

HP Universal CMDB

For the Windows, Red Hat Enterprise Linux, and Oracle Enterprise Linux operating systems

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Disaster Recovery Guide

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Overview

This document describes the basic principles and guidelines on how to set up a Disaster Recovery system, and the required steps to make a secondary HP Universal CMDB system become the new primary system.

You can perform disaster recovery on a typical UCMDb environment consisting of one UCMDb Server and one database schema.

You can also perform disaster recovery on a High Availability UCMDb environment consisting of two or more UCMDb servers linked to the same database.

Note:

- This is a high level guide to introduce concepts of enabling disaster recovery.
- Setting up your environment for disaster recovery involves manual steps in moving various configuration files and updating the UCMDb database schemas. This procedure requires at least one UCMDb administrator and one database administrator who is familiar with UCMDb databases and schemas.
- There are a number of different possible deployment and configurations for UCMDb. To validate that the disaster recovery scenario works in a particular environment, it should be thoroughly tested and documented. You should contact HP Professional Services to ensure best practices are used in the design and backup workflow for any disaster recovery scenario.

Disaster Recovery for a Standalone UCMDB Server

This section includes:

- "Preparing the Disaster Recovery Environment" below
- "Preparing the HP Universal CMDB Backup Instance for Activation" on page 9
- "Performing Startup Cleanup Procedure" on page 9

Preparing the Disaster Recovery Environment

Preparing the Disaster Recovery environment comprises installing UCMDB in the backup environment, and then configuring the system and data backup.

• Install HP Universal CMDB Software in the Backup Environment

Install a second instance of HP Universal CMDB that matches your current production environment. For details, see the instructions for installing UCMDB in the interactive *HP Universal CMDB Deployment Guide*.

- Install exactly the same version of HP Universal CMDB in your backup environment, as that used in your production environment.
- To simplify issues with disparate capacities and deployments, the backup environment should be the same as your production environment.
- Do not run the Server and Database Configuration utility and do not create any databases.
- Do not start the Backup system.

Note: The Disaster Recovery environment should closely resemble the HP Universal CMDB production environment. The hardware, deployment, and versions should all be matched to prevent any loss of functionality when moving to the Backup system.

• Configure System and Data Backup

This stage includes copying configuration directories to the Backup instance and configuring database log file shipping.

■ Copy Configuration Directories to the Backup Instance

Copy from the HP Universal CMDB Production instance to the same server type in the backup instance, any files changed in the following directories:

- UCMDBServer\conf
- UCMDBServer\content

Also copy any other files or directories in the system that are customized.

Note: It is recommended that you perform backups of HP Universal CMDB servers at least daily. Depending on the number and interval of configuration changes, it may be

necessary to incorporate a faster interval to prevent a large loss of configuration changes in the event of losing the Production instance.

■ Microsoft SQL Server—Configure Database Log File Shipping

To provide the most up-to-date monitoring and configuration data, it is critical to enable log file shipping to minimize the time in data gaps. By using log file shipping, you can create an exact duplicate of the original database, out of date only by the delay in the copy-and-load process. You then have the ability to make the standby database server a new primary database server, if the original primary database server becomes unavailable. When the original primary server becomes available again, you can make it a new standby server, effectively reversing the servers' roles.

This section does not contain the specific steps to configure log file shipping. The HP Universal CMDB database administrator can use the following links as a guide to configure log file shipping for the appropriate version of database software that is used in the HP Universal CMDB environment:

Microsoft SQL Server 2005:	<ul style="list-style-type: none"> ○ msdn.microsoft.com/en-us/library/ms188625(v=SQL.90).aspx ○ msdn.microsoft.com/en-us/library/ms190016(v=SQL.90).aspx ○ msdn.microsoft.com/en-us/library/ms187016(v=SQL.90).aspx
Microsoft SQL Server 2008:	<ul style="list-style-type: none"> ○ msdn2.microsoft.com/en-us/library/ms188625.aspx ○ msdn2.microsoft.com/en-us/library/ms190016.aspx ○ msdn2.microsoft.com/en-us/library/ms187016.aspx

■ Oracle—Configure the Standby Database (Data Guard)

Oracle only has logs at the database level, not for each schema. This means that you cannot make a standby database on the schema level, and must create copies of the production system databases on your backup system.

Note: HP recommends that if Oracle is the database platform, Oracle 11i should be used to utilize Data Guard.

This section does not contain the specific steps to configure a Standby database. The HP Universal CMDB database administrator can use the following link as a guide to configure a Standby database for Oracle 11i:

http://download.oracle.com/docs/cd/B19306_01/server.102/b14239/toc.htm

Upon successful completion of the Backup database configuration, the HP Universal CMDB Backup database should be synchronized with the HP Universal CMDB Production database.

Preparing the HP Universal CMDB Backup Instance for Activation

When it is time to activate the Backup instance, perform the following steps in the Backup environment:

- Activate the Backup system, including its database.
- Ensure that all the latest database logs have been updated into the Backup environment's databases.
- Run the Perform Startup Cleanup Procedure to remove any localization in the databases. For details, see below.

Performing Startup Cleanup Procedure

This procedure cleans up all of the machine specific references in the configurations from the Production instance. It is needed to reset the database on the Backup system.

Note:

- Before starting the activation procedures, the HP Universal CMDB Administrator should ensure that the appropriate license has been applied to the Backup instance.
- HP recommends that an experienced database administrator perform the SQL statements included in this procedure.

1. Empty and update tables:

```
update CUSTOMER_REGISTRATION set CLUSTER_ID=null;
truncate table CLUSTER_SERVER;
truncate table SERVER;
truncate table CLUSTERS;
```

2. Run the Server and Database Configuration utility.

Run the Server and Database Configuration utility on each machine to re-initialize the needed tables in the database. To run the Server and Database Configuration utility, select **Start > All Programs > HP UCMDB > Start HP Universal CMDB Configuration Wizard**.

Note:

When running the Server and Database Configuration utility, make sure to reconnect to the same databases that were created for the Backup environment (that is, the one to which the backup data was shipped). A complete loss of configuration data may result if the utility is run on the Production instance.

When prompted for the databases by the Server and Database Configuration utility, ensure that you enter the names of the new databases in the Backup environment.

3. Bring up the Backup Environment.

Start HP Universal CMDB in the Backup environment.

Disaster Recovery for a High Availability UCMDB Environment

The following task describes how to prepare for and perform disaster recovery on a high-availability UCMDB environment:

1. Install HP Universal CMDB in the Backup Environment

Install a second environment of HP Universal CMDB that matches your current production environment.

For details, see the instructions for installing UCMDB and setting up a high-availability environment in the interactive *HP Universal CMDB Deployment Guide*.

Note: The Disaster Recovery environment should closely resemble the HP Universal CMDB production environment. The hardware, deployment, and versions should all be matched to prevent any loss of functionality when moving to the Backup system.

- Install exactly the same version of HP Universal CMDB in your backup environment, as that used in your production environment.
- To simplify issues with disparate capacities and deployments, the backup environment should be the same as your production environment.
- Do not run the Server and Database Configuration utility and do not create any databases.

2. IMPORTANT! Stop the Backup Environment

If any of the servers were started after installation, stop all the servers in the cluster.

3. Configure System and Data Backup

This stage includes copying configuration directories to the Backup environment and configuring database log file shipping.

■ Copy Configuration Directories to the Backup Environment

Copy from the HP Universal CMDB production environment to each server in the cluster of the Backup environment, any files changed in the following directories:

- UCMDBServer\conf
- UCMDBServer\content

Also copy any other files or directories in the system that are customized.

Note: It is recommended that you perform backups of HP Universal CMDB servers at least daily. Depending on the number and interval of configuration changes, it may be necessary to incorporate a faster interval to prevent a large loss of configuration changes in the event of losing the Production environment.

■ Microsoft SQL Server—Configure Database Log File Shipping

To provide the most up-to-date monitoring and configuration data, it is critical to enable log file shipping to minimize the time in data gaps. By using log file shipping, you can create an exact duplicate of the original database, out of date only by the delay in the copy-and-load process. You then have the ability to make the standby database server a new primary database server, if the original primary database server becomes unavailable. When the original primary server becomes available again, you can make it a new standby server, effectively reversing the servers' roles.

This section does not contain the specific steps to configure log file shipping. The HP Universal CMDB database administrator can use the following links as a guide to configure log file shipping for the appropriate version of database software that is used in the HP Universal CMDB environment:

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Microsoft SQL Server 2008:	<ul style="list-style-type: none">○ msdn2.microsoft.com/en-us/library/ms188625.aspx○ msdn2.microsoft.com/en-us/library/ms190016.aspx○ msdn2.microsoft.com/en-us/library/ms187016.aspx

■ Oracle—Configure the Standby Database (Data Guard)

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http://download.oracle.com/docs/cd/B19306_01/server.102/b14239/toc.htm

Upon successful completion of the Backup database configuration, the HP Universal CMDB Backup database should be synchronized with the HP Universal CMDB Production database.

4. Start the Backup Environment

Start up all the servers in the cluster.

- a. If the first UCMDB Server is not started, start the process. Wait until the startup process is complete.

- b. Start the other UCMDB Servers.

