

Oracle® Healthcare Data Repository

Installation Guide

Release 7.0.1.3

E52549-04

May 2015

Oracle Healthcare Data Repository Installation Guide, Release 7.0.1.3

E52549-04

Copyright © 2008, 2015, Oracle and/or its affiliates. All rights reserved.

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

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

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

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

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

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

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface	v
Audience	v
Documentation Accessibility	v
Related Documents	v
1 Installation Overview	
1.1 Software Requirements	1-1
2 Installing Oracle Healthcare Data Repository	
2.1 Prerequisites	2-1
2.2 Installing HDR using the Oracle Universal Installer	2-1
2.2.1 Running Installer for HDR Database Tier Installation	2-2
2.2.2 Running Installer for HDR Middle-Tier Installation	2-8
2.3 Installing HDR without using the Oracle Universal Installer	2-15
2.4 Verifying HDR Installation	2-15
2.5 Uninstalling HDR	2-15
2.5.1 Uninstalling Database Objects	2-15
2.5.2 Uninstalling the HDR Middle-Tier Application	2-16
3 Installing HDR on a WebLogic Cluster	
3.1 Installing HDR Using HDR Installer	3-1
3.2 Creating and Configuring WebLogic Machine and Node Manager	3-1
3.3 Creating and Configuring the HDR Cluster	3-2
3.4 Updating HDR Deployment and Dependent Resources to target to the HDR cluster	3-4
3.5 Changing Client-Side jndi.properties	3-7
4 Upgrading HTB to HDR	
4.1 Upgrading HTB 5.3 to HDR 7.0.1	4-1
4.1.1 Prerequisites	4-1
4.1.2 Upgrading the HTB 5.3 Database Schema to HDR 7.0.1	4-2
4.1.3 Installing the HDR Middle-Tier using the Oracle Universal Installer	4-4
4.1.4 Creating HDR Terminology Jobs	4-4
4.1.5 Creating the Bulk Data Loader Jobs	4-5
4.2 Upgrading HTB 6.X to HDR 7.0.1	4-5

4.2.1	Prerequisites	4-5
4.2.2	Upgrading the HTB 6.X Database Schema to HDR 7.0.1	4-6
4.2.3	Installing the HDR Middle-Tier using the Oracle Universal Installer	4-8
4.2.4	Running the HDR Terminology Jobs.....	4-8
4.2.5	Creating the Bulk Data Loader Jobs.....	4-8

Preface

Welcome to the Installation Guide for Oracle Healthcare Data Repository (HDR)
Version 7.0.1.

Audience

This document is intended for an audience of Oracle Applications Database Administrators who plan to install the Oracle Healthcare Data Repository (HDR) either locally or through a VPN connection to the servers.

Documentation Accessibility

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

Access to Oracle Support

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

Related Documents

The following set of documents have been referenced in this installation guide. All of these documents should be downloaded or printed from My Oracle Support and used as your guide during all HDR installations. You will find that you will add your own comments and corrections to these documents. Should you find errors, inconsistencies or missing information in any of these documents, please log an SR via My Oracle Support so that the documentation error can be corrected. It is recommended that you return to My Oracle Support and check for updates to these documents on a regular basis.

Note that you may obtain the following documents by either downloading these from <https://edelivery.oracle.com/> or from the appropriate media (CD or DVD) in the physical media pack. For downloading a document from *My Oracle Support*, use My Oracle Support Article ID to search for the particular document.

Integration and Other Product References:

Oracle Healthcare Data Repository Javadoc. This document describes the HDR Application Programming Interface. It defines all of the Classes and Interfaces included in the release.

Oracle Healthcare Data Repository Implementation Guide. This document details all of the steps required to implement the variable functional components of the HDR Platform. Once analysis has been performed to determine which parts of the HDR Platform will be utilized, this document will detail the prerequisites and process steps needed to implement the functionality.

Oracle Healthcare Data Repository Programmer's Guide. This document is organized around code samples that address common setup functions and application features, with emphasis on application functionality typically used in healthcare settings. The examples include code samples targeted to developers writing code for HDR setup and application development.

Installation Overview

This document includes the installation and initial setup of Oracle Healthcare Data Repository Version 7.0.1. The approach of this document is to assist the installer by asking relevant questions and, where necessary, providing answers to these questions to help finalize the environment details and content required during and after the installation.

Throughout the document there are references to other information available to provide further details on the process steps and tools. If you have any questions or concerns about any of the process steps in this document, open a Service Request via My Oracle Support. This lets us resolve your questions and concerns as well as provides feedback and improvement on this document.

1.1 Software Requirements

The following list details the required software, versions, and operating systems for the installation of Oracle Healthcare Data Repository version 7.0.1. Each of these products is available for download from the Oracle E-Delivery website (<https://edelivery.oracle.com/>) or the Oracle Technology Network (<http://www.oracle.com/us/technology/products/index.html>).

- Java 1.7.0_45 or JDK 1.7.0_51 executable in path
- Oracle Database 12 c (12.1.0.1.0) or 11g R2
- WebLogic Server 12.1.2 with Coherence option

For more information, refer to the *Oracle WebLogic Server Installation Guide*.

- Operating Systems:
 - Oracle Enterprise Linux 5.5 or later (64 bit)
 - IBM AIX 7.1 (64 bit)
 - HP-UX_IA (64 bit)
 - Solaris SPARC (64 bit)
 - Solaris_x86 (64 bit)

Installing Oracle Healthcare Data Repository

This chapter contains the following topics:

- ["Prerequisites"](#) on page 2-1
- ["Installing HDR using the Oracle Universal Installer"](#) on page 2-1
- ["Installing HDR without using the Oracle Universal Installer"](#) on page 2-15
- ["Verifying HDR Installation"](#) on page 2-15
- ["Uninstalling HDR"](#) on page 2-15

2.1 Prerequisites

Set the following environment variables on the machine from where the HDR installer will be run:

- `JAVA_HOME` - JDK1.7 install directory
- `ANT_HOME` - Ant home path (Ant 1.7.1 or later)
- `ORACLE_HOME` - Oracle database home directory
- `ORACLE_HOME_LISTENER` - Oracle database listener home directory
- `PATH` - `$ORACLE_HOME/bin:$PATH`
- `TWO_TASK` - Oracle Service Name. If you are installing HDR on the Oracle 12c pluggable database (PDB), then set this variable before running the HDR installer.
- `HDR_HOME` - Directory where HDR must be installed.
- `WL_HOME` - WebLogic home directory

If you are installing HDR on the Oracle 12c pluggable database (PDB), then perform the following:

1. Edit `$ORACLE_HOME/network/admin/tnsnames.ora` and add an entry for the PDB service name. The tnsname shall be same as the PDB service name.
2. Edit `$ORACLE_HOME/network/admin/listener.ora` and add the `USE_SID_AS_SERVICE_listener=on` line.

2.2 Installing HDR using the Oracle Universal Installer

This section explains how to install the HDR application using the Oracle Universal Installer. Based on the operating system, download the respective HDR installer. For example, `HDR_Installer_<Operating_System>64_Package.zip`.

The HDR application has to be installed in two stages:

- "Running Installer for HDR Database Tier Installation" on page 2-2
- "Running Installer for HDR Middle-Tier Installation" on page 2-8

2.2.1 Running Installer for HDR Database Tier Installation

This section explains how to create CTB and HCT schemas and respective database objects in the CTB and HCT schemas.

To install the HDR database tier, perform the following:

1. Copy HDR_Installer.zip and artifacts.zip folders to the database server machine.
2. Extract the files from HDR_Installer.zip and artifacts.zip to a directory.

For example, /home/hdrinstaller.

3. Navigate to the /hdrinstaller/Disk1 directory using the following command:

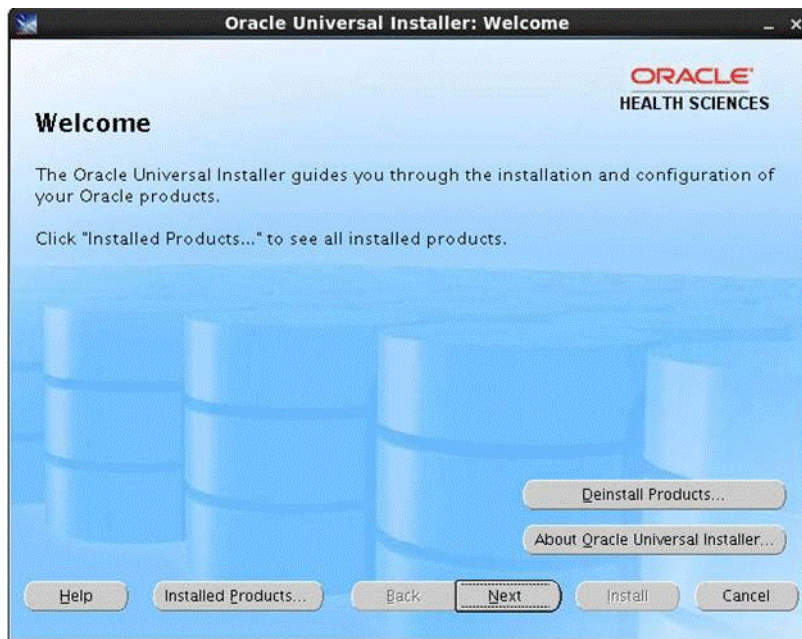
```
cd /hdrinstaller/Disk1
```

4. Execute the following script:

```
./runInstaller.sh
```

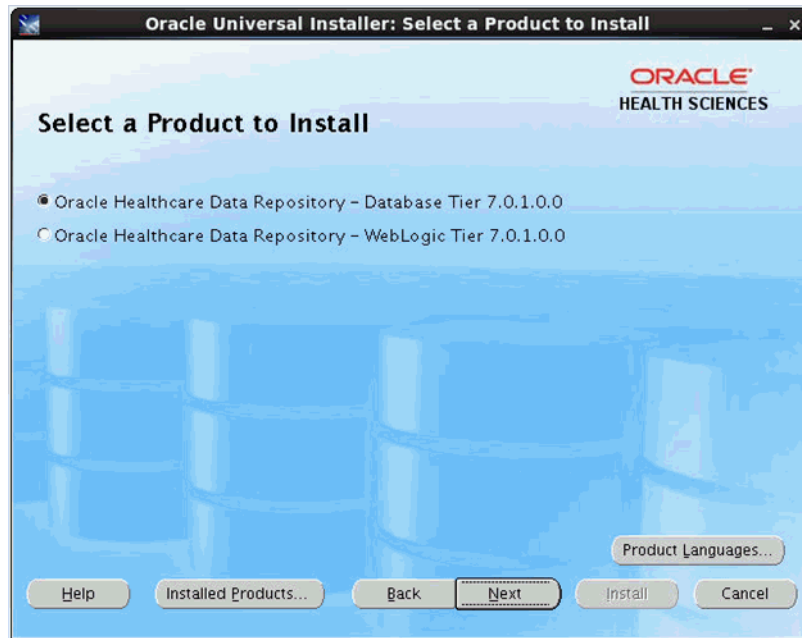
The Oracle Universal Installer screen is displayed.

Figure 2–1 Oracle Universal Installer



5. Click **Next**.

The Select a Product to Install screen is displayed.

Figure 2–2 Select a Product to Install

6. Select the **Healthcare Data Repository - Database Tier 7.0.1.0.0** option for HDR database schema and click **Next**.

The Specify Home Details screen is displayed.

Figure 2–3 Specify Home Details

7. Enter the following values in the corresponding fields:

Table 2–1 Field Values

Field	Value
Name	Enter the name of HDR Home.
Path	Enter the path for HDR Home.

This is the location where the HDR product artifacts, including the HDR J2EE application are copied.

Notes:

- By default, the Oracle database home directory path is displayed. Ensure to change the values to HDR home and its path.
- If the HDR installer cannot reuse the default oraInventory location or if you prefer to have a custom oraInventory location, then you must create a desired oraInventory directory with a file named oraInst.loc. The contents of the oraInst.loc file are as follows:

```
inventory_loc=<full path of the new oraInventory location> inst_
group=<OS user group name that owns the new oraInventory
location>
```

After creating the oraInventory directory and the oraInst.loc file, execute the HDR installer using the following command:

```
Disk1$ ./install/runInstaller -invPtrLoc <full path to
the new oraInst.loc file>
```

8. Click Next.

The Database Details screen is displayed

Figure 2–4 Database Details

9. Enter the following values in the corresponding fields:

Table 2–2 Field Values

Field	Value
Sysdba user	Enter the Oracle system user name.
Password	Enter the system user password.
Service name	Enter the Oracle service name.
Port	Enter the Oracle database port number.
Database ORACLE_HOME folder	Enter the path of ORACLE_HOME.

10. Click **Next**.

The Tablespace Properties screen is displayed.

Figure 2–5 *Tablespace Properties*

Oracle Universal Installer: Tablespace Properties

ORACLE
HEALTH SCIENCES

Tablespace Properties

Please enter the following tablespace details:

HCT user tablespace name:

HCT user tablespace file:

CTB user tablespace name:

CTB user tablespace file:

Context tablespace name:

Context tablespace file:

Index tablespace name:

Index tablespace file:

Note: You must enter the desired file name for the tablespace name fields and full path for the tablespace file fields.

Help Installed Products... Back Next Install Cancel

11. Enter the following values in the corresponding fields:

Table 2–3 *Field Values*

Field	Value
HCT user tablespace name	Enter the table space name for the HCT schema.
HCT user tablespace file	Enter the database file path (.dbf file) of the HCT tablespace.
CTB user tablespace name	Enter the table space name for the CTB schema.
CTB user tablespace file	Enter the database file path (.dbf file) of the CTB tablespace.
Context tablespace name	Enter the table space name for ETS context indexes.
Context tablespace file	Enter the database file path (.dbf file) of the Context tablespace.
Index tablespace name	Enter the tablespace name for all CTB and HCT indexes.
Index tablespace file	Enter the database file path (.dbf file) of the Index tablespace.

12. Click **Next**.

The HCT User Password screen is displayed.

13. Enter the following values in the corresponding fields:

- **Enter Password** - Enter the HCT user password.
- **Confirm Password** - Re-enter the HCT user password to confirm.

14. Click **Next**.

The CTB User Password screen is displayed.

15. Enter the following values in the corresponding fields:

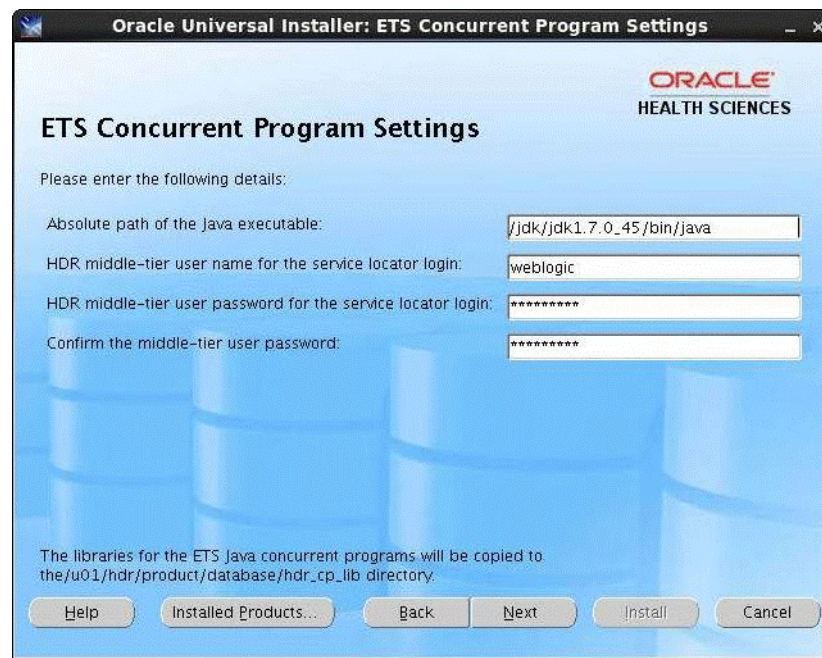
Table 2–4 Field Values

Field	Value
Enter Password	Enter the CTB user password.
Confirm Password	Re-enter the CTB user password to confirm.

16. Click **Next**.

The ETS Concurrent Programs Settings screen is displayed.

Figure 2–6 ETS Concurrent Programs Settings



17. Enter the following values in the corresponding fields:

Table 2–5 Field Values

Field	Value
Absolute path of the Java executable	Enter the complete JDK bin/java path.
HDR middle-tier user name for service locator login	Enter the WebLogic HDR user name.
HDR middle-tier user password for the service locator login	Enter the WebLogic HDR user password.
Note: The WebLogic HDR user name and password should match the WebLogic domain user name and password mentioned in Section 2.2.2 .	
Confirm the middle-tier user password	Re-enter the WebLogic HDR password to confirm.

18. Click **Next**.

The Summary screen is displayed.

19. Click Install.

Note: Any errors during the installation are logged in the files under the <user_home_dir /oraInventory/logs folder.

On successful completion of installation, the End of Installation screen is displayed.

20. Click Exit.

2.2.2 Running Installer for HDR Middle-Tier Installation

To install the HDR middle-tier, perform the following:

1. Copy HDR_Installer.zip and artifacts.zip folders to the WebLogic server machine.
2. Extract the files from HDR_Installer.zip and artifacts.zip to a directory.

For example, /home/hdrinstaller.

3. Navigate to the hdrinstaller directory using the following command:

```
cd hdrinstaller/Disk1
```

4. Execute the following script:

```
./runInstaller.sh
```

The Oracle Universal Installer screen is displayed.

5. Click **Next**.

The Select a Product to Install screen is displayed.

6. Select the **Healthcare Data Repository – WebLogic Tier 7.0.1.0.0** option and click **Next**.

The Specify Home Details screen is displayed.

7. Enter the following values in the corresponding fields:

Table 2–6 Field Values

Field	Value
Name	Enter the name of HDR Home.
Path	Enter the path for HDR Home.

Note:

- By default, the Oracle database Home directory path is displayed. Ensure the values are changed to enter HDR home and its path.
 - You can choose the same machine for both the middle tier and the database tier.
-

8. Click **Next**.

The Choose WebLogic Home Directory screen is displayed.

9. Enter the WebLogic home path in the **WebLogic home folder** field.

10. Click Next.

The HDR Domain Properties screen is displayed.

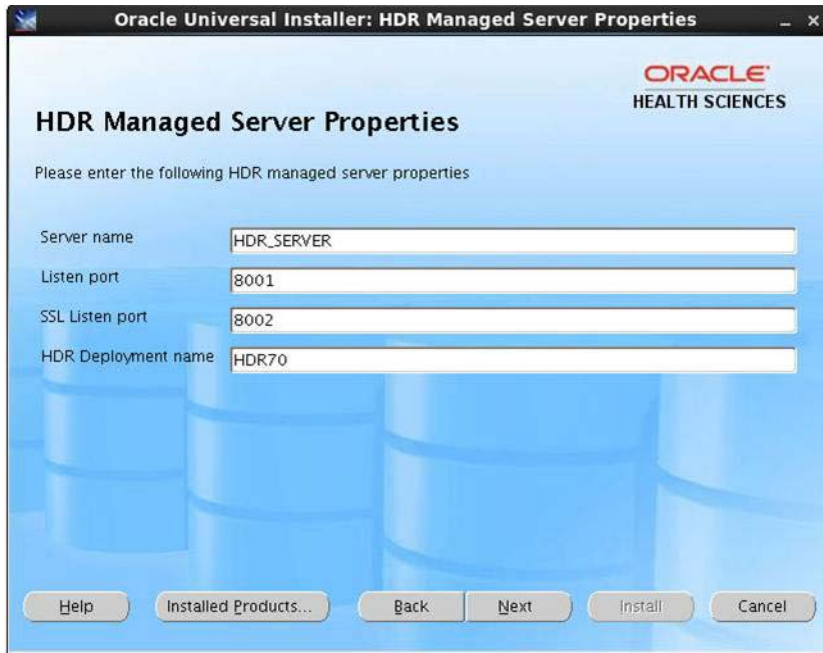
Figure 2–7 HDR Domain Properties
11. Enter the following values in the corresponding fields:**Table 2–7 Field Values**

Field	Value
Domain name	Enter the WebLogic domain name under which the HDR application has to be deployed.
Domain admin user	Enter the WebLogic domain admin user name.
Domain admin password	Enter the WebLogic domain admin password.
Confirm domain admin password	Re-enter the WebLogic domain admin password.
Admin server listen port	Enter the admin port number of the HDR domain.
Admin server SSL listen port	Enter the SSL port number.

12. Click Next.

The HDR Managed Server Properties screen is displayed.

Figure 2–8 HDR Managed Server Properties



13. Enter the following values in the corresponding fields:

Table 2–8 Field Values

Field	Value
Server name	Enter the HDR Managed server name.
Listen port	Enter the port number on which HDR managed server can listen.
SSL Listen port	Enter the SSL listen port number.
HDR Deployment name	Enter the HDR application name.

14. Click **Next**.

The IHE XDS User Password screen is displayed.

15. Enter the following values in the corresponding fields:

Table 2–9 Field Values

Field	Value
Enter Password	Enter the password for IHE XDS user.
Confirm Password	Re-enter the password for IHE XDS user.

16. Click **Next**.

The DataSource properties screen is displayed.

Figure 2–9 Data Source Properties

The screenshot shows a window titled "Oracle Universal Installer: Data Source Properties". The Oracle Health Sciences logo is in the top right. The main title is "Data Source Properties". There are four input fields: "Database host" with "localhost", "Database port" with "1521", "Database service name" with "orcl", and "CTB user's password" with "****". At the bottom, there are buttons for "Help", "Installed Products...", "Back", "Next", "Install", and "Cancel".

17. Enter the following values in the corresponding fields:

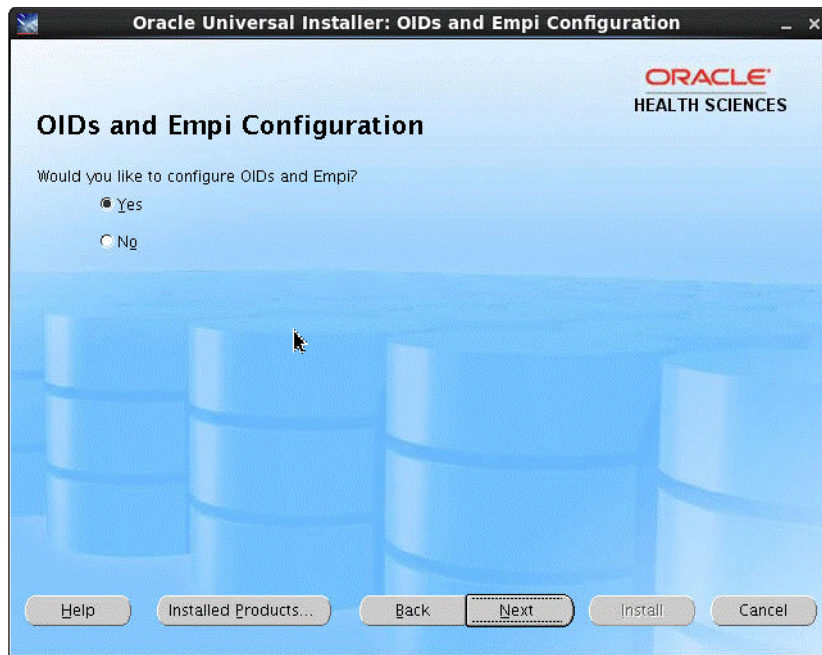
Table 2–10 Field Values

Field	Value
Database host	Enter the host name or IP address of the Oracle database server where HDR is installed.
Database port	Enter the database port number.
Database service name	Enter the database service name.
CTB user's password	Enter the CTB schema user password.

18. Click **Next**.

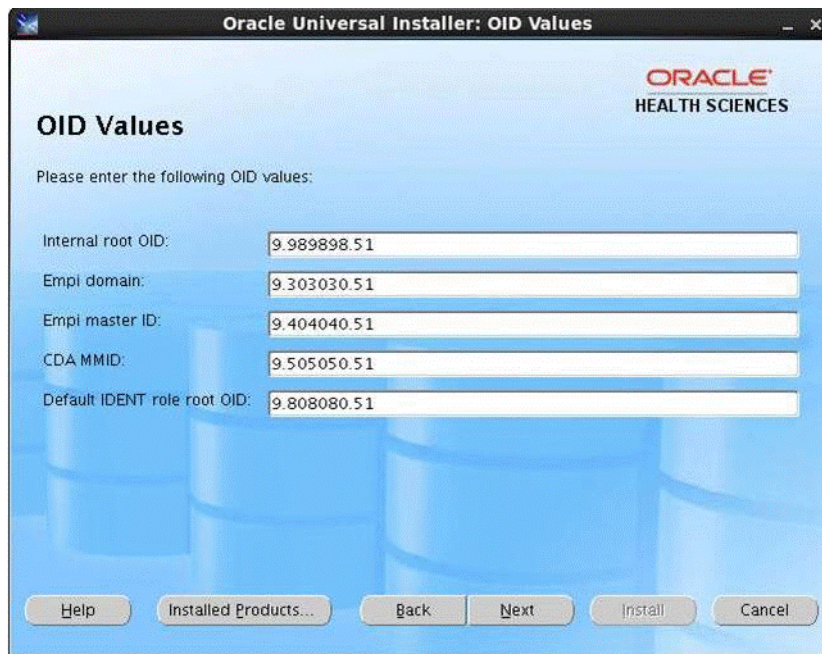
The OIDs and Empi Configuration screen is displayed.

Figure 2–10 *OIDs and Empi Configuration*



19. Select one of the following options:
 - a. Select **Yes**, if the HDR database is a fresh installation.
The OID Values screen is displayed.

Figure 2–11 *OID Values*



- b. Select **No**, if the HDR database is upgraded from HTB 5.3 or 6.1.1.
20. Enter the values in the fields as required.
21. Click **Next**.

The Oracle Wallet Details screen is displayed.

Figure 2–12 Oracle Wallet Details

Oracle Universal Installer: Oracle Wallet Details

ORACLE
HEALTH SCIENCES

Oracle Wallet Details

Please enter the following Oracle Wallet details:

Wallet password: ****

Verify wallet password: ****

Wallet output folder: /u01/hdr/product

Note: The password must be at least eight characters with a combination of alphanumeric and special characters.

Help Installed Products... Back Next Install Cancel

22. Enter the values in the fields as required.

23. Click **Next**.

The IHE Profile Options screen is displayed.

24. To access the IHE Web Services, select **Yes**. Else, select **No**.

25. Select **Yes** and click **Next**.

The IHE Profile Options screen is displayed.

Figure 2–13 IHE Profile Options

26. Enter the values in the fields as required.

Note: For more information on IHE Profile options, see the *Oracle Healthcare Data Repository Implementation Guide*.

27. Click **Next**.

The Summary screen is displayed.

28. Click **Install**.

The following message is displayed after successful installation:

The installation of Oracle Healthcare Data Repository - WebLogic tier was successful.

Note: Installer log files are created under the <user_home_dir>/OraInventory/logs folder. Refer these log files for any errors during the installation.

29. Click **Exit** to exit the installer.

30. Copy all the MTK custom schema/MIFs from HTB 6.X instance to HDR 7.0.1 instance by running the following command:

Note: This step is applicable when you upgrade from HTB 6.X to HDR 7.0.1.

```
Copy $JAVA_TOP/oracle/apps/ctb/message/defs/customSchema/* to $HDR_HOME/hdr_exploded_app/oracle/apps/ctb/message/defs/customSchema
```

31. Copy the tCDA configuration XMLs from HTB 6.X instance to the HDR 7.0.1 instance by running the following command:

Note: This step is applicable when you upgrade from HTB 6.X to HDR 7.0.1.

```
Copy $JAVA_TOP/oracle/apps/ctb/ccd/metadata/configuration/server/*.xml
to $HDR_HOME/hdr_exploded_
app/oracle/apps/ctb/ccd/metadata/configuration/server
```

32. Start the WebLogic `hdr_domain` admin server.
For example, `> nohup ./startWebLogic.sh &`
33. Start the `hdr_server` managed server.
For example, `> nohup ./startManagedWebLogic.sh <hdr-nodemanager
>http://<ip-address>:<port -number> hdr_server.log &`

2.3 Installing HDR without using the Oracle Universal Installer

You can install HDR without using the Oracle Universal Installer. To install HDR without using the Oracle Universal Installer, perform the following:

- Extract the files from `artifacts.zip` and follow the instructions as mentioned in the `/artifacts/docs/HDR_installation_readme.txt` file.

2.4 Verifying HDR Installation

To verify the HDR installation, execute the `SessionTest.java` code supplied. This code tests the creation of a session, user login, ETSService, Profile Options Service, and MasterCatalogService.

To execute the `SessionTest.java` file, perform the following:

1. Create a folder 'src' on your system and copy the `SessionTest.java` file and the `jndi.properties` file to the folder.
2. Edit application server details in the `jndi.properties` file.
3. Install the client-side libraries.

For a list of the client-side libraries, refer to the *Healthcare Data Repository Programmer's Guide*.

4. Execute the `SessionTest.java` file after the compilation.

2.5 Uninstalling HDR

This section contains the following topics:

- ["Uninstalling Database Objects"](#) on page 2-15
- ["Uninstalling the HDR Middle-Tier Application"](#) on page 2-16

2.5.1 Uninstalling Database Objects

To uninstall the database objects (CTB and HCT user schemas), perform the following:

- Execute the following SQL scripts from sqlplus/sqldeveloper as sys user:
 - `exec dbms_scheduler.drop_job('HDR_ETS_MAINTENANCE', TRUE);`
 - `exec dbms_scheduler.drop_job('HDR_ETS_LOADER', TRUE);`
 - `exec dbms_scheduler.drop_job('HDR_ETS_IMPORTER', TRUE);`
 - `exec dbms_scheduler.drop_program('hdr_ets_maintenance_program');`
 - `exec dbms_scheduler.drop_program('hdr_ets_loader_program');`
 - `exec dbms_scheduler.drop_program('hdr_ets_importer_program');`
 - `exec dbms_scheduler.drop_job('hdr_bdl_scheduler_job', TRUE);`
 - `exec dbms_scheduler.drop_program('hdr_bdl_scheduler_program');`
 - `drop user HCT cascade;`
 - `drop user CTB cascade;`
 - `drop tablespace CTB_TBS INCLUDING CONTENTS and datafiles;`
 - `drop tablespace HCT_TBS INCLUDING CONTENTS and datafiles;`
 - `drop tablespace IDX_TBS INCLUDING CONTENTS and datafiles;`
 - `drop tablespace CTX_TBS INCLUDING CONTENTS and datafiles;`

2.5.2 Uninstalling the HDR Middle-Tier Application

To uninstall the HDR middle-tier application, perform the following:

1. Stop the `hdr_domain` and `hdr_server` node managers.
2. Delete the `hdr_domain` folder completely.
3. Edit WebLogic `Oracle_Home/domain-registry.xml` and remove the entry for `hdr_domain`.
4. Delete the HDR home directory (that you provided during installation) completely.

Installing HDR on a WebLogic Cluster

You can install HDR on a WebLogic cluster with pre-configured managed servers or a dynamic cluster where managed servers can be added on demand.

This chapter contains the following topics:

- "Installing HDR Using HDR Installer" on page 3-1
- "Creating and Configuring WebLogic Machine and Node Manager" on page 3-1
- "Creating and Configuring the HDR Cluster" on page 3-2
- "Updating HDR Deployment and Dependent Resources to target to the HDR cluster" on page 3-4
- "Changing Client-Side jndi.properties" on page 3-7

3.1 Installing HDR Using HDR Installer

Install HDR using the HDR installer, following the instructions given in [Chapter 2](#). Use the platform-specific installer appropriate to the operating system platform.

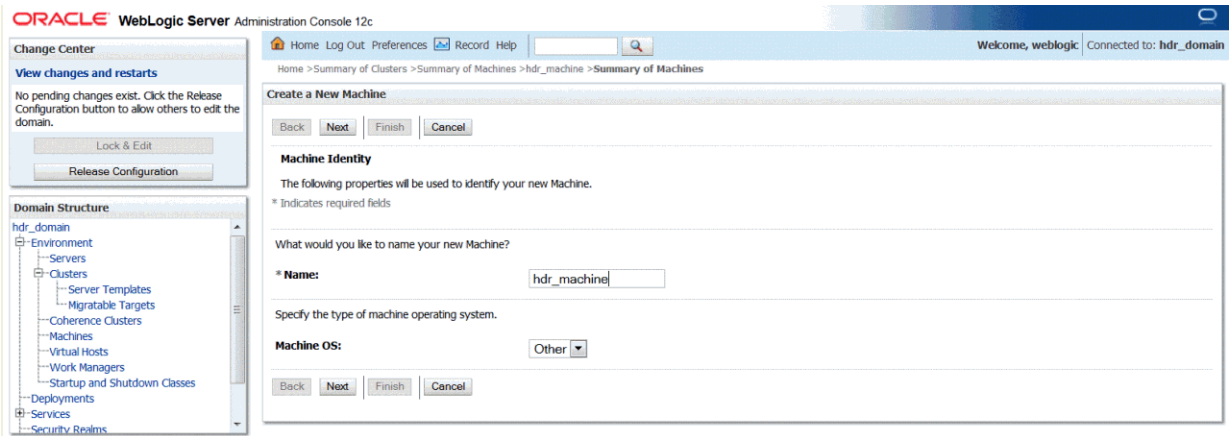
3.2 Creating and Configuring WebLogic Machine and Node Manager

To create and configure WebLogic machine and node manager, perform the following:

1. Log in to the WebLogic administration console.
2. In the left pane, click **hdr_domain** and expand **Environment**.
3. Click **Machines** and then click **Lock & Edit**.
4. Click **New**.

The Create a New Machine screen is displayed.

Figure 3–1 Create a New Machine



5. Enter `hdr_machine` (or any other preferred name) in the **Name** field and click **Next**.
6. Specify the node manager properties.
Typically, node manager runs on localhost with SSL port 5556.
7. Click **Finish**.

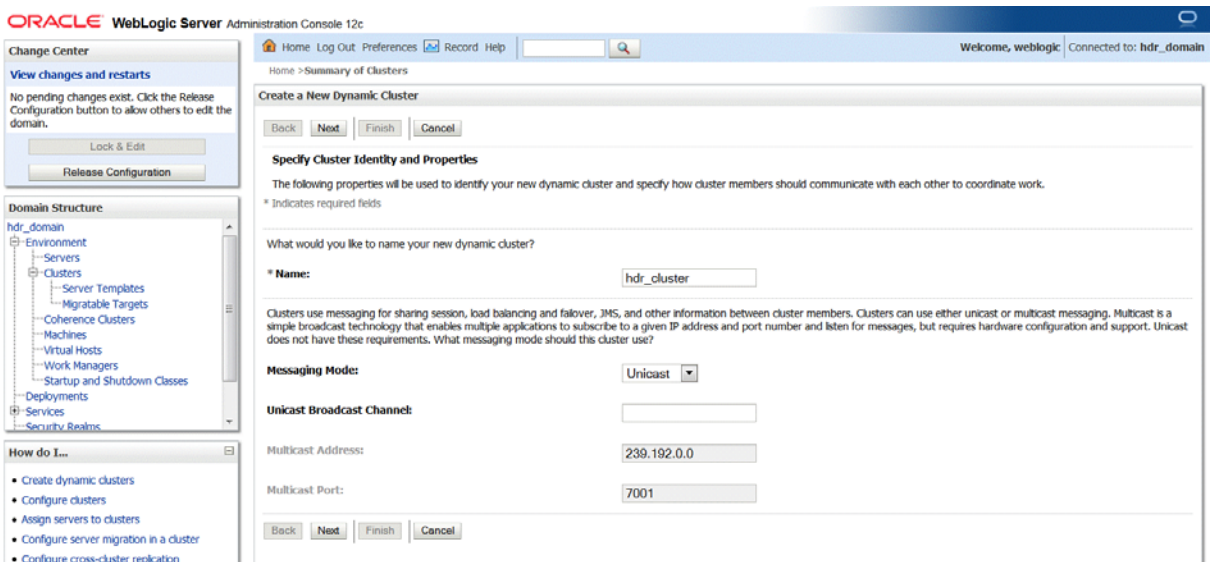
3.3 Creating and Configuring the HDR Cluster

To create and configure the HDR cluster, perform the following:

1. Log in to the WebLogic administration console.
2. In the left pane, click `hdr_domain` and expand **Environment**.
3. Click **Clusters** and then click **Lock & Edit**.
4. Click **New** and then click **Dynamic Cluster**.

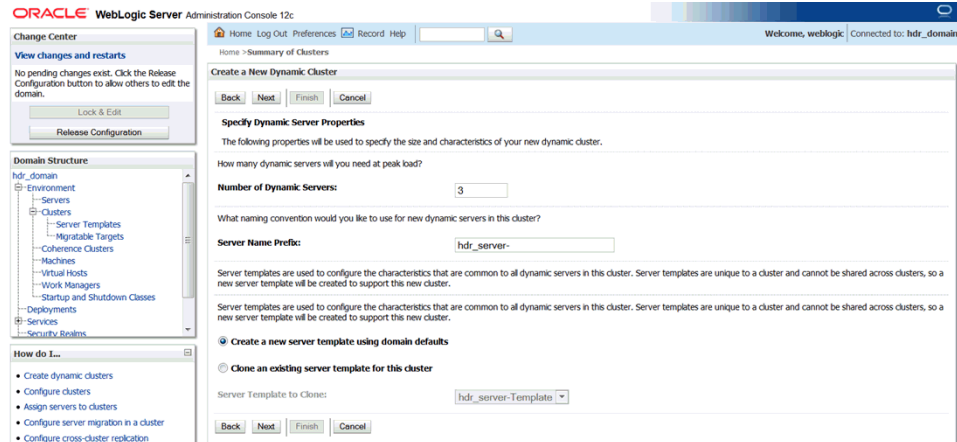
The Create a New Dynamic Cluster screen is displayed.

Figure 3–2 Create a New Dynamic Cluster



5. Enter `hdr_cluster` in the **Name** field.
6. Select **Unicast** from the **Messaging Mode** drop-down list.
7. Click **Next**.

Figure 3–3 Specify Dynamic Server Properties



8. Enter the number of dynamic servers required during the peak load in the **Number of Dynamic Servers** field.

Note: The number of dynamic servers configured depends on the available system resources and the scalability requirements.

9. Enter a prefix for the dynamic server in the **Server Name Prefix** field. For example, `hdr_server-`.

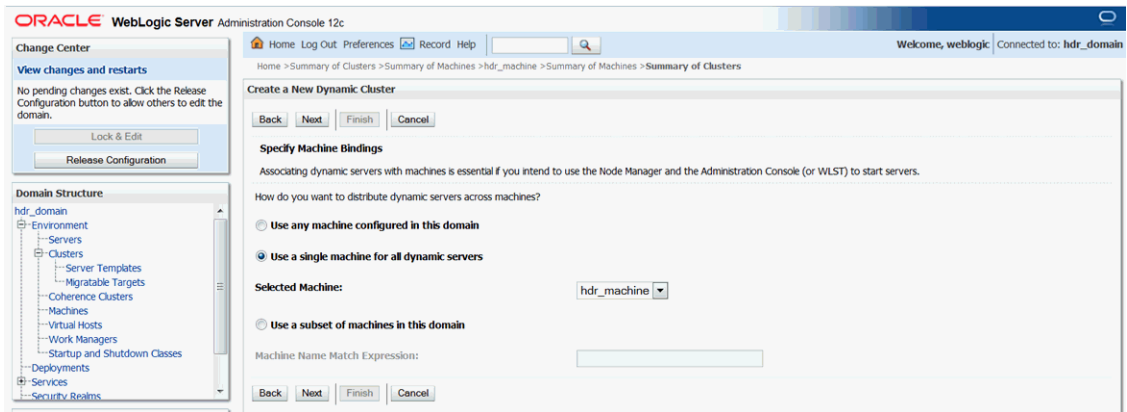
Based on the number of dynamic servers configured, the number of corresponding managed servers are created. For example, if you have configured three dynamic servers, three corresponding managed servers (`hdr_server-1`, `hdr_server-2`, and `hdr_server-3`) are created.

10. Select **Create a new server template using domain defaults**.

The server template contains configurations such as Protocol, Services, SSL, Tuning, and so on, which are configured at each managed server level.

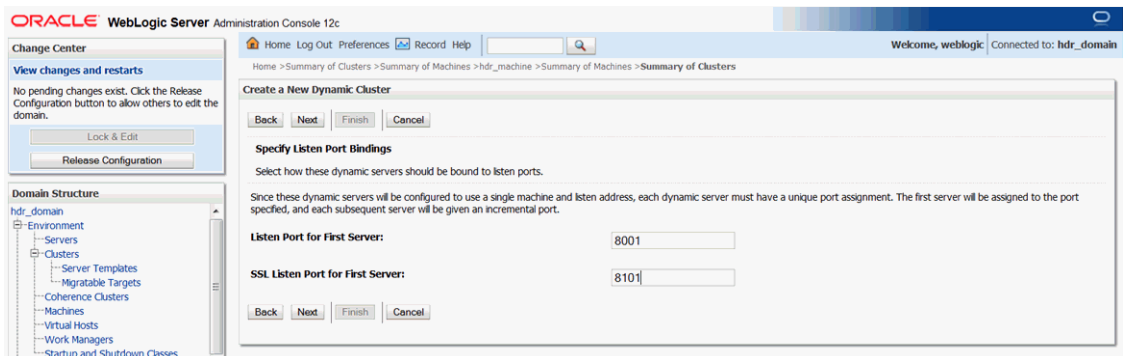
11. Click **Next**.

Figure 3–4 Specify Machine Bindings



12. Select **Use a single machine for all dynamic servers**.
13. Select **hdr_machine** from the **Selected Machine** drop-down list and click **Next**.

Figure 3–5 Specify Listen Port Bindings



14. Enter a listen port in the **Listen Port for First Server** field. For example, 8001.

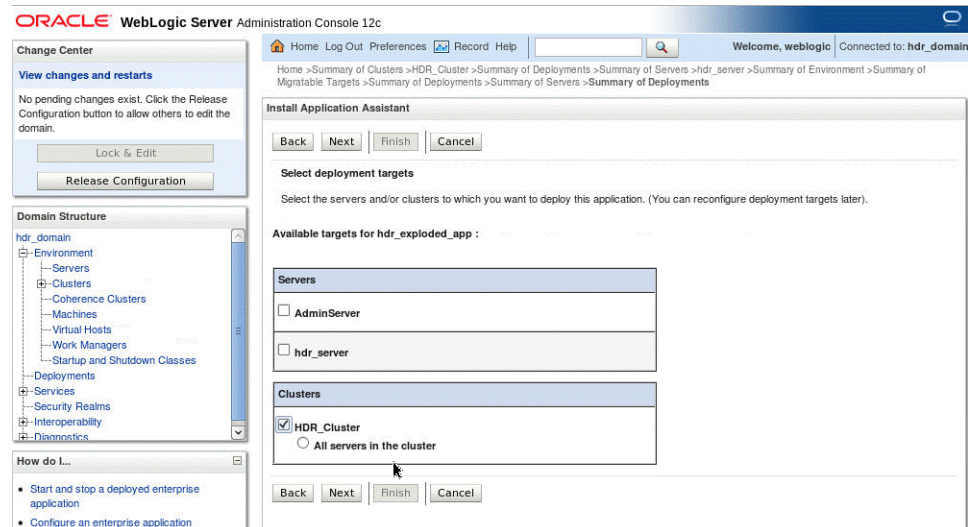
The first server is assigned to the port specified, and each subsequent server is assigned to an incremental port.
15. Enter an SSL listen port in the **SSL Listen Port for First Server** field.
16. Click **Finish**.

3.4 Updating HDR Deployment and Dependent Resources to target to the HDR cluster

The existing `hdr_server` managed server created by the HDR installer can be targeted to `hdr_cluster` or can be deleted so that HDR can be deployed only on the dynamic cluster servers.

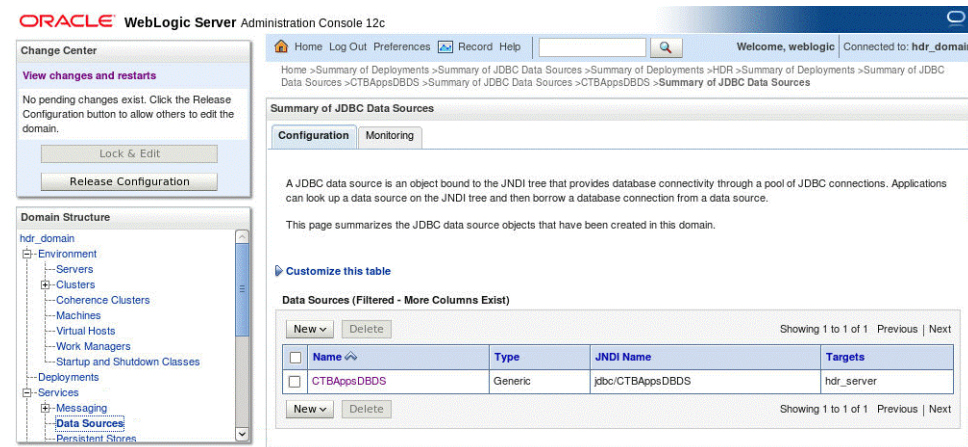
1. Stop the `hdr_server` managed server.
2. Delete HDR deployment.
3. Select HDR deployment from the `$HDRHome/hdr_exploded_app` folder and select deployment as application.
4. Target HDR deployment by selecting the **HDR_Cluster** and **All servers in the cluster** options.

Figure 3–6 Install Application Assistant



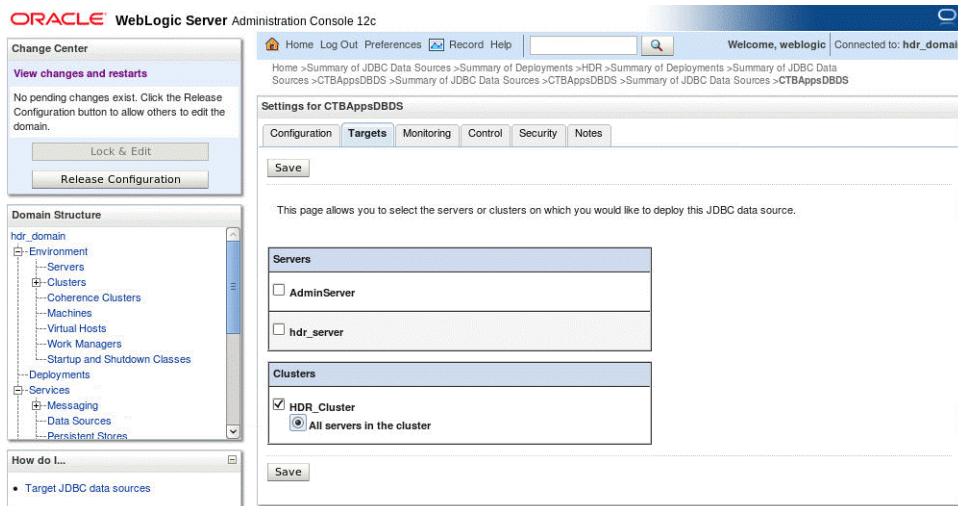
5. Provide appropriate name for HDR and click **Finish**.
6. Click **hdr_domain** and expand **Services**.
The Summary of JDBC Data Sources screen is displayed.

Figure 3–7 Summary of JDBC Data Sources



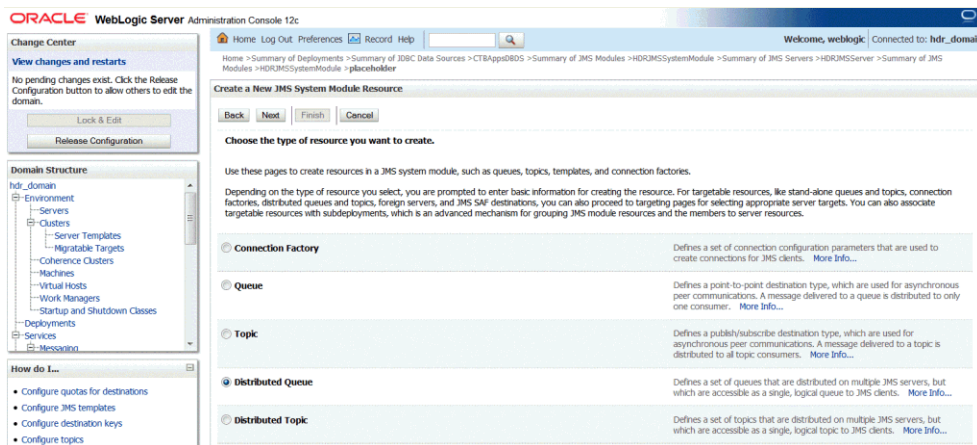
7. Click **Configuration** and then select **CTBAppsDBDS**.
8. Change the targets of datasource CTBAppsDBDS by selecting the **HDR_Cluster** and the **All servers in the cluster** options.

Figure 3–8 Settings for CTBAppsDBDS



9. Click **Save**.
10. Click **hdr_domain** and expand **Services**.
11. Expand **Messaging** and select **JMS Modules** and note all the JMS queue names and jndi names in the JMS module **HDRJMSSystemModule**.
12. Recreate **HDRConnectionFactory**.
13. Delete all the JMS queues created in the JMS module **HDRJMSSystemModule**.
14. Recreate the queues again with same jndi names by selecting the **Distributed Queue** option.

Figure 3–9 Create a New JMS System Module Resource



15. Change the targets of **HDRJMSSystemModule** by selecting the **HDR_Cluster** and the **All servers in the cluster** options.
16. Click **hdr_domain** and expand **Services**.
17. Expand **Messaging** and select **JMS Servers**.
18. Change the targets of **HDRJMSServer** by selecting the **HDR_Cluster** and **All servers in the cluster** options.

19. Copy the HDR-specific JVM arguments configured in `startManagedWebLogic.sh` to `setDomainEnv.sh`.

Figure 3–10 `startManagedWebLogic.sh`

```
JAVA_OPTIONS="${JAVA_OPTIONS}" -DLogFile=hdr.log -Djava.util.logging.config.file=logging.properties -Djava.security.auth.login.config=/opt/oracle/oraem/Oracle/Middleware/Oracle_Home/user_projects/domains/hdr_domain/config/weblogic.security -Dtangosol.coherence.mode=prod -DClientMode=local -Dweblogic.security.SSL.trustedCAKeyStore=/opt/oracle/oraem/Oracle/Middleware/Oracle_Home/wlserver/server/lib/cacerts"
```

Figure 3–11 `setDomainEnv.sh`

```
# If you want to override the default Patch Classpath, Library Path and Path for this domain,
# Please uncomment the following lines and add a valid value for the environment variables
# set PATCH_CLASSPATH=[myPatchClasspath] (windows)
# set PATCH_LIBPATH=[myPatchLibpath] (windows)
# set PATCH_PATH=[myPatchPath] (windows)
# PATCH_CLASSPATH=[myPatchClasspath] (unix)
# PATCH_LIBPATH=[myPatchLibpath] (unix)
# PATCH_PATH=[myPatchPath] (unix)

. ${WL_HOME}/common/bin/commEnv.sh

if [ "${SERVER_NAME:-0:16}" = "hdr_server" ] ; then

    JAVA_OPTIONS="${JAVA_OPTIONS}" -DLogFile=${SERVER_NAME}_hdr.log -Djava.util.logging.config.file=logging.properties -Djava.security.auth.login.config=/opt/oracle/oraem/Oracle/Middleware/Oracle_Home/user_projects/domains/hdr_domain/config/weblogic.security -Dtangosol.coherence.mode=prod -DClientMode=local -Dweblogic.security.SSL.trustedCAKeyStore=/opt/oracle/oraem/Oracle/Middleware/Oracle_Home/wlserver/server/lib/cacerts"

fi
```

20. Start the node manager using `hdr_domain/bin/startNodeManager.sh`
21. Start the dynamic servers in `hdr_cluster` using the WebLogic admin console.
22. Ensure HDR is in running state.

3.5 Changing Client-Side jndi.properties

To change client-side `jndi.properties`, perform the following:

1. Update the HDR client application `jndi.properties` to use the new cluster provider URL.
2. List all host and port numbers for all managed servers in the cluster as a comma separated value.

For example,

```
java.naming.provider.url=t3://<host>:8001,<host>:8003,<host>:8003
```

Upgrading HTB to HDR

This chapter contains the following topics:

- ["Upgrading HTB 5.3 to HDR 7.0.1"](#) on page 4-1
- ["Upgrading HTB 6.X to HDR 7.0.1"](#) on page 4-5

4.1 Upgrading HTB 5.3 to HDR 7.0.1

This section contains the following topics:

- ["Prerequisites"](#) on page 4-1
- ["Upgrading the HTB 5.3 Database Schema to HDR 7.0.1"](#) on page 4-2
- ["Installing the HDR Middle-Tier using the Oracle Universal Installer"](#) on page 4-4
- ["Creating HDR Terminology Jobs"](#) on page 4-4
- ["Creating the Bulk Data Loader Jobs"](#) on page 4-5

4.1.1 Prerequisites

Take backup of the existing HTB 5.3 schemas for CTB and HCT. Export the CTB, HCT, and the following tables from the APPLSYS schema to a dump:

- FND_PROFILE_OPTIONS
- FND_PROFILE_OPTIONS_TL
- FND_PROFILE_OPTION_VALUES
- FND_USER
- FND_LANGUAGES
- FND_APPLICATION

Following is an example for an exporting dump:

```
expdp system/<password>@<SID> schemas=CTB,HCT,APPLSYS
exclude=GRANT,USER,STATISTICS,TABLESPACE_QUOTA,DEFAULT_ROLE
directory=htb_dmp_dir dumpfile=<dump file name>.dmp
logfile=htb_dump.log
```

Set the following environment variables on the machine from where the HDR installer will be run:

- `JAVA_HOME` - JDK1.7 install directory

- **ANT_HOME** - Ant home path (Ant 1.7.1 or later)
- **ORACLE_HOME** - Oracle database home directory
- **TWO_TASK** - Oracle Service Name. If you are installing HDR on the Oracle 12c pluggable database (PDB), then set this variable before running the HDR installer.
- **ORACLE_HOME_LISTENER** - Oracle database listener home directory
- **PATH** - \$ORACLE_HOME/bin:\$PATH
- **HDR_HOME** - Directory where HDR must be installed
- **WL_HOME** - WebLogic home directory

If you are installing HDR on the Oracle 12c pluggable database (PDB), then perform the following:

1. Edit \$ORACLE_HOME/network/admin/tnsnames.ora and add an entry for the PDB service name. The tnsname shall be same as the PDB service name.
2. Edit \$ORACLE_HOME/network/admin/listener.ora and add the USE_SID_AS_SERVICE_listener=on line.

4.1.2 Upgrading the HTB 5.3 Database Schema to HDR 7.0.1

To upgrade the HTB 5.3 database schema to HDR 7.0.1, perform the following:

1. Download the Oracle Healthcare Data Repository 7.0.1 software from the Oracle E-Delivery website (<https://edelivery.oracle.com/>).
2. Extract the files from HDR_Installer.zip and artifacts.zip to the database machine folder, /home/HDR701.
3. Navigate to the artifacts/migration_scripts/HTB5.3_HDR7.0.1/HTB5.3_HDR7.0.1_PARTITION_KEY directory.
4. Create the following tablespaces on the HDR701 target database by connecting as the sys user:
 - a. Tablespace for HCT user
 - b. Tablespace for CTB user
 - c. Tablespace for Context
 - d. Tablespace for Indexes

For example, execute the following script to create the tablespaces:

```
Create TABLESPACE <tablespace name>
LOGGING
DATAFILE '<data file path>/hdr_hcttb.dbf'
SIZE <100M>
AUTOEXTEND ON
NEXT <100M> MAXSIZE UNLIMITED
EXTENT MANAGEMENT LOCAL;
```

5. Create the HCT and the CTB schema users by executing the following script:

```
sh create_hdr_user.sh
```
6. Execute the following script (by connecting as sys user) to create a directory, HTB_DUMP_DIR on the Oracle database where the HTB 6.X dump file is located:

```
CREATE OR REPLACE DIRECTORY HTB_DMP_DIR as '<path>';
```

7. Import the HCT objects from HTB 5.3 to the target HCT schema.

For example, execute the following script to import the HCT objects:

Notes: Ensure that appropriate tablespace names, dump path, and log file path are mentioned in the script.

```
impdp system/<password> exclude=GRANT,USER,STATISTICS,TABLESPACE_QUOTA,DEFAULT_
ROLE schemas=hct remap_schema=apps:hct
remap_schema=applsyst:hct remap_tablespace=APPS_TS_SEED:hct_tbs
remap_tablespace=APPS_TS_TX_DATA:<hct_tbs>
remap_tablespace=APPS_TS_TX_IDX:<idx_tbs>
remap_tablespace=APPS_TS_NOLOGGING:<hct_tbs>
remap_tablespace=APPS_TS_MEDIA:<hct_tbs>
remap_tablespace=APPS_TS_INTERFACE:<hct_tbs>
remap_tablespace=APPS_TS_QUEUES:<hct_tbs>
remap_tablespace=APPS_TS_ARCHIVE:<hct_tbs>
remap_tablespace=APPS_TS_SUMMARY:<hct_tbs>
remap_tablespace=APPS_TS_TOOLS:<hct_tbs> directory=HTB_DMP_DIR
dumpfile=< HTB 5.3 dump file name >.dmp logfile=htb_hct_import.log
```

8. Import the CTB objects from HTB 5.3 to the target CTB schema.

For example, execute the following script to import the CTB objects:

Note: Ensure that appropriate tablespace names, dump path, and log file path are mentioned in the script.

```
impdp system/<password> exclude=GRANT,USER,STATISTICS,TABLESPACE_QUOTA,DEFAULT_
ROLE schemas=ctb remap_schema=apps:ctb
remap_schema=applsyst:ctb remap_tablespace=APPS_TS_SEED:ctb_tbs
remap_tablespace=APPS_TS_TX_DATA:<ctb_tbs>
remap_tablespace=APPS_TS_TX_IDX:<idx_tbs>
remap_tablespace=APPS_TS_NOLOGGING:<ctb_tbs>
remap_tablespace=APPS_TS_MEDIA:<ctb_tbs>
remap_tablespace=APPS_TS_INTERFACE:<ctb_tbs>
remap_tablespace=APPS_TS_QUEUES:<ctb_tbs>
remap_tablespace=APPS_TS_ARCHIVE:<ctb_tbs>
remap_tablespace=APPS_TS_SUMMARY:<ctb_tbs>
remap_tablespace=APPS_TS_TOOLS:<ctb_tbs> directory=HTB_DMP_DIR
dumpfile=<HTB 5.3 dump file name>.dmp logfile=htb_ctb_import.log
```

9. Import the following tables from APPLSYS from HTB 5.3 to the HCT schema on target database:

For example, execute the following script to import the tables:

Notes:

- Ensure that appropriate tablespace names, dump path, and log file path are mentioned in the script.
 - Before importing the dumps to the target database, ensure that there is enough tablespace available on the target database.
-

```
impdp system/<password>
tables=APPLSYS.FND_LANGUAGES,APPLSYS.FND_USER,APPLSYS.FND_
APPLICATION,APPLSYS.FND_PROFILE_OPTIONS,APPLSYS.FND_PROFILE_OPTIONS_
TL,APPLSYS.FND_PROFILE_OPTION_VALUES
remap_schema=apps:hct remap_schema=applsyst:hct remap_tablespace=APPS_TS_
SEED:<hct_tbs>
remap_tablespace=APPS_TS_TX_DATA:<hct_tbs>
remap_tablespace=APPS_TS_TX_IDX:<idx_tbs>
remap_tablespace=APPS_TS_NOLOGGING:<hct_tbs>
remap_tablespace=APPS_TS_MEDIA:<hct_tbs>
remap_tablespace=APPS_TS_INTERFACE:<hct_tbs>
remap_tablespace=APPS_TS_QUEUES:<hct_tbs>
remap_tablespace=APPS_TS_ARCHIVE:<hct_tbs>
remap_tablespace=APPS_TS_SUMMARY:<hct_tbs>
remap_tablespace=APPS_TS_TOOLS:<hct_tbs> directory=HTB_DMP_DIR
dumpfile=<HTB 5.3 dump file name>.dmp logfile=hct_fnd_import.log
```

Note: Ignore the following errors while importing the dump:

- ORA-01917: User or role <role/user> does not exist.
 - ORA-39083: Object type OBJECT_GRANT failed to create with error.
 - ORA-39146: The APPLSYS schema does not exist.
-
-

10. Specify the degree of parallelism (DOP) for running the migration scripts in parallel.

11. Execute the following script to upgrade the HCT schema to HDR:

```
> sh migrate_hct_db_objects.sh
```

The script prompts you to enter HCT user name, password, tablespace name, and ETS language.

Enter ENUS for ETS language.

12. Execute the following script to upgrade the CTB Schema to HDR:

```
> sh migrate_ctb_db_objects.sh
```

The script prompts you to enter CTB user name, password, and tablespace name.

13. Check the actual usage of all the preceding tablespaces and optimize the tablespace accordingly.

4.1.3 Installing the HDR Middle-Tier using the Oracle Universal Installer

For information on how to install the HDR middle-tier using the Oracle universal installer, see [Section 2.2.2](#).

For information on how to install the HDR middle-tier without using the Oracle Universal installer, see [Section 2.3](#).

4.1.4 Creating HDR Terminology Jobs

To create HDR Terminology Jobs, perform the following:

1. Extract the artifacts.zip.

2. Navigate to the /artifacts/db/hdr_cp_lib folder and edit bc4j.properties for database details.
3. Navigate to artifacts/migration_scripts/ETS where the artifacts.zip is extracted.
4. Execute the execute_ets_job.sh shell script.

4.1.5 Creating the Bulk Data Loader Jobs

To create the HDR Bulk Data Loader (BDL) jobs, perform the following:

1. Navigate to artifacts/migration_scripts/BDL where the artifacts.zip is extracted.
2. Execute the create_bdl_job.sh shell script to create the BDL log directory and jobs.

4.2 Upgrading HTB 6.X to HDR 7.0.1

This section contains the following topics:

- ["Prerequisites" on page 4-1](#)
- ["Upgrading the HTB 6.X Database Schema to HDR 7.0.1" on page 4-6](#)
- ["Installing the HDR Middle-Tier using the Oracle Universal Installer" on page 4-8](#)
- ["Running the HDR Terminology Jobs" on page 4-8](#)
- ["Creating the Bulk Data Loader Jobs" on page 4-5](#)

4.2.1 Prerequisites

- Take backup of the existing HTB 6.X schemas for CTB and HCT. Export the following tables from the APPLSYS schema to a dump:
 - FND_PROFILE_OPTIONS
 - FND_PROFILE_OPTIONS_TL
 - FND_PROFILE_OPTION_VALUES
 - FND_USER
 - FND_LANGUAGES
 - FND_APPLICATION

Following is an example of a dump:

```
expdp system/<password>@<SID> schemas=CTB,HCT,APPLSYS
exclude=GRANT,USER,STATISTICS,TABLESPACE_QUOTA,DEFAULT_ROLE
directory=htb_dmp_dir dumpfile=<dump file name>.dmp
logfile=htb_dump.log
```

Set the following environment variables on the machine from where the HDR installer will be run:

- **JAVA_HOME** - JDK1.7 install directory
- **ANT_HOME** - Ant home path (Ant 1.7.1 or later)
- **ORACLE_HOME** - Oracle database home directory
- **TWO_TASK** - Oracle Service Name. If you are installing HDR on the Oracle 12c pluggable database (PDB), then set this variable before running the HDR installer.

- **ORACLE_HOME_LISTENER** - Oracle database listener home directory
- **PATH** - \$ORACLE_HOME/bin :\$PATH
- **HDR_HOME** - Directory where HDR must be installed
- **WL_HOME** - WebLogic home directory

If you are installing HDR on the Oracle 12c pluggable database (PDB), then perform the following:

1. Edit \$ORACLE_HOME/network/admin/tnsnames.ora and add an entry for the PDB service name. The tnsname shall be same as the PDB service name.
2. Edit \$ORACLE_HOME/network/admin/listener.ora and add the USE_SID_AS_SERVICE_listener=on line.

4.2.2 Upgrading the HTB 6.X Database Schema to HDR 7.0.1

To upgrade the HTB 6.X database schema to HDR 7.0.1, perform the following:

1. Download the Oracle Healthcare Data Repository 7.0.1 software from the Oracle E-Delivery website (<https://edelivery.oracle.com/>).
2. Extract the files from HDR_Installer.zip and artifacts.zip to the database machine folder, /home/HDR701.
3. Create the following tablespaces on the HDR701 target database by connecting as the sys user:
 - a. Tablespace for HCT user
 - b. Tablespace for CTB user
 - c. Tablespace for Context
 - d. Tablespace for Indexes

For example, execute the following script to create the tablespaces:

```
Create TABLESPACE <tablespace name>
LOGGING
DATAFILE '<data file path>/hdr_hcttb.dbf'
SIZE <100M>
AUTOEXTEND ON
NEXT <100M> MAXSIZE UNLIMITED
EXTENT MANAGEMENT LOCAL;
```

4. If the CTB schema tables are already partitioned using the HTB partition patches, then navigate to the artifacts/migration_scripts/HTB6.1_HDR7.0.1/HTB6.1_HDR7.0.1/ folder. Else, navigate to the artifacts/migration_scripts/HTB6.1_HDR7.0.1/HTB6.1_HDR7.0.1_PARTITION_KEY folder.
5. Create the HCT schema and the CTB schema users by executing the following script:

```
sh create_hdr_user.sh
```

6. Execute the following script (by connecting as the sys user) to create the HTB_DUMP_DIR directory on the Oracle database where the HTB 6.X dump file is located:

```
CREATE OR REPLACE DIRECTORY HTB_DMP_DIR as '<path>';
```

7. Import the HCT objects from HTB 6.X to the target HCT schema.

For example, execute the following script to import the HCT objects:

Note: Ensure that appropriate tablespace names, dump path, and log file path are mentioned in the script.

```
impdp system/<password> schemas=hct remap_schema=apps:hct remap_
schema=applsyst:hct remap_tablespace=APPS_TS_SEED:hct_tbs
remap_tablespace=APPS_TS_TX_DATA:<hct_tbs>
remap_tablespace=APPS_TS_TX_IDX:<idx_tbs>
remap_tablespace=APPS_TS_NOLOGGING:<hct_tbs>
remap_tablespace=APPS_TS_MEDIA:<hct_tbs>
remap_tablespace=APPS_TS_INTERFACE:<hct_tbs>
remap_tablespace=APPS_TS_QUEUES:<hct_tbs>
remap_tablespace=APPS_TS_ARCHIVE:<hct_tbs>
remap_tablespace=APPS_TS_SUMMARY:<hct_tbs>
remap_tablespace=APPS_TS_TOOLS:<hct_tbs> directory=HTB_DMP_DIR
dumpfile=< HTB 6.X dump file name >.dmp logfile=htb_hct_import.log
```

8. Import the CTB objects from HTB 6.X to the target CTB schema.

For example, execute the following script to import the CTB objects:

Notes: Ensure that appropriate tablespace names, dump path, and log file path are mentioned in the script.

```
impdp system/<password> schemas=ctb remap_schema=apps:ctb remap_
schema=applsyst:ctb remap_tablespace=APPS_TS_SEED:ctb_tbs
remap_tablespace=APPS_TS_TX_DATA:<ctb_tbs>
remap_tablespace=APPS_TS_TX_IDX:<idx_tbs>
remap_tablespace=APPS_TS_NOLOGGING:<ctb_tbs>
remap_tablespace=APPS_TS_MEDIA:<ctb_tbs>
remap_tablespace=APPS_TS_INTERFACE:<ctb_tbs>
remap_tablespace=APPS_TS_QUEUES:<ctb_tbs>
remap_tablespace=APPS_TS_ARCHIVE:<ctb_tbs>
remap_tablespace=APPS_TS_SUMMARY:<ctb_tbs>
remap_tablespace=APPS_TS_TOOLS:<ctb_tbs> directory=HTB_DMP_DIR
dumpfile=<HTB 6.X dump file name>.dmp logfile=htb_ctb_import.log
```

9. Import the following tables from APPLSYS from HTB 6.X to the HCT schema on the target database:

For example, execute the following script to import the tables:

Notes:

- Ensure that appropriate tablespace names, dump path, and log file path are mentioned in the script.
 - Before importing the dumps to the target database, ensure that there is enough tablespace available for on the target database.
-
-

```
impdp system/<password>
tables=APPLSYS.FND_LANGUAGES,APPLSYS.FND_USER,APPLSYS.FND_
APPLICATION,APPLSYS.FND_PROFILE_OPTIONS,APPLSYS.FND_PROFILE_OPTIONS_
TL,APPLSYS.FND_PROFILE_OPTION_VALUES
```

```
remap_schema=apps:hct remap_schema=appls:hct remap_tablespace=APPS_TS_
SEED:<hct_tbs>
remap_tablespace=APPS_TS_TX_DATA:<hct_tbs>
remap_tablespace=APPS_TS_TX_IDX:<idx_tbs>
remap_tablespace=APPS_TS_NOLOGGING:<hct_tbs>
remap_tablespace=APPS_TS_MEDIA:<hct_tbs>
remap_tablespace=APPS_TS_INTERFACE:<hct_tbs>
remap_tablespace=APPS_TS_QUEUES:<hct_tbs>
remap_tablespace=APPS_TS_ARCHIVE:<hct_tbs>
remap_tablespace=APPS_TS_SUMMARY:<hct_tbs>
remap_tablespace=APPS_TS_TOOLS:<hct_tbs> directory=HTB_DMP_DIR
dumpfile=<HTB 6.X dump file name>.dmp logfile=hct_fnd_import.log
```

Note: Ignore the following errors while importing the dump:

- ORA-01917: User or role <role/user> does not exist.
 - ORA-39083: Object type OBJECT_GRANT failed to create with error.
 - ORA-39146: The APPLSYS schema does not exist.
-

10. Specify the degree of parallelism.

11. Execute the following script to upgrade the HCT schema to HDR.

```
> sh migrate_hct_db_objects.sh
```

The script prompts you to enter HCT user name, password, and tablespace name details.

12. Execute the following script to upgrade the CTB schema to HDR:

```
> sh migrate_ctb_db_objects.sh
```

The script prompts you to enter CTB user name, password, and tablespace name details. When the script prompts for the ETS language, enter the value as ENS.

13. Check the actual usage of all the preceding tablespaces and optimize the tablespace accordingly.

4.2.3 Installing the HDR Middle-Tier using the Oracle Universal Installer

For information on how to install the HDR middle-tier using the Oracle Universal Installer, see [Section 2.2.2](#).

For information on how to install the HDR middle-tier application without using the Oracle Universal installer, see [Section 2.3](#).

4.2.4 Running the HDR Terminology Jobs

To run the HDR Terminology Jobs, perform the following:

1. Navigate to artifacts/migration_scripts/ETS where the artifacts.zip is extracted.
2. Execute the execute_ets_job.sh shell script.

4.2.5 Creating the Bulk Data Loader Jobs

To create the HDR Bulk Data Loader (BDL) jobs, perform the following:

1. Navigate to artifacts/migration_scripts/BDL where the artifacts.zip is extracted.

2. Execute the `create_bdl_job.sh` shell script to create the BDL log directory and jobs.

