CHAPTER 1

Upgrading Cisco DCNM-LAN Servers

This chapter describes how to upgrade Cisco Data Center Network Manager for LAN (DCNM-LAN) on a server system where a previous installation of an earlier Cisco DCNM-LAN release is present.

This chapter includes the following sections:

Information About Cisco DCNM-LAN Server Upgrades

This section includes the following topics:

Primary Server Upgrades

You perform a primary server upgrade when you upgrade to a newer release of the Cisco DCNM-LAN server software for either of the following two purposes:

- You are upgrading a single-server Cisco DCNM-LAN environment.
- You are upgrading the primary Cisco DCNM-LAN server in a clustered-server environment.

Note All servers in a Cisco DCNM-LAN server cluster must run an identical release of Cisco DCNM-LAN, such as Cisco DCNM-LAN Release 5.0(2). If you upgrade the primary server, you must upgrade all secondary servers in the cluster.

A primary server upgrades use the Cisco DCNM installer wizard to collect information about how the upgraded Cisco DCNM-LAN server should be configured. After you have provided the installer the information that it needs, it upgrades the server software.

A primary server upgrades also create the upgrade-installation.properties file in the *INSTALL_DIR*/dcm/dcnm/config directory. This file is for use during the upgrade of each secondary server in the server cluster that the primary server belongs to. On a Microsoft Windows server system, the default *INSTALL_DIR* value is C:\Program Files\Cisco Systems. On a RHEL server system, the default *INSTALL_DIR* value is /usr/local/cisco.

Secondary Server Upgrades

you perform a secondary server upgrade when you upgrade secondary Cisco DCNM-LAN servers in a clustered-server environment. This upgrade can be performed only after you upgrade the primary server in the cluster.

A secondary server upgrade is a silent installation. After you run the installer from a command prompt, the installer does not prompt you for information. Instead, a secondary server upgrade uses the information from the upgrade-installer.properties file that was created when you upgraded the primary server in the cluster that the secondary server belongs to.

Using the upgrade-installer.properties file from the primary server ensures that each secondary server is configured identically, as required by Cisco DCNM-LAN clustered-server deployments. For more information, see the "Clustered-Server Configuration Requirements" section on page 1-6.

Upgrading Cisco DCNM-LAN Servers

This section includes the following topics:

Single-Server Cisco DCNM-LAN Upgrade Process

You can upgrade a clustered-server Cisco DCNM-LAN environment.

DETAILED STEPS

Step 1 Ensure that the Cisco DCNM-LAN server system meets all the server system requirements. In particular, ensure that the server system meets the requirements in the *Cisco DCNM Release Notes, Release 5.x*.

For more information, see the "Prerequisites for Installing a Cisco DCNM-LAN Server" section on page 1-5.

Step 2 Download the Cisco DCNM-LAN server software.

For more information, see the "Downloading the Cisco DCNM-LAN Server Software" section on page 1-11.

Step 3 On the Cisco DCNM-LAN server system, upgrade the Cisco DCNM-LAN server software.

For more information, see the "Upgrading a Primary Cisco DCNM-LAN Server" section on page 1-4.

Note If the database used by Cisco DCNM-LAN is remote to the primary server and if the upgrade that you are performing requires database migration, the Cisco DCNM installer warns you that you must perform database migration manually and then run the Cisco DCNM installer again. The warning will indicate where you can find the database migration tool. Instructions for using the database migration tool manually are included in a readme.txt file with the tool.

Step 4 (Optional) If you have not started the Cisco DCNM-LAN server, start it now. For more information about starting a Cisco DCNM-LAN server, see the *Cisco DCNM Fundamentals Guide, Release 5.x*.

Step 5 Install the Cisco DCNM-LAN client. For more information, see the *Cisco DCNM Fundamentals Guide, Release 5.x*.

Clustered-Server Cisco DCNM-LAN Upgrade Process

You can upgrade a clustered-server Cisco DCNM-LAN environment.

DETAILED STEPS

Step 1 Ensure that each server system in the Cisco DCNM-LAN server cluster meets all the server system requirements. In particular, ensure that each server system meets the requirements in the *Cisco DCNM Release Notes, Release 5.x*.

For more information, see the "Prerequisites for Installing a Cisco DCNM-LAN Server" section on page 1-5.

Step 2 Ensure that each server system meets the additional server requirements for a clustered-server deployment.

For more information, see the "Prerequisites for Deploying a Clustered-Server Cisco DCNM-LAN Environment" section on page 1-6.

Step 3 Download the Cisco DCNM-LAN server software.

For more information, see the "Downloading the Cisco DCNM-LAN Server Software" section on page 1-11.

Step 4 On the primary server system, upgrade the Cisco DCNM-LAN server software.

For more information, see the "Upgrading a Primary Cisco DCNM-LAN Server" section on page 1-4.

Note If the database used by Cisco DCNM-LAN is remote to the primary server and if the upgrade that you are performing requires database migration, the Cisco DCNM installer warns you that you must perform database migration manually and then run the Cisco DCNM installer again. The warning will indicate where you can find the database migration tool. Instructions for using the database migration tool manually are included in a readme.txt file with the tool.

Step 5 On each secondary server system, upgrade the Cisco DCNM-LAN server software.

For more information, see the "Upgrading a Secondary Cisco DCNM-LAN Server" section on page 1-6.

Step 6 (Optional) If you have not started all the Cisco DCNM-LAN servers in the cluster, start each server system in the server cluster now. For more information about starting a Cisco DCNM-LAN server cluster, see the *Cisco DCNM Fundamentals Guide, Release 5.x*.

Step 7 Install the Cisco DCNM-LAN client. For more information, see the *Cisco DCNM Fundamentals Guide, Release 5.x*.

Upgrading a Primary Cisco DCNM-LAN Server

You can upgrade a primary Cisco DNCM server to a more recent release of Cisco DCNM-LAN.

BEFORE YOU BEGIN

Note

- For a single-server Cisco DCNM-LAN environment, you must have performed Step 1 through Step 2 in the "Single-Server Cisco DCNM-LAN Upgrade Process" section on page 1-2.
- For a clustered-server Cisco DCNM-LAN environment, you must have performed Step 1 through Step 3 in the "Clustered-Server Cisco DCNM-LAN Upgrade Process" section on page 1-3.

Disable antivirus and instruction detection software on the server system. In general, disable any security software or feature that might interfere with the installation of the Cisco DCNM-LAN server software. After you complete the installation, reenable the software or features.

Note When upgrading a DCNM-LAN server that is also running Fabric Manager, you must first stop Cisco Fabric Manager and uninstall Fabric Manager before proceeding with the upgrade of the DCNM-LAN server. After upgrading the DCNM_LAN server, you can install DCNM-SAN to replace the pre-existing Fabric Manager. For more information about upgrading DCNM-SAN, see Upgrading Cisco DCNM-SAN, page 1-1.

DETAILED STEPS

Step 1 Log into the server with a user account that has the required privileges, as follows:

- For Microsoft Windows, the user account must be a member of the local administrators group.
- For RHEL, the user account must be root.

If you are installing Cisco DCNM-LAN on Microsoft Windows and using Remote Desktop Connection (RDC) to access the Cisco DCNM-LAN server system, start RDC from a command prompt and use the /console option, as follows:

```
C:\>mstsc /console /v:server
```

where *server* is the DNS name or IP address of the Cisco DCNM-LAN server system.

Step 2 If you have not already done so, stop the Cisco DCNM-LAN server.

Step 3 Go to the directory where you downloaded the updated Cisco DCNM-LAN server software and run one of the following files:

- For Microsoft Windows, run the dcnm-k9.*release*.exe file.

- For RHEL, use the following **sh** command:

  ```
  sh dcnm-k9.release.bin
  ```

The Introduction step appears in the Cisco DCNM installer window.

Step 4 Click **Next**.

The Please Read Before Continuing information appears in the Cisco DCNM installer window.

Step 5 Click **Next**.

Step 6 The Choose Install Folder step appears in the Cisco DCNM installer window, do the following:

a. Check the **DCNM-LAN** checkbox.

b. Click **Next**.

A warning dialog box indicates that an existing installation of the Cisco DCNM-LAN server was found.

Step 7 Click **OK**.

Note The database user credential fields are disabled (Step 8 to Step 10) and user intervention is not required.

The Database Options step appears in the Cisco DCNM installer window.

Step 8 In the DB Admin User field, enter the username of a database user account that has administrator permissions in the database.

Step 9 In the DB Admin Password field, type the password for the database administrator username that you specified.

Step 10 Click **Next**.

The Pre-Installation Summary step appears in the Cisco DCNM installer window.

Step 11 Carefully review the summary of your choices. If you need to change anything, click **Previous** until the the Cisco DCNM installer window displays the step that you need to change, and then return to the applicable preceding step.

Step 12 When you are ready to install the Cisco DCNM-LAN server software, click **Next**.

The installer installs the Cisco DCNM-LAN server software.

The Install Complete step appears in the Cisco DCNM installer window.

Caution Clicking **Cancel** after you click **Next** is not recommended. Canceling the operation at this step puts the DCNM server in an inconsistent state and would require you to uninstall DCNM and start the installation process again.

Step 13 Choose whether you want to start the Cisco DCNM-LAN server now. If you start the Cisco DCNM-LAN server now, a splash screen appears while the server starts.

The Install Complete step appears in the Cisco DCNM installer window. The Cisco DCNM instance ID number is displayed.

Step 14 Click **Done**.

Step 15 (Optional) If you need to start the Cisco DCNM-LAN server, see the *Cisco DCNM Fundamentals Guide, Release 5.x*.

Step 16 (Optional) If the server system is the primary server of a clustered-server environment, you must upgrade Cisco DCNM-LAN on each secondary server in the server cluster. For more information, see the "Upgrading a Secondary Cisco DCNM-LAN Server" section on page 1-6.

Upgrading a Secondary Cisco DCNM-LAN Server

Depending on the operating system of the secondary server, you can upgrade the Cisco DCNM-LAN server using the CLI or the DCNM Install Manager tool. You can use the CLI or the DCNM Install Manager tool for a secondary serverthat runs RHEL. For a secondary server that runs Microsoft Windows, you upgrade the Cisco DCNM-LAN server with the CLI.

Upgrading with the CLI

This section describes how to upgrade the Cisco DCNM-LAN server software on a secondary server system of a clustered-server environment.

Note Support for Cisco DCNM-LAN clustered-server environments was introduced in Cisco DCNM-LAN Release 5.0(2); therefore, you cannot perform a secondary server upgrade from a Cisco DCNM-LAN release prior to Release 5.0(2).

The Cisco DCNM installer creates the DCNM_InstallLog.log file in the home directory of the user account that you use to upgrade the secondary server. You can determine the success of the secondary server upgrade installation by monitoring the DCNM_InstallLog.log file.

BEFORE YOU BEGIN

Note You must have performed Step 1 through Step 4 in the "Clustered-Server Cisco DCNM-LAN Upgrade Process" section on page 1-3.

You must have upgraded the Cisco DCNM-LAN server software on the primary server system. The upgrade-installer.properties file, required for secondary server upgrade, is created during the primary server upgrade.

Determine the IP address of the secondary server.

Disable antivirus and instruction detection software on the server system. In general, disable any security software or feature that may interfere with the installation of the Cisco DCNM-LAN server software. After you complete the installation, reenable the software or features.

DETAILED STEPS

Step 1 From the primary server system, get a copy of the upgrade-installer.properties file from the following location:

INSTALL_DIR/dcm/dcnm/config

On a Microsoft Windows server system, the default *INSTALL_DIR* value is C:\Program Files\Cisco Systems. On a RHEL server system, the default *INSTALL_DIR* value is /usr/local/cisco.

Step 2 Log into the secondary server with a user account that has the required privileges, as follows:

- For Microsoft Windows, the user account must be a member of the local administrators group.
- For RHEL, the user account must be root.

If you are installing Cisco DCNM-LAN on Microsoft Windows and using Remote Desktop Connection (RDC) to access the Cisco DCNM-LAN server system, start RDC from a command prompt and use the /console option, as follows:

```
C:\>mstsc /console /v:server
```

where *server* is the DNS name or IP address of the Cisco DCNM-LAN server system.

Step 3 Choose a directory and copy the following files to that directory:

- The upgrade-installer.properties file that you copied from the primary Cisco DCNM-LAN server system.
- The Cisco DCNM-LAN server software that you downloaded.

Step 4 At a command prompt, change directories as needed to ensure that the working directory is the directory that contains the installer.properties file and the Cisco DCNM-LAN server software. On Microsoft Windows, use the **chdir** command without arguments to display the working directory. On RHEL, use the **pwd** command.

Step 5 Run the applicable command as follows:

- For Microsoft Windows:
  dcnm-k9.*release***.exe -i silent -f upgrade-installer.properties**
  -DDCNM_IP_ADDRESS=*server_ip_address*
- For RHEL:
  sh dcnm-k9.*release***.bin -i silent -f upgrade-installer.properties**
  -DDCNM_IP_ADDRESS=*server_ip_address*

For example, to upgrade a secondary Cisco DCNM-LAN Release 5.0(2) server on a Microsoft Windows server system that is assigned the IPv4 address 10.72.139.14, the installation command is as follows:

```
dcnm-k9.5.0.2.exe -i silent -f upgrade-installer.properties -DDCNM_IP_ADDRESS=10.72.189.14
```

Table 1-1 describes the command syntax.

Table 1-1 Secondary Server Upgrade Command Syntax

Option	Description
-i silent	Specifies that the installation is silent.
-f installer.properties	Specifies the upgrade-installer.properties file.
-DDCNM_IP_ADDRESS=*server_ip_address*	Specifies the IPv4 address of the secondary server on which you are installing the Cisco DCNM-LAN server software.

Step 6 Monitor the DCNM_InstallLog.log file to determine the status of the upgrade installation. The Cisco DCNM installer writes the log file to the home directory of the current user account.

Step 7 (Optional) If you want to install a Cisco DCNM-LAN license, see Chapter 1, "Licensing a Cisco DCNM-LAN Deployment."

Upgrading with Install Manager

DCNM Install Manager is a GUI tool for servers that run Linux. It is designed to assist in performing silent mode operations on secondary servers (remote nodes).

Note DCNM Install Manager does not support Windows servers.

Note Disable antivirus and instruction detection software on the server system. In general, disable any security software or feature that might interfere with the upgrade of the Cisco DCNM-LAN server software. After you have completed the upgrade, reenable the software or features.

DETAILED STEPS

Step 1 To access Install Manager, navigate to the **dcnm-install-manager.sh** file that is located in the bin folder where the DCNM-LAN Server was installed.

The default bin folder location for servers running Linux is /usr/local/Cisco/dcm/dcnm/bin.

Step 2 Double click the **dcnm-install-manager.sh** file to launch Install Manager.

Step 3 In the DCNM Installer Folder drop-down list, choose the path that contains the binary executable file for DCNM-LAN server installation.

Step 4 Click the **New** icon in the toolbar near the top of the Install Manager GUI for every secondary server.

A new row in the list of Server Nodes is created every time the New icon is clicked.

Note In the toolbar, click the **Delete** icon to delete a selected row in the list of Server Nodes. This action does not delete a secondary server from the clustered-server environment.

Step 5 For each secondary server represented by a row in the list of Server Nodes, enter the following:

- Server name or IP address in the Server Name/IP Address field.
- Protocol used for connectivity in the Protocol field.

  The protocol is either Telnet or SSH.
- User credentials (user ID and password) used for connecting to the secondary server in the User Credentials field.

  The user credentials are used for SSH connectivity to the server. Telnet connectivity to the server does not require user credentials.

  Alternatively, default user credentials may be set by entering the credentials in the Default Credentials section of the GUI. The default credentials are used when the User Credential field is blank.
- (Optional) Comments that may be useful to identify the secondary server in the Comments field.

The Last Action Status column in the list of Server Nodes includes the success or failure status of the last performed action. Clicking the + icon for the Last Action Status expands the display to show the entire log of actions performed on the server.

Step 6 In the list of Server Nodes, select the secondary servers to perform the upgrade.

Step 7 In the toolbar, click the **Verify** icon to verify the connectivity to the selected secondary servers.

Correct any connectivity issues before continuing the installation.

Step 8 (Optional) In the DCNM Install Location field, enter the path on the secondary server for the installation of the DCNM-LAN server.

If the DCNM Install Location field is blank, the Install Manager uses the default path, /usr/local/Cisco/dcm, for the installation of the DCNM-LAN server.

Step 9 Click the **Install** icon in the toolbar to begin the installation on the selected secondary servers.

Before starting the upgrade, the Install Manager does the following:

- Checks the connectivity to the server.
- Performs upgrade and reinstallation depending on the version already installed.

Step 10 Monitor the Last Action Status column to determine the status of the upgrade.

In addition, you may also review the DCNM_Installer_Manager.log file. This file, located at /root/.dcnm, contains the log for all the operations of the Install Manager.

If the upgrade operation fails on a secondary server, the installation log of the secondary server is automatically copied to /usr/local/Cisco/dcm/FailureLog_<SECONDARY_SERVER_IP_ADDRESS>.log on the primary server, where <SECONDARY_SERVER_IP_ADDRESS> is the IP address of the secondary server.

Step 11 (Optional) Install a Cisco DCNM-LAN license. For more information, see Chapter 1, "Licensing a Cisco DCNM-LAN Deployment."

Note The Install Manager is a standalone application. The settings specified are not saved and are not persistent. The settings are lost when the Install Manager GUI is closed.

Feature History for Upgrading Cisco DCNM-LAN Servers

Table 1-2 lists the release history for this feature.

Table 1-2 Feature History for Upgrading Cisco DCNM-LAN Servers

Feature Name	Releases	Feature Information
Support for a clustered-server environment	5.0(2)	This feature was introduced.
Install Manager	5.1	This feature was introduced.