Disaster Recovery (Backup and Restore)

This chapter contains the following sections:

Backup and Restore Cisco DCNM and Application Data on Standalone DCNM setup

You can take a backup of Cisco DCNM application data for analytics and troubleshooting.

Note In Release 11.3(1), the sysadmin and the root user's password are not identical. When you upgrade to 11.4(1), the sysadmin and root user passwords are preserved.

However, when you perform backup and restore on Cisco DCNM after upgrade, the sysadmin user inherits the password from the root user, and therefore both the users will have the same password. You can change the password for both the users after restore is complete.

Perform the following task to take a backup of Cisco DCNM and Application data.

Procedure

Step 1 Logon to the Cisco DCNM appliance using SSH.

Step 2 Take a backup of the application data using the **appmgr backup** command.

```
dcnm# appmgr backup
```

From Release 11.4(1), Cisco DCNM allows you to configure a cron job that allows saves the backup to a remote scp server. Use **appmgr backup schedule** command to configure a scheduled backup.

```
dcnm# appmgr backup schedule [day] <hh<hh>:<mm>
[destination <user>@<host>:[<dir>]]
```

Copy the backup file to a safe location and shut down the DCNM Appliance.

Step 3 Right click on the installed VM and select **Power** > **Power Off**.

Step 4 Deploy the new DCNM appliance.

Step 5 After the VM is powered on, click on **Console** tab.

A message indicating that the DCNM appliance is configuring appears on the screen.

Copy and paste the URL to the browser to continue with restore process.

Step 6 On the DCNM Web Installer UI, click **Get Started**.

Step 7 On the Cisco DCNM Installer screen, select radio button.

Select the backup file that was generated in Step 2, on page 1.

Continue to deploy the DCNM.

Step 8 On the Summary tab, review the configuration details.

Click **Previous** to go to the previous tabs and modify the configuration. Click **Start Installation** complete Cisco DCNM Virtual Appliance Installation for the chosen deployment mode.

A progress bar appears showing the completed percentage, description of the operation, and the elapsed time during the installation.

After the progress bar shows 100%, click **Continue**.

Step 9 After the data is restored, check the status using the **appmgr status all** command.

Backup and Restore Cisco DCNM and Application Data on Native HA setup

You can take a backup of Cisco DCNM application data for analytics and troubleshooting.

Note In Release 11.3(1), the sysadmin and the root user's password are not identical. When you upgrade to 11.4(1), the sysadmin and root user passwords are preserved.

However, when you perform backup and restore on Cisco DCNM after upgrade, the sysadmin user inherits the password from the root user, and therefore both the users will have the same password. You can change the password for both the users after restore is complete.

Perform the following task to take perform backup and restore of data in a Native HA setup.

Before you begin

Ensure that the Active node is operating and functional.

Procedure

Step 1 Check if the Active node is operational. Otherwise, trigger a failover.

Step 2 Logon to the Cisco DCNM appliance using SSH.

Step 3 Take a backup of the application data using the **appmgr backup** command on both Active and Standby appliances.

```
dcnm1# appmgr backup
dcnm2 appmgr backup
```

From Release 11.4(1), Cisco DCNM allows you to configure a cron job that allows saves the backup to a remote scp server. Use **appmgr backup schedule** command to configure a scheduled backup.

```
dcnm# appmgr backup schedule [day] <hh<hh>:<mm>
[destination <user>@<host>:[<dir>]]
```

Copy the backup file of both active and standby appliances to a safe location and shut down the DCNM Appliance.

Step 4 Right click on the installed VM and select **Power** > **Power Off**.

Step 5 Deploy the new DCNM appliance in Native HA mode.

Step 6 For both the Active and Standby appliances, after the VM is powered on, click on **Console** tab.

A message indicating that the DCNM appliance is configuring appears on the screen.

Copy and paste the URL to the browser to continue with restore process.

Step 7 On the DCNM Web Installer UI, click **Get Started**.

Step 8 On the Cisco DCNM Installer screen, select radio button.

Select the backup file that was generated in Step Step 3, on page 3.

The values for parameters are read from the backup file, and auto-populated. Modify the values, if required.

Continue to deploy the DCNM.

Step 9 On the Summary tab, review the configuration details.

Click **Previous** to go to the previous tabs and modify the configuration. Click **Start Installation** complete Cisco DCNM Virtual Appliance Installation for the chosen deployment mode.

A progress bar appears showing the completed percentage, description of the operation, and the elapsed time during the installation.

After the progress bar shows 100%, click **Continue**.

Step 10 After the data is restored, check the status using the **appmgr status all** command.

Recovering Cisco DCNM Single HA Node

This section details the scenarios and provides instructions to recover Cisco DCNM Single HA node.

The following table details all the recovery procedures when one or both the nodes fail in a Cisco DCNM Native HA set up.

Failure type	Node/Database to recover	Primary backup available	Secondary backup available	Recovery procedure
Primary node is lost. Secondary node is now Primary (due to fail over).	Primary Node	—	—	1. Convert Secondary node to Primary node. 2. Configure new Secondary node.
Primary and Secondary server database is lost. Secondary node is now Primary (due to fail over)	Primary database	—	—	The Active Secondary node will restart and sync to the Standby Primary node.
Active Secondary node is lost. Primary node is now active due to fail over.	Secondary node	—	No	Configure new Secondary node.
Active Secondary node is lost. Primary node is not active due to fail over.	Secondary node	—	Yes	Configure new Secondary node, using the Web Installer. Choose **Fresh installation with backup file for restore**. Select **Restore secondary DCNM node only** in HA settings screen.
Secondary standby node is lost.	Secondary node	—	No	Configure new Secondary node.
Secondary standby node lost	Secondary node	—	Yes	Configure new Secondary node, using the Web Installer. Choose **Fresh installation with backup file for restore**. Select **Restore secondary DCNM node only** in HA settings screen.
Primary node is active. Secondary standby database lost.	Secondary database	—	—	Primary node will restart to sync with Secondary node.

Converting Secondary node to Primary node

To convert the secondary node to Primary node, perform the following steps:

1. Log on to the DCNM server via SSH on the Secondary node.
2. Stop all the applications on the Secondary node by using the **appmgr stop all** command.
3. Navigate to the `/root/packaged-files/properties/ha-setup.properties` file.
4. Set the node ID to 1 to configure the secondary node as the primary node.

```
NODE_ID 1
```

After you change the node ID for the secondary node to 1, reboot the server. The old Secondary will restart as the new Primary Node. Consider the lost Primary as lost secondary node, and configure the new secondary node.

Configuring Secondary node

To configure the secondary node, perform the following steps:

1. Install a standalone Cisco DCNM. Use the same configuration settings as the lost secondary node.

Note If the Primary node was lost, and the old secondary node was converted to primary node, configure the new standalone node with the lost primary configuration.

2. Log on to the new DCNM standalone server via SSH, and stop all applications, using the **appmgr stop all** command.
3. Provide access to the `/root` directory on the new node, using the **appmgr root-access permit**.
4. Log on to the primary node via SSH, and stop all applications, using the **appmgr stop all** command.
5. Provide access to the `/root` directory on the Primary node, using the **appmgr root-access permit**.
6. On the Primary node, edit the `/root/.DO_NOT_DELETE` file. Set the **NATIVE_HA_STATUS** parameter to **NOT_TRIGGERED** on the primary node.
7. Configure the Primary node as Active, using the **appmgr setup native-ha active** command.
8. Configure the Secondary node as Standby, using the **appmgr setup native-ha standby** command.