Oracle® Healthcare Data Repository

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Oracle Healthcare Data Repository Installation Guide, Release 7.0.1.3

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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

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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.	

Table 2–1 Field Values

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 oral oral ventory directory and the oral st.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

San Oracle Uni	iversal Installer: Database Details _ ×
	ORACLE HEALTH SCIENCES
Database Details	
Please enter the following databas	e connection details:
Sysdba user:	sγs
Password:	****
Service name:	orcl
Port:	1521
Database ORACLE_HOME folder:	/u01/oracle/product
Please note that the user you enter	must be able to connect as sysdbal
Help Installed Product	s) Back Next Install Cancel

Figure 2–4 Database Details

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 Tab	elespace Pro	perties
----------------	--------------	---------

Tablespace Prop	erties	HEALTH SCIENCES
lease enter the following table	espace details:	
HCT user tablespace name:	НСТ_ТВ5	
HCT user tablespace file:	/u01/oracle/oradata/orcl/hct_tbs.dbf	
CTB user tablespace name:	CTB_TBS	
CTB user tablespace file:	/u01/oracle/oradata/orcl/ctb_tbs.dbf	
Context tablespace name:	CTX_TBS	
Context tablespace file:	/u01/oracle/oradata/orcl/ctx_tbs.dbf	
Index tablespace name:	IDX_TBS	
Index tablespace file:	/u01/oracle/oradata/orcl/idx_tbs.dbf	
lote: You must enter the desir ablespace file fields.	ed file name for the tablespace name field	s and full path for the

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.

Table 2–3 Field Values

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.

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

Table 2–4 Field Values

16. Click Next.

The ETS Concurrent Programs Settings screen is displayed.

Figure 2–6 ETS Concurrent Programs Settings

Oracle Universal Installer: ETS Concurr	rent Program Settings
ETS Concurrent Program Settings	ORACLE HEALTH SCIENCES
Please enter the following details:	
Absolute path of the Java executable:	/jdk/jdk1.7.0_45/bin/java
HDR middle-tier user name for the service locator login:	weblogic
HDR middle-tier user password for the service locator login:	*****
Confirm the middle-tier user password:	******
The libraries for the ETS Java concurrent programs will be co he/u01/hdr/product/database/hdr_cp_lib directory.	pied to

17. Enter the following values in the corresponding fields:

Value		
Enter the complete JDK bin/java path.		
Enter the WebLogic HDR user name.		
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.		

Table 2–5 Field Values

Confirm the middle-tier user password Re-enter confirm.	the WebLogic HDR password to
---	------------------------------

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.

 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.

HDR Domain Prope	rties
Please enter the following HDR dor	nain properties
Domain name	hdr_domain
Domain admin user	weblogic
Domain admin password	*****
Confirm domain admin password	******
Admin server listen port	7001
Admin server SSL listen port	7002

Figure 2–7 HDR Domain Properties

11. Enter the following values in the corresponding fields:

Tabl	e 2–7	Field	Val	ues
labi	e 2–7	Field	Val	ues

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.

IDR Managed	Server Properties	HEALTH SCIENCES
ease enter the following	HDR managed server properties	
ierver name	HDR_SERVER	
listen port	8001	
SL Listen port	8002	
HDR Deployment name	HDR70	

Figure 2–8 HDR Managed Server Properties

Table 2–8 Fi	ield 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:

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.

		HEALTH SCIENCES
Data Source Pi	operties	
Database host:	localhost	
Database port:	1521	
Database service name:	orcl	
CTB user's password:	***	

Figure 2–9 Data Source Properties

17. Enter the following values in the corresponding fields:

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.

Table 2–10 Field Values

18. Click Next.

The OIDs and Empi Configuration screen is displayed.

💥 Oracle Universal Installer: OIDs and Empi Co	onfiguration _ ×
OIDs and Empi Configuration	HEALTH SCIENCES
Would you like to configure OIDs and Empi?	
● Yes	
C Ng	
Help Installed Products Back Next) Install Cancel

Figure 2–10 OIDs and Empi Configuration

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

Figure 2–11 OID Values

😹 Ora	cle Universal Installer: OID Values	- ×
OID Values		ORACLE HEALTH SCIENCES
Please enter the following OID	values:	
Internal root OID:	9.989898.51	
Empi domain:	9.303030.51	
Empi master ID:	9.404040.51	
CDA MMID:	9.505050.51	
Default IDENT role root OID:	9.808080.51	
Help Installed Pro	ducts) Back Next	Install Cancel

- **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.

Dracle Wallet	Details	HEALTH SCIENCES
lease enter the following) Oracle Wallet details:	
Wallet password:	****	
Verify wallet password:	****	
Wallet output folder:	/u01/hdr/product	

Figure 2–12 Oracle Wallet Details

- **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
-------------	-------------	---------

Orac	le Universal	IE Profile Opt	ORACLE	
HE Profile Options				HEALTH SCIENCES
Audit log server host:				
Audit log server port:				
Server transfer protocol:	UDP			*
Repository unique ID:				
Registry sync URL:				
Registry async URL:				
Help	Producto	Pack	Next	lectell Concel
	Eroducis	Dark	[]Nex(

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-nodemanger

>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 mangers.
- 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

Welcome, weblogic Connected to: hdr_domain

- 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

ORACLE WebLogic Server Adm	ninistration Console 12c		\mathbf{Q}
Change Center	🔒 Home Log Out Preferences 🔤 Record Help	Q	Welcome, weblogic Connected to: hdr_domain
View changes and restarts	Home >Summary of Clusters		
No pending changes exist. Click the Release Configuration button to allow others to edit the domain. Lock & Edit Release Configuration	Create a New Dynamic Cluster Back Next Finish Cancel Specify Cluster Identity and Properties The following properties will be used to identify your new dynamic cluster	r and specify how cluster members should	communicate with each other to coordinate work.
Domain Structure	* Indicates required fields		
hdr_domain -Environment -Servers -Olusters -Server Templates	What would you like to name your new dynamic cluster? * Name:	hdr_cluster	
Goherence Clusters Migratable Targets Goherence Clusters Machines Virtual Hosts	Ousters use messaging for sharing session, load balancing and falover, JM simple broadcast technology that enables multiple applications to subscrib does not have these requirements. What messaging mode should this due the second	IS, and other information between cluster be to a given IP address and port number ister use?	members. Ousters can use either unicast or multicast messaging. Multicast is a and laten for messages, but requires hardware configuration and support. Unicast
Work Managers	Messaging Mode:	Unicast	
Deployments Services Security Realms	Unicast Broadcast Channel:		
How do I	Multicast Address:	239.192.0.0	
Create dynamic clusters Configure clusters	Multicast Port:	7001	
Assign servers to dusters Configure server migration in a duster Configure cross-duster replication	Back Next Finish Cancel		

- 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

ORACLE WebLogic Server Adm	ninistration Console 12c		Q
Change Center	🏠 Home Log Out Preferences 🔤 Record Help	٩	Welcome, weblogic Connected to: hdr_domain
View changes and restarts	Home >Summary of Clusters		
No pending changes exist. Click the Release	Create a New Dynamic Cluster		
domain.	Back Next Finish Cancel Specify Dynamic Server Properties		
Release Configuration	The following properties will be used to specify the size	and characteristics of your new dynamic cluster.	
Domain Structure	How many dynamic servers will you need at peak load?	,	
hdr_domain -Environment -Servers	Number of Dynamic Servers:	3	
Ousters Server Templates	What naming convention would you like to use for new	v dynamic servers in this cluster?	
	Server Name Prefix:	hdr_server-	
Virtual Hosts Work Managers	Server templates are used to configure the characterist new server template will be created to support this new	ics that are common to all dynamic servers in this cluster. Serve cluster.	er templates are unique to a cluster and cannot be shared across clusters, so a
Deployments Deployments Deployments Deployments Deployments DeploymentsDeployme	Server templates are used to configure the characterist new server template will be created to support this new	ics that are common to all dynamic servers in this cluster. Serve cluster.	er templates are unique to a cluster and cannot be shared across clusters, so a
How do I	Create a new server template using domain de	efaults	
Create dynamic clusters	Clone an existing server template for this clust	ter	
Configure clusters	Server Template to Clone:	hdr server-Template	
 Assign servers to clusters 			
Configure server migration in a cluster	Back Next Finish Cancel		
 Configure cross-cluster replication 			

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

	Administration Console 12c	Q
Change Center	😰 Home Log Out Preferences 🔤 Record Help	Welcome, weblogic Connected to: hdr_domain
View changes and restarts	Home >Summary of Clusters >Summary of Machines >hdr_machine >Summary of Machines >Summary	ry of Clusters
No pending changes exist. Click the Release	Create a New Dynamic Cluster	
domain.	Back Next Finish Cancel	
Lock & Edit	Spacifit Machina Bindinge	
Release Configuration	Speciny machine bindings	
	Associating dynamic servers with machines is essential if you intend to use the Node Manager and	d the Administration Console (or WLST) to start servers.
Domain Structure	How do you want to distribute dynamic servers across machines?	
hdr_domain	<u>A</u>	
Environment	Use any machine configured in this domain	
Servers		
⊟-Clusters	Use a single machine for all dynamic servers	
Server Templates		
Migratable Targets	E Selected Machine:	
Coherence Clusters		
Machines		
Virtual Hosts	Use a subset of machines in this domain	
Work Managers		
Startup and Shutdown Classes	Machine Name Match Expression:	
Deployments		
Construction Services	T Back Next Finish Cancel	
Security Reams		

- **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

	ninistration Console 12c		<u>Q</u>
Change Center	🔒 Home Log Out Preferences 🔤 Record Help	Q	Welcome, weblogic Connected to: hdr_domain
View changes and restarts	Home >Summary of Clusters >Summary of Machines >hdr_machine	>Summary of Machines >Summary of Clusters	
No pending changes exist. Click the Release	Create a New Dynamic Cluster		
Configuration button to allow others to edit the domain.	Back Next Finish Cancel		
	Specify Listen Port Bindings		
Release Configuration	Select how these dynamic servers should be bound to listen port	S.	
Domain Structure	Since these dynamic servers will be configured to use a single mad	hine and listen address, each dynamic server must h	ave a unique port assignment. The first server will be assigned to the port
hdr_domain	specified, and each subsequent server will be given an incremental	port.	
Servers	Listen Port for First Server:	8001	
Clusters Server Templates Migratable Targets	SSL Listen Port for First Server:	8101	
Machines	Back Next Finish Cancel		

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.

WebLogic Server #	ministration Console 12c			
Change Center	🟦 Home Log Out Preferences 🔤 Record Help 🔍 Welcome, weblogic Connected to: hdr_			
View changes and restarts	Home >Summary of Clusters >HDR_Cluster >Summary of Deployments >Summary of Servers >hdr_server >Summary of Environment >Summary of Migratable Targets >Summary of Deployments >Summary of Servers >Summary of Deployments			
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Install Application Assistant Back Next Finish Cancel Select deployment targets Select deployment targets Select deployment targets			
Release Configuration	Select the servers and/or clusters to which you want to deploy this application. (You can reconfigure deployment targets later).			
Domain Structure				
hdr_domain	Available targets for hdr_exploded_app :			
	Servers AdminServer			
	hdr_server			
Services Security Realms	Clusters			
Interoperability Interoperability Interoperability	HDR_Cluster			
How do I 🖂				
Start and stop a deployed enterprise	Back Next Finish Cancel			

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

ORACLE WebLogic Server A	dministration Consc	le 12c				1	
Change Center	Home Log	🏠 Home Log Out Preferences 🖾 Record Help					
View changes and restarts	Home >Summar Data Sources >	y of Deployments >Su CTBAppsDBDS >Sum	immary of JDBC Data So mary of JDBC Data Sour	urces >Summary of Deployments ces >CTBAppsDBDS >Summary	>HDR >Summary of Deploym of JDBC Data Sources	ents >Summary of JDBC	
No pending changes exist. Click the Release Configuration button to allow others to edit the	Summary of JDI	BC Data Sources					
domain.	Configuration	Monitoring					
Lock & Edit							
Release Configuration	A JDBC data :	source is an object bo data source on the JI	ound to the JNDI tree th NDI tree and then borro	at provides database connectiv w a database connection from a	ity through a pool of JDBC c data source.	onnections. Applications	
Jomain Structure	This page sur	nmarizes the JDBC d	lata source objects that	have been created in this doma	in		
ndr_domain							
-Environment							
Servers	Customize th	is table					
Clusters							
Coherence Clusters	Data Sources	(Filtered - More Col	umns Exist)				
Machines Virtual Hosts	New -	Delete			Showing 1 to	01 of 1 Previous Next	
Work Managers	Name 4	\$	Туре	JNDI Name	Т	argets	
- Deployments	СТВАрр	sDBDS	Generic	jdbc/CTBAppsDBDS	hd		
Dopioymenta		(0)762553121	100 100 million	A set of the state of the st	286	Ir_server	

- 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

Change Center	Home Log	🏠 Home Log Out Preferences 🔤 Record Help					Q	Welcome, weblogic Connected to: hdr_domain	
View changes and restarts	Home >Summa Sources >CTB/	Home >Summary of JDBC Data Sources >Summary of Deployments >HDR >Summary of Deployments >Summary of JDBC Data Sources >CTBAppsDBDS >Summary of JDBC Data Sources >CTBAppsDBDS >Summary of JDBC Data Sources >CTBAppsDBDS							
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Settings for CTBAppsDBDS								
	Configuration	Targets	Monitoring	Control	Security	Notes			
Lock & Edit	- Province of the second								
Release Configuration	Save								
	J This name alls	we you to e	elect the ear.	are or clust	tere on which	h you would	like to deploy th	is IDBC data source	
Domain Structure	This page and			ore or elder		in you noold	and to depicy in		
hdr_domain									
	Servers								
-Coherence Clusters	☐ AdminServer								
Machines							100000		
Virtual Hosts	hdr_serve	r							
Work Managers									
Startup and Shutdown Gasses	Clusters								
-Services									
Messaging	HDR Clus	ster							
Data Sources	All set	vers in the	cluster						
-Persistent Stores			120-02-26-26						

- 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

ORACLE WebLogic Server Administration Console 12c			Q					
Change Center	🏫 Home Log Out Preferences 🔚 Record Help	<u>a</u>	Welcome, weblogic Connected to: hdr_domain					
View changes and restarts	Home >Summary of Deployments >Summary of JDBC Data Sou Modules >HDB IMSSystemModule >placebolder	arces >CTBAppsDBDS >Summary of JMS Modules >HDR	3MSSystemModule >Summary of 3MS Servers >HDRJMSServer >Summary of 3MS					
No pending changes exist. Click the Release Configuration button to allow others to edit the domain.	Create a New JMS System Module Resource							
Lock & Edit	Beck Next Finish Cancel							
Release Configuration	Choose the type of resource you want to create.							
Domain Structure	Use these pages to create resources in a JMS system modu	ule, such as queues, topics, templates, and connectio	in factories.					
hdr_domain Environment Servers E-Ousters E-Ousters	Depending on the type of resource you select, you are prompted to enter basic atomation for orealing the resource. For targetable resources, like stand-aimer equeues and topics, connection licetories, distributed queues and topics, comparison-you and BSV selectaments, you can also proved to targeting apper point as even targets. You can also associate targetable resources with subdeptyments, which is an advanced mechanism for grouping JMS module resources and the members to server resources.							
Server TempatesGoterence CastersMachinesMachines	© Connection Factory		Defines a set of connection configuration parameters that are used to create connections for JMS clients. More Info					
	© Queue		Defines a point-to-point destination type, which are used for asynchronous peer communications. A message delivered to a queue is distributed to only one consumer. More Info					
	🕞 Торіс		Defnes a publish/subscribe destination type, which are used for asynchronous peer communications. A message delivered to a topic is distributed to all topic consumers. More Info					
How do I	Distributed Queue		Defines a set of queues that are distributed on multiple JMS servers, but					
Configure quotas for destinations Configure 1MS templates			which are accessible as a single, logical queue to JMS clients. More Info					
Configure destination keys Configure topics	🔘 Distributed Topic		Defines a set of topics that are distributed on multiple JMS servers, but which are accessible as a single, logical topic to JMS clients. More Info					

- **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.au th.login.config=/opt/oracle/oraem/Oracle/Middleware/Oracle_Home/user_projects/domains/hdr_domain/config/weblogic.security -Dt angosol.coherence.mode=prod -DClientMode=local -Dweblogic.security.SSL.trustedCAKeyStore=/opt/oracle/oraem/Oracle/Middleware/ Oracle Home/vlserver/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 <mark>:0:10</mark> }" = "hdr_server"] ; then
JAVA_OPTIONS="\${JAVA_OPTIONS} -DLogFile=\${SERVER_NAME}_hdr.log -Djava.util.logging.config.file=logging.properties -Dj ava.security.auth.login.config=/opt/oracle/oraem/Oracle/Middleware/Oracle_Home/user_projects/domains/hdr_domain/config/weblog ic.security -Dtangosol.coherence.mode=prod -DClientMode=local -Dweblogic.security.SSL.trustedCAKeyStore=/opt/oracle/oraem/Ora cle/Middleware/Oracle_Home/wlserver/server/lib/cacerts"

- fi
- **20.** Start the node manages 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:

- 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=applsys: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_TS_SUMMARY:<hct_tbs>
remap_tablespace=APPS_TS_TOOLS:<hct_tbs>
remap_tablespace=APPS_TS_TOOLS:<hct_tbs>
```

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=applsys: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_TS_TS_SUMMARY:<ctb_tbs>
remap_tablespace=APPS_TS_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=applsys: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 OUEUES:<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:

- 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=applsys: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_TS_OUEUES:<hct_tbs> remap_tablespace=APPS_TS_SUMMARY:<hct_tbs> remap_tablespace=APPS_TS_TOOLS:<hct_tbs> remap_tablespace=APPS_TS_TOOLS:<hct_tbs> remap_tablespace=APPS_TS_TOOLS:<hct_tbs>

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=applsys: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_SUMMARY:<ctb_tbs> remap_tablespace=APPS_TS_TOOLS:<ctb_tbs> remap_tablespace=APPS_TS_TOOLS:<ctb_tbs>

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=applsys: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_S_NOLOX:<hct_tbs>
remap_tablespace=APPS_TS_TS_OULS:<hct_tbs>
remap_tablespace=APPS_TS_TS_TOOLS:<hct_tbs>
remap_tablespace=APPS_TS_TS_TOOLS:<hct_tbs>
```

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.