablespace location for repository schema screen appears. Specify the repository schema tablespace location.

41. Click **Next**. The Specify Informatica Domain Details.

- Domain name
- Domain code page ID
- Node name
- License name
- Informatica host name
- Informatica port number
- Informatica administrator user name
- Informatica administrator password

Contact your Informatica Administrator for the Domain Code Page ID and provide a valid Code Page ID. Make sure that the code page is compatible with domain code page for creating the Integration Service. For a domain compatible code page, see any existing and active integration service code pages from the Informatica admin console. A list of sample code pages and their IDs are as follows:

Table 4–2 Sample Code Pages and their IDs

Name	Description	ID
US-ASCII	7-bit ASCII	1
Latin1	ISO 8859-1 Western European	4
JapanEUC	Japanese Extended UNIX Code (including JIS X 0212)	18
UTF-8	Unicode Transformation Format, multibyte	106
MS932	MS Windows Japanese, Shift-JIS	2024
MS1252	MS Windows Latin1 (ANSI), superset of Latin1	2252

42. Click **Next**. The Verify Configuration Parameters screens appear.

43. Click **Next**. The Summary screen appears.

44. Click **Install**.

45. After the installation is complete, the End of Installation screen appears.

46. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.

47. Review the generated installation log files for errors. For details on troubleshooting, [Section 4.9](#).

48. Contact Oracle support, if necessary, to resolve any errors.

4.6 Upgrading OHADI, Application Toolkit, and Cohort Data Mart Loaders to Oracle Healthcare Foundation

To upgrade existing OHADI 3.1, Application Toolkit 3.1, and CDM 3.1 to Oracle Healthcare Foundation Data Management Assembly 7.0.1, perform the following steps:

1. If any previous ETLs are in the failed status, make sure that they are executed successfully before upgrading.
2. Make sure that the data models of OHADI, Application Toolkit, and CDM are upgraded to Oracle Healthcare Foundation 7.0.1.
3. The OUI displays default configuration schema (hmc) names. You must change these schema names to existing schema names of OHADI 3.1 and Application Toolkit 3.1.

The installer upgrades the configuration schemas to Oracle Healthcare Foundation 7.0.1.

4. The loader jobs (ETLs) are imported into a fresh repository. Therefore, enter unique names for the repository names and repository schema names.

Note: If an existing repository names and repository schema names are entered, the installer may terminate or delete the objects.

5. Run the installer in the custom mode. Follow the instructions in [Section 4.5](#).

4.7 Running the Installer on Pre-created Schemas

1. Create the following default and temporary tablespaces with an appropriate quota. The following table shows an example tablespace name:

Table 4-3 Default Tablespaces

Tablespace Details	Tablespace Name	BIG File Tablespace
Repository schema default tablespace name	infarep_ts	Yes
Repository schema temporary tablespace name	infarep_temp	Yes
Configuration schema default tablespace name	hmc_ts	Yes
Configuration schema temporary tablespace name	hmc_temp	Yes

2. Create the following database users and associate them with the tablespaces created above:
 - Warehouse Integration loader Configuration schema (wil_hmc)
 - Warehouse Integration loader Repository schema (wil_rep_701)
 - Healthcare common data mart Configuration schema (hcd_hmc)

- Healthcare common data mart Repository schema (hcd_rep_701)
- Healthcare cohort data mart Repository schema (cdm_rep_701)

Table 4–4 Schema Names and Associated Default and Temporary Tablespaces

Schema Name	Default Tablespace	Temporary Tablespace
wil_hmc	hmc_ts	hmc_temp
hcd_hmc	hmc_ts	hmc_temp
wil_rep_701	infarep_ts	infarep_temp
hcd_rep_701	infarep_ts	infarep_temp
cdm_rep_701	infarep_ts	infarep_temp

3. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
4. Navigate to the `<media_pack_location>/` folder.
5. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:


```
unzip -a OHF_V701_Linux-x64.zip
```
6. Navigate to the directory `<media_pack_location>/Disk1/stage/Components/oracle.hsgbu.hc.dma.infa/7.0.1.0.0/1/DataFiles/Expanded/filegroup1`.
7. Unzip the `dma_infa_master_install.zip` file.
8. Navigate to the `dma_infa_master_install/hmc_infa_install` directory.
9. Connect to the system user and execute the following scripts:
 - `@infa_hdi_user_privilege.sql <HDI_SCHEMA_NAME>`
 - `@infa_hmc_user_privilege.sql <WIL_HMC_SCHEMA_NAME> <HCD_HMC_SCHEMA_NAME>`
 - `@infa_rep_user_privilege.sql <WIL_INFA_REP_DB_USER> <HCD_INFA_REP_DB_USER> <CDM_INFA_REP_DB_USER>`
10. Navigate to the `<media_pack_location>/Disk1/install` folder.
11. Change the protection on files as follows:


```
chmod 755 *
```
12. Start the Oracle Universal Installer by running the following command:
 - If the Informatica repository schemas to be created is on the database instance of the installation server, execute:


```
sh runInstaller.sh -local dba_tasks=false
```
 - If the Informatica repository schemas to be created is on the database instance of other server, execute:


```
sh runInstaller.sh -local remote_installation=true dba_tasks=false
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

13. Click **Next**. The Select a Product to Install screen appears.
14. Select the **Oracle Healthcare Foundation Data Management Assembly for Informatica 7.0.1.0.0** option.
15. Select the **Custom** option and click **Next**.
The Specify Home Details screen appears.
16. Enter or select the path where you want to install.
17. Click **Next**. The Verify Installation Prerequisites screen appears.
18. Verify if all the prerequisites are met before proceeding.
19. Click **Next**. The Oracle Home Configuration screen appears.
20. Enter the Oracle client home location.
21. Click **Next**. The Select the Informatica home location screen appears.
22. Specify the Informatica home location.

Note: Informatica home should be one level above the /server directory. For example, <path>/Informatica/961/.

23. Click **Next**. The Select database server for Informatica repository schemas screen appears.
24. Select one of the following options for Informatica repository schemas:
 - If the Informatica repository database server exist on the installation server, select the **Installation database server** option, and go to **step 26**.
 - Else, select the **Remote database server** option, and go to **step 25**.
25. (Applicable only for Remote installation) Click **Next**. The Specify mount path details screen appears.

Enter the following mounted directory configuration details in which remote server directory is being mounted:

- Mount path in repository database server - Remote server path
- Mount path in installation server - Path in the installation server where the mounting is performed

To obtain the available storage drives in the Linux machine, execute the `df -h` command. If the remote server directory is mounted on the installation server, the mounting is displayed as follows:

```
<Remote Server name>:<Remote server path>
    <total size> <used up space> <Available space> <use%> <Path in
installation server where mounting was done>
```

For example,

```
abc:/scratch/dump
    191G 138G 44G 76% /installation server
```

Note:

- (datapump) directory of the remote database server should be mounted to the installation server with an appropriate read and write privileges.
 - Make sure that the remote directories are accessible after mounting from the installation server.
 - If the remote server mounted path is displayed as /, provide the absolute mounted path of the remote server.
 - The remote server Linux user that executes the Oracle process, must have minimum privilege of 755 to the directory.
-
-

26. Click **Next**. The Specify Healthcare Data Model database instance details screen appears.

27. Enter values for the following fields:

- Host name - By default, the system host name appears
- Port number
- Service name
- Select this database instance for repository schema creation

If you select **Yes**, the installer uses the same Data Model database instance for Informatica repository schema creation. Go to **step 30**.

If you select **No**, the Specify Informatica repository database instance details screen is displayed (**step 28**).

28. Click **Next**. The Specify Informatica repository database instance details screen appears.

29. Enter values for the following fields:

- Host name - By default, the system host name appears
- Port number
- Service name

30. Click **Next**. The Select Terminology loaders source location screen appears.

31. Specify the Terminology loaders source file location.

Note: This location is used to read the terminology loaders source data files. You can change this location when required.

The installer creates an archive directory at the same level as that of the source directory. Make sure that the create directory privileges exist for installation user.

32. Click **Next**. The Specify Healthcare Data Model schema details screen appears.

33. Enter values for the following fields:

- Interface table schema name
- Interface table schema password

- Data warehouse schema name
 - Data warehouse schema password
 - Common data mart (hcd) schema name
 - Common data mart (hcd) schema password
 - Cohort data mart (cdm) schema name
 - Cohort data mart (cdm) schema password
34. Click **Next**. The Specify Healthcare Data Model schema details screen appears.
35. Enter values for the following fields:
- Enterprise schema name
 - Enterprise schema password.
36. Click **Next**. The Specify Warehouse Integration loader details screen appears.
37. Enter the pre-created schema details for the following parameters:
- Configuration schema name
 - Configuration schema password
 - Repository name
 - Repository schema name
 - Repository schema password

Note: The installer creates a repository service (<Repository name>) and integration service (Is_<Repository name>).

For upgrade, provide an existing or pre-created hmc schema details.

38. Click **Next**. The Specify Healthcare common data mart loader details screen appears.
39. Enter the pre-created schema details for the following parameters:
- Configuration schema name
 - Configuration schema password
 - Repository name
 - Repository schema name
 - Repository schema password

Note: The installer creates a repository service (<Repository name>) and integration service (Is_<Repository name>).

For upgrade, provide an existing or pre-created hmc schema details.

40. Click **Next**. The Specify Healthcare cohort data mart loader details screen appears.
41. Enter the pre-created schema details for the following parameters:
- Repository name
 - Repository schema name

- Repository schema password

Note: The installer creates a repository service (<Repository name>) and integration service (Is_<Repository name>).

The configuration schema is not required for CDM.

- 42.** Click **Next**. The Specify Tablespace details screen appears.
- 43.** Enter the pre-created schema details for the following parameters:
- Repository schema default tablespace name
 - Repository schema temporary tablespace name
- 44.** Click **Next**. The Specify Informatica Domain Details.
- Domain name
 - Domain code page ID
 - Node name
 - License name
 - Informatica host name
 - Informatica port number
 - Informatica administrator user name
 - Informatica administrator password

Contact your Informatica Administrator for the Domain Code Page ID and provide a valid Code Page ID. Make sure that the code page is compatible with the domain code page for creating Integration Service. For a domain compatible code page, see any existing and active integration service code pages from the Informatica admin console. A list of sample code pages and their IDs are as follows:

Table 4–5 Sample Code Pages and their IDs

Name	Description	ID
US-ASCII	7-bit ASCII	1
Latin1	ISO 8859-1 Western European	4
JapanEUC	Japanese Extended UNIX Code (including JIS X 0212)	18
UTF-8	Unicode Transformation Format, multibyte	106
MS932	MS Windows Japanese, Shift-JIS	2024
MS1252	MS Windows Latin1 (ANSI), superset of Latin1	2252

- 45.** Click **Next**. The Verify Configuration Parameters screens appear.
- 46.** Click **Next**. The Summary screen appears.
- 47.** Click **Install**.
- 48.** After the installation is complete, the End of Installation screen appears.

49. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
50. Review the generated installation log files for errors. For details on troubleshooting, [Section 4.9](#).
51. Contact Oracle support, if necessary, to resolve any errors.

4.8 Revoking Privileges

After the Data Management Assembly for Informatica installation, run the following scripts from System user:

```
@<OHC_Install_Home>/dma_infa_master_install/hmc_infa_install/dma_directory_drop.sql
```

```
@<OHC_Install_Home>/dma_infa_master_install/hmc_infa_install/dma_revoke_privilege.sql <WIL_INFA_REP_DB_USER> <HCD_INFA_REP_DB_USER> <CDM_INFA_REP_DB_USER>
```

where,

<OHC_Install_Home> is Oracle Healthcare Foundation installation home directory

<WIL_INFA_REP_DB_USER> is Warehouse integration loader repository schema name

<HCD_INFA_REP_DB_USER> is Healthcare common data mart loader repository schema name

<CDM_INFA_REP_DB_USER> is Cohort data mart loader repository schema name

4.9 Troubleshooting

For details on installation log files, see [Section 4.3](#).

- If the installer fails while executing the python script:
 - a. Review the logs.
 - b. Analyze and fix the issue.
 - c. Restart the installer with same installation home parameters.

For example, if the password expiry notification is displayed, reset the password and restart the installer.

- If the installer fails while executing the ksh script:
 - a. Review the logs.
 - b. Analyze and fix the issue.
 - c. Restart the installer with same installation home parameters.

For example, if a particular directory does not have the write permission, provide the permission and restart the installer.

- To skip any execution process, create a zero byte **done** file in the temp directory using the following steps:
 - a. Navigate to the following folders and select the appropriate script:

```
<INSTALL_HOME>/dma_infa_master_install/dmascripts/
```
 - b. Remove **.ksh** from the file, append **.done** to the file, and place a zero byte file in the temp log folder.

```
<INSTALL_HOME>/dma_infa_master_install/dmalogs/tmplogs
```

To perform a fresh installation with a new set of parameters, create a separate installer home directory and start the installer.

4.10 Uninstalling the Oracle Healthcare Foundation Data Management Assembly

Note: This section is applicable to uninstall Data Management Assembly only from the development environment.

Custom Mode

- Execute the following commands to drop user schemas by connecting to the system user.

```
drop user <WIL_HMC_USR> cascade;
drop user <WIL_INFA_REP_DB_USER> cascade;
drop user <AT_HMC_USR> cascade;
drop user <AT_INFA_REP_DB_USER> cascade;
drop user <CDM_INFA_REP_DB_USER> cascade;
drop tablespace <INFA_REP_TBSP> INCLUDING CONTENTS and datafiles;
drop tablespace <INFA_REP_TMP_TBSP> INCLUDING CONTENTS and datafiles;
drop tablespace <HMC_SCHEMA_TBSP> INCLUDING CONTENTS and datafiles;
drop tablespace <HMC_SCHEMA_TMP_TBSP> INCLUDING CONTENTS and datafiles;
commit;
```

- Log in to the Informatica Admin console and delete the following repositories and integration services:

Repositories:

- <WIL_REP_NAME>
- <AT_REP_NAME>
- <CDM_REP_NAME >

Integration Services:

- <WIL_INT_SRVC >
- <AT_INT_SRVC >
- <CDM_INT_SRVC>

Note:

- Ensure that there are no db (.dbf files) files in <INSTALL_HOME>.

If they exist, do not execute the following command:

```
rm -r <INSTAL_HOME>
```

Contact the Database Administrator for guidance.

- Back up any user-specific files (apart from installer default files) in the installation directory.
-
-

Typical Mode

- Execute the following commands to drop user schemas by connecting to the system user.

```
drop user wil_hmc cascade;
drop user wil_rep_701 cascade;
drop user hcd_hmc cascade;
drop user hcd_rep_701 cascade;
drop user cdm_rep_701 cascade;
drop tablespace infarep_ts INCLUDING CONTENTS and datafiles;
drop tablespace infarep_temp INCLUDING CONTENTS and datafiles;
drop tablespace hmc_ts INCLUDING CONTENTS and datafiles;
drop tablespace hmc_temp INCLUDING CONTENTS and datafiles;
commit;
```

- Log in to the Informatica Admin console and delete the following repositories and integration services:

Repositories:

- Warehouse_Integration_Loaders_701
- Common_Datamart_Loaders_701
- Cohort_Datamart_Loaders_701

Integration Services:

- Is_Warehouse_Integration_Loaders_701
- Is_Common_Datamart_Loaders_701
- Is_Cohort_Datamart_Loaders_701

Note:

- Ensure that there are no db (.dbf files) files in <INSTALL_HOME>.

If they exist, do not execute the following command:

```
rm -r <INSTAL_HOME>
```

Contact the Database Administrator for guidance.

- Back up any user-specific files (apart from installer default files) in the installation directory.
-
-

Oracle Healthcare Foundation Data Pipeline Services

Oracle Healthcare Foundation Data Pipeline Services installer configures WebLogic application server for the Oracle Healthcare Foundation products and services installation and configuration. You can install Data Pipeline Services on the following nodes:

- **Installing on Primary Node:**

Installer must be run in primary node configuration first to create a new WebLogic domain named **oh_domain** with a cluster named **oh_cluster**. All managed servers that installer created will be part of this cluster. Installer deploys and configures all Healthcare products and services, such as Omics Data loader service and File Upload service.

- **Installing on Secondary Node:**

Once the primary node installation is successful, you can run the installer in the secondary node configuration on multiple different machines other than primary node machine to scale the cluster **oh_cluster**. However, this node is optional and is required only if you want to create a WebLogic domain spread across multiple machines. Installer can be run in this node at any time to add more machines to WebLogic domain.

This chapter contains the following sections:

- [Section 5.1, "Prerequisites"](#)
- [Section 5.2, "Installation Log Files"](#)
- [Section 5.3, "Installing the Oracle Healthcare Foundation Data Pipeline Services on Primary Node"](#)
- [Section 5.4, "Installing the Oracle Healthcare Foundation Data Pipeline Services on Secondary Node"](#)
- [Section 5.5, "Troubleshooting"](#)
- [Section 5.6, "Uninstalling the Oracle Healthcare Foundation Data Pipeline Services"](#)

5.1 Prerequisites

The following are the prerequisites to install Oracle Healthcare Foundation Data Pipeline Services:

- WebLogic domain with name "oh_domain" should not exist. The installer must be on the machine where WebLogic is installed for both primary and secondary node configuration.
- All Oracle Healthcare Foundation Data Model schemas should exist.
- Oracle external table DIRECTORY object must be created for Omics Data Bank.

5.2 Installation Log Files

While installing Oracle Healthcare Foundation Data pipeline services, the installer generates the following log files:

- `installActions<timestamp>.log` - this log file records the action of the installer and can be used to diagnose issues with the installer.
- `oraInstall<timestamp>.out` - this output file records the output of all the scripts run by the installer.
- `oraInstall<timestamp>.err` - this error file records the errors from all the scripts run by the installer.

The log files are time stamped and each installation session creates a new log file.

On a Linux machine, the log files are located at `$ORACLE_BASE/oraInventory/logs`. For example, `/u01/app/oraInventory/logs`.

The installation summary with all parameters provided for the installer will be available at:

`<INSTALL_HOME>/reports/Oracle_Healthcare_Data_Pipeline_Services_7.0.1_install_<timestamp>.html`

While reporting any problems that occur during Oracle Healthcare Foundation Data pipeline services installation, make sure that you include all the above log files

5.3 Installing the Oracle Healthcare Foundation Data Pipeline Services on Primary Node

To install Oracle Healthcare Foundation Data pipeline services on the primary node, perform the following steps:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the `<media_pack_location>/` folder.
3. Unzip the `OHF_V701_Linux-x64.zip` file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```

4. Navigate to the `Disk1/install` folder.
5. Change the protection on files as follows:

```
chmod 755 *
```

6. Start the Oracle Universal Installer (OUI) by running the following command. WebLogic should be installed on the same machine where installer is running.

```
./runInstaller -local
```

where, the `-local` option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

7. Click **Next**. Select a Product to Install screen appears.
8. Select the **Oracle Healthcare Foundation Data Pipeline Services 7.0.1.0.0** option and click **Next**.

The Specify Home Details screen appears.

9. Select the data pipeline services install home name and location.
10. Click **Next**. The Verify Installation Prerequisites screen appears.
11. Verify if all the prerequisites are met before proceeding.
12. Click **Next**. The Java Home screen appears.
13. Specify the JDK installation path. The installer validates this path.
14. Click **Next**. The Fusion Middleware (FMW) screen appears.
15. Specify the WebLogic with ADF installation path. The installer validates this path.
16. Click **Next**. The Cluster Configuration screen appears.
17. Select **Yes** to create a domain and make the machine as primary node where the WebLogic AdminServer is located.
18. Click **Next**. The AdminServer Configuration screen appears.
19. Enter values for the following fields:
 - Listen Address
 - Listen Port
 - SSL Listen Port
 - User name - WebLogic administrator user
 - Password - WebLogic administrator password
20. Click **Next**. The Node Manager Configuration screen appears.
21. Enter values for the following fields:
 - Listen Address
 - Listen Port
 - User name - Node manager administrator user
 - Password - Node manager administrator password
22. Click **Next**. The Managed Server Configuration screen appears.
23. Enter values for the following fields:
 - Number of Managed Servers on this machine
 - Managed Servers listen port start index - This is used to increment port number. For example, if number of managed servers is 3, and listen port start index is 8001, three managed servers with listen ports 8001, 8002, 8003 are created.
24. Click **Next**. The FMW Repository creation utility (RCU) Configuration screen appears.

Fusion Middleware (FMW) RCU requires Oracle Database user with DBA or SYSDBA. Using the installer, you can create new RCU repositories or use pre-created repositories using the WebLogic RCU utility.

- Database Host
 - Database Port
 - Service Name
 - Schema Prefix
 - DBA User name - This field is optional if the RCU repositories are pre-created using the RCU utility
 - DBA Password - This field is optional if the RCU repositories are pre-created using the RCU utility
 - Schemas Common Password
25. Click **Next**. The Oracle Healthcare Foundation Data Model Configuration screen appears.
26. Enter values for the following fields:
- Database Host name
 - Database Port
 - Service Name
 - Omics Databank schema name
 - Omics Databank schema password
 - Services Schema name
 - Services Schema password
27. Click **Next**. The Service Configuration screen appears.
- Select **Yes** to provide service configuration.
 - Select **No** to provide service configuration post installation.
28. Click **Next**. The File Upload Service Configuration screen appears.
29. Enter values for the following fields:
- File retention period in days
 - File storage location
 - Max file size in bytes
 - Max zip extract size in bytes
 - Simultaneous upload limit
 - Use bucket and object name
30. Click **Next**. The Omics Loader Service Configuration screen appears.
31. Enter values for the following fields:
- Oracle data directory object
 - Ensembl and SwissProt directory
32. Click **Next**. The Summary screen appears.
33. Click **Install**.

34. After the installation is complete, the End of Installation screen appears.
35. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
36. See the log file located in **ORACLE_BASE/oraInventory/logs**.
37. Review the generated installation log files for errors. For details, [Section 5.5](#).
38. Contact Oracle support, if necessary, to resolve any errors.

5.4 Installing the Oracle Healthcare Foundation Data Pipeline Services on Secondary Node

To install Oracle Healthcare Foundation Data pipeline services on the secondary node, perform the following steps:

1. Extract the contents of the Oracle Healthcare Foundation media pack to your system.
2. Navigate to the **<media_pack_location>/** folder.
3. Unzip the **OHF_V701_Linux-x64.zip** file where you want to launch the installer using the following command:

```
unzip -a OHF_V701_Linux-x64.zip
```

4. Navigate to the **Disk1/install** folder.
5. Change the protection on files as follows:

```
chmod 755 *
```

6. Start the Oracle Universal Installer (OUI) by running the following command. WebLogic should be installed on the same machine where installer is running.

```
./runInstaller -local
```

where, the **-local** option is to install on the local node irrespective of the cluster nodes specified on the installer machine.

The Welcome screen appears.

7. Click **Next**. Select a Product to Install screen appears.
8. Select the **Oracle Healthcare Foundation Data Pipeline Services 7.0.1.0.0** option and click **Next**.

The Specify Home Details screen appears.

9. Select the data pipeline services install home name and location.
10. Click **Next**. The Verify Installation Prerequisites screen appears.
11. Verify if all the prerequisites are met before proceeding.
12. Click **Next**. The Java Home screen appears.
13. Specify the JDK installation path. The installer validates this path.
14. Click **Next**. The Fusion Middleware (FMW) screen appears.
15. Specify WebLogic with ADF installation path. The installer validates this path.
16. Click **Next**. The Cluster Configuration screen appears.
17. Select **No** to migrate an existing domain created by running this installer on primary node to scale the cluster and add more machines to domain.

18. Click **Next**. The AdminServer Configuration screen appears.
19. Enter values for the following fields:
 - Listen Address - Running AdminServer listen address provided as part of primary node installation
 - Listen Port - Running AdminServer listen port provided as part of primary node installation
 - SSL Listen Port - Running AdminServer SSL listen port provided as part of primary node installation
 - Administrator User name
 - Administrator Password
20. Click **Next**. The Node Manager Configuration screen appears.
21. Enter values for the following fields:
 - Listen Address
 - Listen Port
 - Administrator User name
 - Administrator Password
22. Click **Next**. The Managed Server Configuration screen appears.
23. Enter values for the following fields:
 - Number of Managed Servers on this Machine
 - Managed Servers listen port start index- This is used to increment the port number. For example, if number of managed servers is 3, and listen port start index is 8001, three managed servers with listen ports 8001, 8002, 8003 are created.
24. Click **Next**. The Summary screen appears.
25. Click **Install**.
26. After the installation is complete, the End of Installation screen appears.
27. Click **Exit** after reviewing the installation information. At the confirmation prompt, click **Yes** to exit the installer.
28. See the log file located in **ORACLE_BASE/oraInventory/logs**.
29. Review the generated installation log files for errors. For details, [Section 5.5](#).
30. Contact Oracle support, if necessary, to resolve any errors.

5.5 Troubleshooting

Primary Node

- If the installer fails due to the time taken by the node manager process to start, check the machine network configuration to make sure other processes are listening on same port, and user running the installer has the required file system permissions.
- If AdminServer fails to start due to node manager process being not available, verify if the node manager process is still running.

- If wrong database configuration is provided, modify it from the WebLogic Admin console.

Secondary Node

- If the installer fails to connect to AdminServer, verify if the AdminServer is running on primary node by accessing the WebLogic Admin console from Secondary node.
- If the installer fails due to wrong FMW path, make sure WebLogic is installed in the same file system location as the primary node.

5.6 Uninstalling the Oracle Healthcare Foundation Data Pipeline Services

If the installer fails, de-install the domain `oh_domain`. Make sure all secondary node machines are uninstalled first before uninstalling the primary node. Restart the AdminServer after every secondary node uninstall.

Oracle Healthcare Foundation Omics Data Bank Loaders

This chapter contains the following topics:

- [Section 6.1, "Prerequisites"](#)
- [Section 6.2, "Installing the Oracle Healthcare Foundation Omics Data Bank Loaders"](#)

6.1 Prerequisites

To install Omics Data Bank Loaders, the Data Model must be installed. For Data Model installation instructions, see [Chapter 2](#).

Installing Java

1. Download JRE 1.8 from <http://www.oracle.com/technetwork/java/javase/downloads/index-jsp-138363.html>
2. Install JRE on the system that you will use as the client tier. The EMBL and Swissprot loaders require JRE 1.8 to be installed on the machine from where they will be run.
3. Make sure that the path for Java 1.8 is set in the environment variable.

Note: If you plan to execute multiple loaders, make sure that you execute each loader from a separate directory. You must copy `.sh/.bat` files to another directory to execute the loaders in parallel.

6.2 Installing the Oracle Healthcare Foundation Omics Data Bank Loaders

Copy the ODB Loaders folder or ODB_Loaders.zip file from `<INSTALL_HOME>/`.

If you are executing the loaders on an operating system that supports the bash shell command language, make sure that the `.sh` files have execute privileges.

For example,

```
chmod +x <filename>
```

Oracle Healthcare Foundation Self-Service Analytics

This chapter describes how to install Oracle Healthcare Foundation Self-Service Analytics. It contains the following sections:

- [Section 7.1, "Installation Overview"](#)
- [Section 7.2, "Prerequisites"](#)
- [Section 7.3, "Installing the Oracle Healthcare Foundation Self-Service Analytics"](#)

7.1 Installation Overview

Oracle Healthcare Foundation Self-Service Analytics is available in the **OHF_V701_Linux-x64.zip** file of the media pack.

The following is the structure of the Self-Service Analytics package:

```
/selfserviceanalytics
  /hcd_rpd
    obieeIds.csv
    oh7.0_ssa_hcd.rpd
  /software
    oh_7.0_at_rpd.zip
```

It consists of the following components:

- Self-Service Analytics Oracle Business Intelligence Enterprise Edition (OBIEE) RPD file for the Healthcare Common Data Mart, which is used for Self-Service Business Intelligence.
- Self-Service Analytics tool, to generate an OBIEE RPD file for data marts built using the Healthcare Common Data Mart.

7.2 Prerequisites

The following is the prerequisite for Self-Service Analytics:

- Oracle Healthcare Foundation Data Model

7.3 Installing the Oracle Healthcare Foundation Self-Service Analytics

To install the Oracle Healthcare Foundation Self-Service Analytics, perform the following steps:

1. Navigate to the **selfserviceanalytics** folder in the media pack.
2. Open the RPD file, **oh7.0_ssa_hcd.rpd**, available in the `selfserviceanalytics\hcd_rpd` folder using the Oracle Business Intelligence Developer Client Tools 11.1.1.9.0, and update the connection pool to point to the HCD.
3. Save the **oh7.0_ssa_hcd.rpd** file and deploy it on the OBIEE server for analytics and reporting.

For details on deploying the `oh7.0_ssa_hcd` RPD file, see *Oracle Business Intelligence Enterprise Edition 11g Release 1 (11.1.1.9)* documentation.

4. Create a folder **OH_SSA_HOME** in a preferred drive on a Windows machine.
5. Copy the **oh_7.0_at_rpd.zip** file available in the `selfserviceanalytics\software` folder to the `OH_SSA_HOME` folder.
6. Extract the contents of **oh_7.0_at_rpd.zip** file in the `OH_SSA_HOME` folder.

The Self-Service Analytics tool is now available in the `OH_SSA_HOME\oh_7.0_at_rpd` folder.

For details on generating the OBIEE RPD using the Self-Service Analytics tool, see *Oracle Healthcare Foundation Programmer's Guide*.