Cisco Catalyst Center Upgrade Guide

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CHAPTER 1

Prerequisites

Prerequisites for Upgrading

You must complete the system updates before you can perform package updates. Do not download or install any package updates until all system updates have been installed.

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Important

- In a multihop upgrade, you must confirm that the applications have been updated successfully before you begin the next system update. If you skip to the next system update without first updating the applications, you will have to reimage your Cisco Catalyst Center appliance.

- If you are running Cisco DNA Center release 2.1.2.8 or earlier, you must first upgrade to 2.2.2.9 before you can upgrade to release 2.2.3.6 or later. Contact your Cisco sales representative if you need assistance.

Note the following points:

- You cannot upgrade the packages individually. You must follow all of the steps that are described in this guide.

- Before you upgrade, make sure that the cluster link interface is connected to a switch port and is in the up state. To confirm that the interface is up, complete these steps:

  1. In an SSH client, log in to Catalyst Center on your appliance.

  2. Enter the **ifconfig** *interface-name* command:

     - For a 44-core first-generation appliance (Cisco part number DN1-HW-APL), specify **enp10s0** as the interface name.

     - For a 44- or 56-core second-generation appliance (Cisco part number DN2-HW-APL or DN2-HW-APL-L), specify **enp94s0f1** as the interface name.

     - For a 112-core second-generation appliance (Cisco part number DN2-HW-APL-XL), specify **enp69s0f1** as the interface name.

3. In the resulting output, check the last line and verify that data has been received and transmitted. Nonzero values indicate that the interface is up and operational.

Review the following list of prerequisites before upgrading your installed instance of Catalyst Center:

- Only a user with SUPER-ADMIN-ROLE permissions can perform this procedure. For more information, see the *Cisco Catalyst Center Administrator Guide*.

- Create a backup of your Catalyst Center database. For more information, see the *Cisco Catalyst Center Administrator Guide*.

- If you have a firewall, allow Catalyst Center to access the following location on each node in your cluster for all system and package downloads: https://www.ciscoconnectdna.com:443. To ensure that you have cloud connectivity to AWS, log in to the cluster and enter the following CLI command: **maglev catalog settings validate**. For more information, see the Internet Connectivity Traffic table in the *Cisco Catalyst Center Second-Generation Appliance Installation Guide*.

- While the Catalyst Center GUI is compatible with the following HTTPS-enabled browsers, we recommend that you use Chrome, not Firefox, during the upgrade:

  - Google Chrome: Version 93 or later (recommended for upgrade)

  - Mozilla Firefox: Version 92 or later (not recommended for upgrade)

- Have the username and password for a cisco.com user account available during the upgrade. You might be prompted, once, for the account credentials during package installations. This can be any valid cisco.com user account.

- Allocate enough time for the upgrade process. Upgrading can take longer than 6 hours to complete.

- We strongly recommend that you do not use Catalyst Center or any of its applications or tools while the upgrade is in process.

- Confirm that the minimum disk requirements are met:

  - The / partition has at least 2 GB of free space.

  - The /data partition has at least 35 GB of free space and is not more than 70% full.

  If you receive a `storage validations failed` error, contact the Cisco TAC.

- If the Catalyst Center download, update, or install procedures fail for any reason, always retry the procedure a second time using the GUI.

- If your environment uses Catalyst Center's disaster recovery implementation, see the "Implement Disaster Recovery" chapter in the *Cisco Catalyst Center Administrator Guide* for upgrade information specific to a disaster recovery setup.

- Before you upgrade your disaster recovery system or update your Cisco IMC firmware, first place your system on pause. For more information, see the "Pause Your Disaster Recovery System" section in the *Cisco Catalyst Center Administrator Guide*.

In a three-node cluster, you can trigger an upgrade of the entire cluster from the Catalyst Center GUI (the GUI represents the entire cluster and not just a single host). An upgrade triggered from the GUI automatically upgrades all hosts in the cluster.

Note   To upgrade a three-node cluster, Service Distribution (or high availability) must be enabled.

Factors That Affect the Upgrade

Download Times for Upgrade

The download time for the Catalyst Center software upgrade, which is approximately 40 GB in size, depends significantly on your internet connection's bandwidth. The following table provides estimates of the expected download times based on various common bandwidth speeds.

These estimates are based on ideal conditions. Factors such as network congestion and connection stability can affect actual download times.

Bandwidth	Estimated Download Time
25 Mbps	3 hours, 38 minutes
50 Mbps	1 hour, 49 minutes
100 Mbps	54 minutes
200 Mbps	27 minutes

Connection Throttling

During the software upgrade process, many objects are downloaded. If a web security appliance is in place that limits connections based on various criteria, such as the total amount of data transferred within a specific period or the number of concurrent connections, this throttling can interrupt the download process, potentially leading to failure. To ensure a smooth software upgrade, we recommend that you configure exceptions for Catalyst Center traffic to prevent it from being throttled.

Proxy/Firewall

The proxy or firewall must allow the software management URLs that are listed in "Required Internet URLs and Fully Qualified Domain Names" in the *Cisco Catalyst Center Appliance Installation Guide*.

TLS Intercept Proxy

The TLS intercept proxy will disrupt the software download activity initiated by Catalyst Center if the TLS intercept proxy's certificate is not installed on Catalyst Center. To add the TLS intercept proxy certificate, see "Upload an SSL Intercept Proxy Certificate" in the *Cisco Catalyst Center Administrator Guide*.

Antimalware

The Catalyst Center software management system retrieves files from Cisco's connected catalog server and retrieves Docker images from a remote Docker registry. To prevent interruptions and failures in the software download process, the following compressed file formats must be excluded from antimalware scans.

Application Package Data

Files	content-type	content-encoding	Notes
tar.gz	application/x-compressed	gzip	Commonly used for compressed archives. Also seen as application/x-gzip or application/x-compressed.
.json	application/json	None	Text-based format for representing structured data. Typically UTF-8 encoded.

Docker Images

Component	File Extension	content-type	content-encoding
Docker image layers	.tar.gz	application/gzip	gzip
Docker image manifest	.json	application/json	None
Docker configuration object	.json	application/json	None
YAML configuration	.yaml/yml	text/yaml or application/x-yam	None
Docker image archive	.tar or .tar.gz	application/x-tar or application/gzip	None or gzip

Update the Cisco IMC Firmware

To update your Cisco IMC firmware, first see the release notes for the corresponding release of Catalyst Center that you are installing. In the release notes, the "Supported Firmware" section shows the Cisco IMC firmware version for your Catalyst Center release.

Then, see the *Cisco Host Upgrade Utility User Guide* for instructions on updating the firmware.

In a three-node cluster configuration, we recommend that you shut down all three nodes in the cluster before updating the Cisco IMC firmware. However, you can upgrade the cluster nodes individually if that's what you prefer. See "Typical Cluster Node Operations" in the *Cisco Catalyst Center High Availability Guide* and follow the steps provided to shut down one or all of the nodes for maintenance.

Supported Upgrade Paths for Hot Fixes

If your release is…	You can upgrade to…	Recommendation
• 2.3.7.5.70434 • 2.3.7.4.70424 • 2.3.7.3.70332 • 2.3.7.0.70488	2.3.7.6	Recommended for fixes

If your release is…	You can upgrade to…	Recommendation
• 2.3.6.0.70351 • 2.3.6.0.70349	2.3.7.6	Recommended for fixes
• 2.3.5.6.70143-HF20 • 2.3.5.6.70143-HF10 • 2.3.5.6.70143 • 2.3.5.6.70105	2.3.7.6	Recommended for fixes
• 2.3.5.5.70026-HF70 • 2.3.5.5.70026-HF61	2.3.7.6	Recommended for fixes
2.3.5.5.70026-HF60	2.3.7.6	Recommended for fixes
	2.3.5.6	
• 2.3.5.5.70026-HF50 • 2.3.5.5.70026-HF40 • 2.3.5.5.70026-HF30 • 2.3.5.5.70026-HF20	2.3.7.6	
	2.3.7.5	
	2.3.5.6	Recommended for fixes
• 2.3.5.5.70026-HF15 • 2.3.5.5.70026-HF14 • 2.3.5.5.70026-HF13 • 2.3.5.5.70026-HF12 • 2.3.5.5.70026-HF11 • 2.3.5.5.70026-HF10	2.3.7.6	Recommended for fixes
2.3.5.5.70026-HF2	2.3.7.6	
	2.3.5.6	Recommended for fixes
2.3.5.5.70026-HF1	2.3.7.6	
	2.3.7.5	
	2.3.5.6	Recommended for fixes
2.3.5.5.70026	2.3.7.6	Recommended for fixes
• 2.3.5.4.70852-HF40 • 2.3.5.4.70852-HF20	2.3.7.6	Recommended for fixes

If your release is…	You can upgrade to…	Recommendation
• 2.3.5.4.70852-HF5 • 2.3.5.4.70852-HF4	2.3.7.6	
	2.3.7.5	
	2.3.7.4	
	2.3.5.6	Recommended for fixes
2.3.5.4.70852-HF3	2.3.7.6	
	2.3.7.5	
	2.3.7.4	
	2.3.7.3	
	2.3.5.6	Recommended for fixes
	2.3.5.5	
• 2.3.5.4.70852-HF2 • 2.3.5.4.70852	2.3.7.6	Recommended for fixes
• 2.3.5.3.70194-HF5 • 2.3.5.3.70194-HF4 • 2.3.5.3.70194-HF3 • 2.3.5.3.70194-HF2 • 2.3.5.3.70194-HF1 • 2.3.5.3.70194	2.3.7.6	
	2.3.7.5	
	2.3.7.4	
	2.3.7.3	
	2.3.5.6	Recommended for fixes
	2.3.5.5	
2.3.5.0.70586	2.3.7.6	Recommended for fixes
• 2.3.4.3.70172 • 2.3.4.0.70523	2.3.7.6	Recommended for fixes
• 2.3.3.7.72328-HF6 • 2.3.3.7.72328-HF5 • 2.3.3.7.72328-HF4 • 2.3.3.7.72328-HF3 • 2.3.3.7.72328-HF2 • 2.3.3.7.72328-HF1	2.3.7.6	
	2.3.7.5	
	2.3.7.4	
	2.3.7.3	
	2.3.5.6	Recommended for fixes
	2.3.5.5	

If your release is…	You can upgrade to…	Recommendation
• 2.3.3.7.72328 • 2.3.3.7.72323 • 2.3.3.6.70045-HF2 • 2.3.3.6.70045-HF1 • 2.3.3.6.70045 • 2.3.3.5.70134-HF4 • 2.3.3.5.70134-HF3 • 2.3.3.5.70134-HF2 • 2.3.3.5.70134-HF1 • 2.3.3.5.70134 • 2.3.3.4.72142-HF1 • 2.3.3.4.72142 • 2.3.3.3.72139 • 2.3.3.0.70399	2.3.7.6	Recommended for fixes

PART I

Upgrade Cisco Catalyst Center

Upgrade to Catalyst Center 2.3.7.6

To complete any of the upgrade procedures described in this chapter, you'll need to know the latest version of the System package for the relevant Catalyst Center release. To determine the latest version, do the following:

1. From the release notes landing page, open the release notes for the appropriate Catalyst Center release.

2. Refer to the "Package Versions in Catalyst Center" table and note the System package version that's listed for the release.

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Important • Before you complete any of the following upgrade procedures, see Cisco ISE Is Required with Cisco DNA Center 2.2.2.9 and Later for a description of the Cisco ISE requirements that must be in place before you upgrade.

• By default, restricted shell (which limits access to the underlying operating system and file system) is enabled in Cisco DNA Center 2.3.7. Restricted shell with Consent Token is enabled for security purposes. If you want to access the root shell temporarily, you must contact the Cisco TAC for assistance. For more information, see the "About Restricted Shell" section in the Catalyst Center Administrator Guide.

Set Up NIC Bonding

Catalyst Center 2.3.7.6 provides network interface controller (NIC) bonding support. If you want to enable and use this functionality on your appliance, do the following:

1. Confirm that you have one of the following Catalyst Center appliances:

    Second-generation:

- 44-core appliance: Cisco part number DN2-HW-APL

- 44-core promotional appliance: Cisco part number DN2-HW-APL-U

- 56-core appliance: Cisco part number DN2-HW-APL-L

- 56-core promotional appliance: Cisco part number DN2-HW-APL-L-U

- 112-core appliance: Cisco part number DN2-HW-APL-XL

- 112-core promotional appliance: Cisco part number DN2-HW-APL-XL-U

Third-generation:

- 32-core appliance: Cisco part number DN3-HW-APL

- 56-core appliance: Cisco part number DN3-HW-APL-L

- 80-core appliance: Cisco part number DN3-HW-APL-XL

2. On the switch that you will connect to your appliance, do the following:

   - Ensure that it supports dynamic interface aggregation.

   - Enable LACP on the switch and then specify the following settings:

     - LACP mode: **active**—This places the switch port connected to your appliance into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets.

     - LACP rate: **fast**—This changes the rate at which the LACP control packets are sent to an LACP-supported interface. Instead of the default every 30 seconds, control packets are sent once every second.

3. Complete the procedure that's specific to your appliance:

   - Enable NIC Bonding on a 44- or 56-Core Appliance, on page 12

   - Enable NIC Bonding on a 112-Core Appliance, on page 14

Enable NIC Bonding on a 44- or 56-Core Appliance

If you are upgrading either a 44- or 56-core appliance to Catalyst Center 2.3.7.6, you have two options available when it comes to NIC bonding:

- If you have decided to enable NIC bonding on your appliance, complete the steps described in Enable NIC Bonding Now, on page 13. The advantage of this option is that it will result in less downtime.

- If you are undecided about enabling NIC bonding, complete Step 1 in Enable NIC Bonding Later, on page 13. If you decide to enable NIC bonding at some point in the future, complete the rest of this procedure starting with Step 2.

Enable NIC Bonding Now

Procedure

Step 1   Upgrade to the appropriate Cisco IMC firmware version for your Catalyst Center release. See Update the Cisco IMC Firmware, on page 4.

Step 2   Enable the NIC that the secondary instance of your appliance's interfaces will reside on—the Intel X710-DA4 NIC for 2nd-generation appliances, and the Intel E810XXVDA4 for 3rd-generation appliances.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 3   Upgrade from your current Catalyst Center release to 2.3.7.6.

Step 4   Enable the interfaces that reside on your appliance's secondary NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding Later

Procedure

Step 1   Upgrade from your current Catalyst Center release to 2.3.7.6.

Step 2   Upgrade to the appropriate Cisco IMC firmware version for your Catalyst Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3   Enable the NIC that the secondary instance of your appliance's interfaces will reside on—the Intel X710-DA4 NIC for 2nd-generation appliances, and the Intel E810XXVDA4 for 3rd-generation appliances.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4   Power-Cycle the Appliance.

Step 5   Enable the interfaces that reside on your appliance's secondary NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding on a 112-Core Appliance

Procedure

Step 1   Upgrade from your current Catalyst Center release to 2.3.7.6.

Step 2   Upgrade to the appropriate Cisco IMC firmware version for your Catalyst Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3   Enable the NIC that the secondary instance of your appliance's interfaces will reside on—the Intel X710-DA4 NIC for 2nd-generation appliances, and the Intel E810XXVDA4 for 3rd-generation appliances.

       Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4   Power-Cycle the Appliance.

Step 5   Enable the interfaces that reside on your appliance's secondary NIC for configuration and use.

       Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

       Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Upgrade from Release 2.3.7.x to 2.3.7.6

By completing this procedure, you can upgrade directly to Catalyst Center 2.3.7.6 from the following versions:

- 2.3.7.0

- 2.3.7.3

- 2.3.7.4

- 2.3.7.5

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Catalyst Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Catalyst Center 2.3.7.6.70319 is available.

Step 3   Click **Download Now**.

Step 4   After Catalyst Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Catalyst Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.6.0 to Release 2.3.7.6

By completing this procedure, you can upgrade directly to Catalyst Center 2.3.7.6 from 2.3.6.0.

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Catalyst Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Catalyst Center 2.3.7.6.70319 is available.

Step 3   Click **Download now**.

Step 4   After Catalyst Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Catalyst Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

     Note   Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.5.x to Release 2.3.7.6

By completing this procedure, you can upgrade directly to Catalyst Center 2.3.7.6 from the following versions:

- 2.3.5.0

- 2.3.5.3

- 2.3.5.4

- 2.3.5.5

- 2.3.5.6

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Catalyst Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Catalyst Center 2.3.7.6.70319 is available.

Step 3   Click **Download now**.

Step 4   After Catalyst Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Catalyst Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.4.x to Release 2.3.7.6

You cannot upgrade directly to Catalyst Center 2.3.7.6 from 2.3.4.0 and 2.3.4.3. You must first upgrade to 2.3.5.4. From there, you can upgrade directly to 2.3.7.6.

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Catalyst Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.5.4.70852 is available.

Step 3   Click **Download now**.

Step 4   After Catalyst Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Catalyst Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Step 10   After the upgrade to 2.3.5.4 is complete, see .

Upgrade from Release 2.3.3.x to Release 2.3.7.6

By completing this procedure, you can upgrade directly to Catalyst Center 2.3.7.6 from the following versions:

- 2.3.3.0

- 2.3.3.3

- 2.3.3.4

- 2.3.3.5

- 2.3.3.6

- 2.3.3.7

✎

Note   If you're upgrading to 2.3.7.6 from 2.3.3.1, you must first upgrade to 2.3.3.7. For more information, see the following:

- Upgrade from Release 2.3.3.x to Release 2.3.3.7, on page 46

- CSCwc24780

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Catalyst Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Catalyst Center 2.3.7.6.70319 is available.

Step 3   Click **Download now**.

Step 4   After Catalyst Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Catalyst Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.2.x to Release 2.3.7.6

You cannot upgrade directly to Catalyst Center 2.3.7.6 from the following versions:

- 2.3.2.0
- 2.3.2.1
- 2.3.2.3

You must first upgrade to 2.3.3.7. From there, you can upgrade directly to 2.3.7.6.

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1   Prepare your system for the upgrade:

Important This step is only valid if you are upgrading from 2.3.2.1. If you are upgrading from 2.3.2.3, start with Step 2 of this procedure.

  a) Download a local copy of CSCwb00526.sh.zip from the following URL: https://software.cisco.com/download/specialrelease/46a2ecbbe1219e5184d0094771637b2a

  b) Unzip this zip file.

  c) Copy the CSCwb00526.sh file to your Catalyst Center cluster: **ssh maglev@***cluster's-IP-address***:/data/tmp**

  d) If you have restricted shell enabled, run following command to get full shell access:

```
_shell
```

  e) Run the following commands:

- **sudo chmod 777 CSCwb00526.sh**

- **sudo bash CSCwb00526.sh**

  f) Confirm that the catalog service is running: **magctl appstack status | grep catalogs**

Your output should look similar to the following example:

```
$ magctl appstack status | grep catalogs
maglev-system catalogserver 1/1 Running
```

Step 2   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 3   Confirm the following:

- The **Installed Version** field indicates the Catalyst Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available.

Step 4   Do one of the following:

- If you want to upgrade to 2.3.3.7, proceed to Step 5.

- If you want to upgrade to a 2.3.3.x version other than 2.3.3.7, complete the following steps:

  a.   Click the **Click here** link.

    The **Choose your target release version** dialog box opens.

  b.   Click the radio button for the version you want to upgrade to, then click **Select**.

  c.   Proceed to Step 5.

Step 5   Click **Download now**.

Step 6   After Catalyst Center completes its prechecks, click **Download**.

Step 7   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being downloaded and displays their progress.

Step 8   After the package download completes, click **Install now**.

Step 9   After Catalyst Center completes its prechecks, click **Install**.

Step 10   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 11   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Step 12   After the upgrade to 2.3.3.7 is complete, see Upgrade from Release 2.3.3.x to Release 2.3.7.6, on page 18.

Upgrade from Release 2.2.3.x to Release 2.3.7.6

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Catalyst Center 2.3.7.6 application packages.

You cannot upgrade directly to Catalyst Center 2.3.7.6 from the following versions:

- 2.2.3.0

- 2.2.3.3

- 2.2.3.4

- 2.2.3.5

- 2.2.3.6

You must first upgrade to 2.3.3.7. From there, you can upgrade directly to 2.3.7.6.

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1 From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2 Click **Switch Now**.

Step 3 At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 4 A system update appears on the **Software Updates** page. Click **Update**.

Step 5 After the system update is complete, install the Cisco DNA Center 2.3.3.7 application packages:

    a) From the top-left corner, click the menu icon and choose **System** > **Software Management**.

    b) The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available. Click **Download now**.

    c) After Catalyst Center completes its prechecks, click **Download**.

    d) (Optional) Click the **More details** link to open a slide-in pane that lists the application packages that are being downloaded and displays their progress.

    e) After the package download completes, click **Install now**.

    f) After Catalyst Center completes its prechecks, click **Install**.

    g) (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

    h) Click the **Currently Installed Applications** link and confirm that each application has been updated.

    Note Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Step 6 After the upgrade to 2.3.3.7 is complete, see .

Upgrade from Release 2.2.2.x to Release 2.3.7.6

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Catalyst Center 2.3.7.6 application packages.

You cannot upgrade directly to Catalyst Center 2.3.7.6 from the following versions:

- 2.2.2.0
- 2.2.2.1
- 2.2.2.3
- 2.2.2.4
- 2.2.2.5

- 2.2.2.6

- 2.2.2.8

- 2.2.2.9

You must first upgrade to 2.3.3.7. From there, you can upgrade directly to 2.3.7.6.

After you upgrade to 2.3.7.6, you cannot switch back to an earlier release.

Procedure

Step 1 From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.2.3.6 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2 Click **Switch Now**.

Step 3 At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 4 Click **Switch Now**.

Step 5 At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 6 A system update appears on the **Software Updates** page. Click **Update**.

Step 7 After the system update is complete, install the Cisco DNA Center 2.3.3.7 application packages:

a) From the top-left corner, click the menu icon and choose **System** > **Software Management**.

b) The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available. Click **Download now**.

c) After Catalyst Center completes its prechecks, click **Download**.

d) (Optional) Click the **More details** link to open a slide-in pane that lists the application packages that are being downloaded and displays their progress.

e) After the package download completes, click **Install now**.

f) After Catalyst Center completes its prechecks, click **Install**.

g) (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

h) Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note Any new or optional packages that are available to download for the Catalyst Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Step 8 After the upgrade to 2.3.3.7 is complete, see Upgrade from Release 2.3.3.x to Release 2.3.7.6, on page 18.

CHAPTER 3

Upgrade to Cisco DNA Center 2.3.5.6

To complete any of the upgrade procedures described in this chapter, you'll need to know the latest version of the System package for the relevant Cisco DNA Center release. To determine the latest version, do the following:

1. From the release notes landing page, open the release notes for the appropriate Cisco DNA Center release.

2. Refer to the "Package Versions in Cisco DNA Center" table and note the System package version that's listed for the release.

☞

Important

- Before you complete any of the following upgrade procedures, see Cisco ISE Is Required with Cisco DNA Center 2.2.2.9 and Later for a description of the Cisco ISE requirements that must be in place before you upgrade.

- By default, restricted shell (which limits access to the underlying operating system and file system) is enabled in Cisco DNA Center 2.3.5. Restricted shell with Consent Token is enabled for security purposes. If you want to access the root shell temporarily, you must contact the Cisco TAC for assistance. For more information, see the "About Restricted Shell" section in the Cisco DNA Center Administrator Guide.

Set Up NIC Bonding

Cisco DNA Center 2.3.5.6 provides network interface controller (NIC) bonding support. If you want to enable and use this functionality on your appliance, do the following:

1. Confirm that you have one of the following second-generation Cisco DNA Center appliances:

    - 44-core appliance: Cisco part number DN2-HW-APL

- 44-core promotional appliance: Cisco part number DN2-HW-APL-U

- 56-core appliance: Cisco part number DN2-HW-APL-L

- 56-core promotional appliance: Cisco part number DN2-HW-APL-L-U

- 112-core appliance: Cisco part number DN2-HW-APL-XL

- 112-core promotional appliance: Cisco part number DN2-HW-APL-XL-U

2. On the switch that you will connect to your appliance, do the following:

- Ensure that it supports dynamic interface aggregation.

- Enable LACP on the switch and then specify the following settings:

  - LACP mode: **active**—This places the switch port connected to your appliance into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets.

  - LACP rate: **fast**—This changes the rate at which the LACP control packets are sent to an LACP-supported interface. Instead of the default every 30 seconds, control packets are sent once every second.

3. Complete the procedure that's specific to your appliance:

Enable NIC Bonding on a 44 or 56-Core Appliance

If you are upgrading either a 44 or 56-core appliance to Cisco DNA Center 2.3.5.6, you have two options available when it comes to NIC bonding:

Enable NIC Bonding Now

Procedure

Step 1 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 2 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 3 Upgrade from your current Cisco DNA Center release to 2.3.5.6.

Step 4 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding Later

Procedure

Step 1 Upgrade from your current Cisco DNA Center release to 2.3.5.6.

Step 2 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4 Power-Cycle the Appliance.

Step 5 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding on a 112-Core Appliance

Procedure

Step 1   Upgrade from your current Cisco DNA Center release to 2.3.5.6.

Step 2   Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3   Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4   Power-Cycle the Appliance.

Step 5   Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Upgrade from Release 2.3.5.x to Release 2.3.5.6

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.5.6 from the following versions:

- 2.3.5.0

- 2.3.5.3

- 2.3.5.4

- 2.3.5.5

After you upgrade to 2.3.5.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2 Confirm the following:

- The **Installed Version** field indicates the Cisco DNA Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.5.6.70143 is available.

Step 3 Click **Download now**.

Step 4 After Cisco DNA Center completes its prechecks, click **Download**.

Step 5 (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6 After the package download completes, click **Install now**.

Step 7 After Cisco DNA Center completes its prechecks, click **Install**.

Step 8 (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9 Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.4.x to Release 2.3.5.6

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.5.6 from 2.3.4.0 and 2.3.4.3.

After you upgrade to 2.3.5.6, you cannot switch back to an earlier release.

Procedure

Step 1 From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2 Confirm the following:

- The **Installed Version** field indicates the Cisco DNA Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.5.6.70143 is available.

Step 3 Click **Download now**.

Step 4 After Cisco DNA Center completes its prechecks, click **Download**.

Step 5 (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6 After the package download completes, click **Install now**.

Step 7 After Cisco DNA Center completes its prechecks, click **Install**.

Step 8 (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.3.x to Release 2.3.5.6

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.5.6 from the following versions:

- 2.3.3.0

- 2.3.3.3

- 2.3.3.4

- 2.3.3.5

- 2.3.3.6

- 2.3.3.7

After you upgrade to 2.3.5.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Cisco DNA Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.5.6.70143 is available.

Step 3   Click **Download now**.

Step 4   After Cisco DNA Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Cisco DNA Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.2.x to Release 2.3.5.6

By completing the following procedure, you can upgrade directly to Cisco DNA Center 2.3.5.6 from 2.3.2.0, 2.3.2.1, or 2.3.2.3.

After you upgrade to 2.3.5.6, you cannot switch back to an earlier release.

Procedure

Step 1   Prepare your system for the upgrade:

Important This step is only valid if you are upgrading from either release 2.3.2.0 or 2.3.2.1. If you are upgrading from 2.3.2.3, start with Step 2 of this procedure.

a) Download a local copy of CSCwb00526.sh.zip from the following URL: https://software.cisco.com/download/specialrelease/46a2ecbbe1219e5184d0094771637b2a

b) Unzip this zip file.

c) Copy the CSCwb00526.sh file to your Cisco DNA Center cluster: **ssh maglev@***cluster's-IP-address***:/data/tmp**

d) Run the following commands:

   • **sudo chmod 777 CSCwb00526.sh**

   • **sudo bash CSCwb00526.sh**

e) Confirm that the catalog service is running: **magctl appstack status | grep catalogs**

   Your output should look similar to the following example:

   ```
   $ magctl appstack status | grep catalogs
   maglev-system catalogserver 1/1 Running
   ```

Step 2   From the top-left corner, click the menu icon and choose **System** > **Software Management** from the Cisco DNA Center GUI.

Step 3   Confirm that the **Software Management** window indicates that Cisco DNA Center 2.3.5.6.70143 is available. Click **Download now**.

Step 4   After Cisco DNA Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Cisco DNA Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.2.3.x to Release 2.3.5.6

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Cisco DNA Center 2.3.5.6 application packages.

By completing the following procedure, you can upgrade directly to Cisco DNA Center 2.3.5.6 from the following versions:

- 2.2.3.0
- 2.2.3.3
- 2.2.3.4
- 2.2.3.5
- 2.2.3.6

After you upgrade to 2.3.5.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2   Click **Switch Now**.

Step 3   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

A **Cisco DNA Center 2.3.5.6 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 4   Click **Switch Now**.

Step 5   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 6   A system update appears on the **Software Updates** page. Click **Update**.

Step 7   After the system update is complete, install the Cisco DNA Center 2.3.5.6 application packages:

a)   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

b) The **Software Management** window indicates that Cisco DNA Center 2.3.5.6.70143 is available. Click **Download now**.

c) After Cisco DNA Center completes its prechecks, click **Download**.

d) (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

e) After the package download completes, click **Install now**.

f) After Cisco DNA Center completes its prechecks, click **Install**.

g) (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

h) Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.2.2.x to Release 2.3.5.6

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Cisco DNA Center 2.3.5.6 application packages.

You cannot upgrade directly to Cisco DNA Center 2.3.5.6 from the following versions:

- 2.2.2.0

- 2.2.2.1

- 2.2.2.3

- 2.2.2.4

- 2.2.2.5

- 2.2.2.6

- 2.2.2.8

- 2.2.2.9

You must first upgrade to 2.3.3.7. From there, you can upgrade directly to 2.3.5.6.

After you upgrade to 2.3.5.6, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.2.3.6 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2   Click **Switch Now**.

Step 3   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 4   Click **Switch Now**.

Step 5   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 6   A system update appears on the **Software Updates** page. Click **Update**.

Step 7   After the system update is complete, install the Cisco DNA Center 2.3.3.7 application packages:

a) From the top-left corner, click the menu icon and choose **System** > **Software Management**.

b) The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available. Click **Download now**.

c) After Cisco DNA Center completes its prechecks, click **Download**.

d) (Optional) Click the **More details** link to open a slide-in pane that lists the application packages that are being downloaded and displays their progress.

e) After the package download completes, click **Install now**.

f) After Cisco DNA Center completes its prechecks, click **Install**.

g) (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

h) Click the **Currently Installed Applications** link and confirm that each application has been updated.

> **Note**   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Step 8   After the upgrade to 2.3.3.7 is complete, see Upgrade from Release 2.3.3.x to Release 2.3.5.6, on page 28.

Upgrade to Cisco DNA Center 2.3.4.3

To complete any of the upgrade procedures described in this chapter, you'll need to know the latest version of the System package for the relevant Cisco DNA Center release. To determine the latest version, do the following:

1. From the release notes landing page, open the release notes for the appropriate Cisco DNA Center release.

2. Refer to the "Package Versions in Cisco DNA Center" table and note the System package version that's listed for the release.

☞

Important

- Before you complete any of the following upgrade procedures, see Cisco ISE Is Required with Cisco DNA Center 2.2.2.9 and Later for a description of the Cisco ISE requirements that must be in place before you upgrade.

- By default, restricted shell (which limits access to the underlying operating system and file system) is enabled in Cisco DNA Center 2.3.4. Restricted shell with Consent Token is enabled for security purposes. If you want to access the root shell temporarily, you must contact the Cisco TAC for assistance. For more information, see the "About Restricted Shell" section in the Cisco DNA Center Administrator Guide.

Set Up NIC Bonding

Cisco DNA Center 2.3.4.3 provides network interface controller (NIC) bonding support. If you want to enable and use this functionality on your appliance, do the following:

1. Confirm that you have one of the following second-generation Cisco DNA Center appliances:

   - 44-core appliance: Cisco part number DN2-HW-APL

   - 44-core promotional appliance: Cisco part number DN2-HW-APL-U

- 56-core appliance: Cisco part number DN2-HW-APL-L

- 56-core promotional appliance: Cisco part number DN2-HW-APL-L-U

- 112-core appliance: Cisco part number DN2-HW-APL-XL

- 112-core promotional appliance: Cisco part number DN2-HW-APL-XL-U

2. On the switch that you will connect to your appliance, do the following:

- Ensure that it supports dynamic interface aggregation.

- Enable LACP on the switch and then specify the following settings:

- LACP mode: **active**—This places the switch port connected to your appliance into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets.

- LACP rate: **fast**—This changes the rate at which the LACP control packets are sent to an LACP-supported interface. Instead of the default every 30 seconds, control packets are sent once every second.

3. Complete the procedure that's specific to your appliance:

Enable NIC Bonding on a 44 or 56-Core Appliance

If you are upgrading either a 44 or 56-core appliance to Cisco DNA Center 2.3.4.3, you have two options available when it comes to NIC bonding:

- If you have decided to enable NIC bonding on your appliance, complete the steps described in Enable NIC Bonding Now, on page 34. The advantage of this option is that it will result in less downtime.

- If you are undecided about enabling NIC bonding, complete Step 1 in Enable NIC Bonding Later, on page 35. If you decide to enable NIC bonding at some point in the future, complete the rest of this procedure starting with Step 2.

Enable NIC Bonding Now

Procedure

Step 1   Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 2   Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 3   Upgrade from your current Cisco DNA Center release to 2.3.4.3.

Step 4   Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding Later

Procedure

Step 1   Upgrade from your current Cisco DNA Center release to 2.3.4.3.

Step 2   Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3   Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4   Power-Cycle the Appliance.

Step 5   Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding on a 112-Core Appliance

Procedure

Step 1   Upgrade from your current Cisco DNA Center release to 2.3.4.3.

Step 2   Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3   Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4   Power-Cycle the Appliance.

Step 5   Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Upgrade from Release 2.3.4.0 to Release 2.3.4.3

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.4.3 from 2.3.4.0.

After you upgrade to 2.3.4.3, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Cisco DNA Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.4.3.70172 is available.

Step 3   Click **Download Now**.

Step 4   After Cisco DNA Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Cisco DNA Center completes its prechecks, click **Install**.

Step 8   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9   Click the **Currently Installed Applications** link and confirm that each application has been updated.

> **Note**   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.3.x to Release 2.3.4.3

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.4.3 from the following versions:

- 2.3.3.0

- 2.3.3.3

- 2.3.3.4

- 2.3.3.5

- 2.3.3.6

- 2.3.3.7

After you upgrade to 2.3.4.3, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Cisco DNA Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.4.3.70172 is available.

Step 3   Click **Download Now**.

Step 4   After Cisco DNA Center completes its prechecks, click **Download**.

Step 5   (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6   After the package download completes, click **Install now**.

Step 7   After Cisco DNA Center completes its prechecks, click **Install**.

Step 8 (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9 Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.2.x to Release 2.3.4.3

By completing the following procedure, you can upgrade directly to Cisco DNA Center 2.3.4.3 from 2.3.2.0, 2.3.2.1, or 2.3.2.3.

After you upgrade to 2.3.4.3, you cannot switch back to an earlier release.

Procedure

Step 1 Prepare your system for the upgrade:

Important This step is only valid if you are upgrading from either release 2.3.2.0 or 2.3.2.1. If you are upgrading from 2.3.2.3, start with Step 2 of this procedure.

a) Download a local copy of CSCwb00526.sh.zip from the following URL: https://software.cisco.com/download/specialrelease/46a2ecbbe1219e5184d0094771637b2a

b) Unzip this zip file.

c) Copy the CSCwb00526.sh file to your Cisco DNA Center cluster: **ssh maglev@***cluster's-IP-address***:/data/tmp**

d) Run the following commands:

   • **sudo chmod 777 CSCwb00526.sh**

   • **sudo bash CSCwb00526.sh**

e) Confirm that the catalog service is running: **magctl appstack status | grep catalogs**

   Your output should look similar to the following example:

```
$ magctl appstack status | grep catalogs
maglev-system catalogserver 1/1 Running
```

Step 2 From the top-left corner, click the menu icon and choose **System** > **Software Management** from the Cisco DNA Center GUI.

Step 3 Confirm that the **Software Management** window indicates that Cisco DNA Center 2.3.4.3.70172 is available. Click **Download now**.

Step 4 After Cisco DNA Center completes its prechecks, click **Download**.

Step 5 (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

Step 6 After the package download completes, click **Install now**.

Step 7 After Cisco DNA Center completes its prechecks, click **Install**.

Step 8 (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 9 Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.2.3.x to Release 2.3.4.3

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Cisco DNA Center 2.3.4.3 application packages.

By completing the following procedure, you can upgrade directly to Cisco DNA Center 2.3.4.3 from the following versions:

- 2.2.3.0
- 2.2.3.3
- 2.2.3.4
- 2.2.3.5
- 2.2.3.6

After you upgrade to 2.3.4.3, you cannot switch back to an earlier release.

Procedure

Step 1 From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2 Click **Switch Now**.

Step 3 At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

A **Cisco DNA Center 2.3.4.3 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 4 Click **Switch Now**.

Step 5 At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 6　　A system update appears on the **Software Updates** page. Click **Update**.

Step 7　　After the system update is complete, install the Cisco DNA Center 2.3.4.3 application packages:

　　a) From the top-left corner, click the menu icon and choose **System** > **Software Management**.

　　b) The **Software Management** window indicates that Cisco DNA Center 2.3.4.3.70172 is available. Click **Download now**.

　　c) After Cisco DNA Center completes its prechecks, click **Download**.

　　d) (Optional) Click the **More details** link to open a slide-in pane that lists all of the application packages that are being downloaded and displays their progress.

　　e) After the package download completes, click **Install now**.

　　f) After Cisco DNA Center completes its prechecks, click **Install**.

　　g) (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

　　h) Click the **Currently Installed Applications** link and confirm that each application has been updated.

　　Note　　Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.2.2.x to Release 2.3.4.3

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Cisco DNA Center 2.3.4.3 application packages.

You cannot upgrade directly to Cisco DNA Center 2.3.4.3 from the following versions:

- 2.2.2.0
- 2.2.2.1
- 2.2.2.3
- 2.2.2.4
- 2.2.2.5
- 2.2.2.6
- 2.2.2.8
- 2.2.2.9

You must first upgrade to 2.3.3.7. From there, you can upgrade directly to 2.3.4.3.

After you upgrade to 2.3.4.3, you cannot switch back to an earlier release.

Procedure

Step 1　　From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.2.3.6 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2   Click **Switch Now**.

Step 3   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 4   Click **Switch Now**.

Step 5   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 6   A system update appears on the **Software Updates** page. Click **Update**.

Step 7   After the system update is complete, install the Cisco DNA Center 2.3.3.7 application packages:

    a)   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

    b)   The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available. Click **Download now**.

    c)   After Cisco DNA Center completes its prechecks, click **Download**.

    d)   (Optional) Click the **More details** link to open a slide-in pane that lists the application packages that are being downloaded and displays their progress.

    e)   After the package download completes, click **Install now**.

    f)   After Cisco DNA Center completes its prechecks, click **Install**.

    g)   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

    h)   Click the **Currently Installed Applications** link and confirm that each application has been updated.

       Note   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Step 8   After the upgrade to 2.3.3.7 is complete, see .

Upgrade to Cisco DNA Center 2.3.3.7

To complete any of the upgrade procedures described in this chapter, you'll need to know the latest version of the System package for the relevant Cisco DNA Center release. To determine the latest version, do the following:

1. From the release notes landing page, open the release notes for the appropriate Cisco DNA Center release.

2. Refer to the "Package Versions in Cisco DNA Center" table and note the System package version that's listed for the release.

☞

Important
- Before you complete any of the following upgrade procedures, see Cisco ISE Is Required with Cisco DNA Center 2.2.2.9 and Later for a description of the Cisco ISE requirements that must be in place before you upgrade.

- By default, restricted shell (which limits access to the underlying operating system and file system) is enabled in Cisco DNA Center 2.3.3. If you want to access the root shell temporarily, complete the steps in the "Disable Restricted Shell Temporarily" section in the Cisco DNA Center Administrator Guide.

Set Up NIC Bonding

Cisco DNA Center 2.3.3.7 provides network interface controller (NIC) bonding support. If you want to enable and use this functionality on your appliance, do the following:

1. Confirm that you have one of the following second-generation Cisco DNA Center appliances:

   - 44-core appliance: Cisco part number DN2-HW-APL

   - 44-core promotional appliance: Cisco part number DN2-HW-APL-U

   - 56-core appliance: Cisco part number DN2-HW-APL-L

- 56-core promotional appliance: Cisco part number DN2-HW-APL-L-U

- 112-core appliance: Cisco part number DN2-HW-APL-XL

- 112-core promotional appliance: Cisco part number DN2-HW-APL-XL-U

2. On the switch that you will connect to your appliance, do the following:

- Ensure that it supports dynamic interface aggregation.

- Enable LACP on the switch and then specify the following settings:

  - LACP mode: **active**—This places the switch port connected to your appliance into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets.

  - LACP rate: **fast**—This changes the rate at which the LACP control packets are sent to an LACP-supported interface. Instead of the default every 30 seconds, control packets are sent once every second.

3. Complete the procedure that's specific to your appliance:

Enable NIC Bonding on a 44- or 56-Core Appliance

If you are upgrading either a 44- or 56-core appliance to Cisco DNA Center 2.3.3.7, you have two options available when it comes to NIC bonding:

Enable NIC Bonding Now

Procedure

Step 1 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 2 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 3 Upgrade from your current Cisco DNA Center release to 2.3.3.7.

Step 4 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding Later

Procedure

Step 1   Upgrade from your current Cisco DNA Center release to 2.3.3.7.

Step 2   Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3   Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4   Power cycle the appliance.

Step 5   Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding on a 112-Core Appliance

Procedure

Step 1   Upgrade from your current Cisco DNA Center release to 2.3.3.7.

Step 2   Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3   Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4   Power cycle the appliance.

Step 5   Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Upgrade from Release 2.3.3.x to Release 2.3.3.7

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.3.7 from one of the following versions:

- 2.3.3.0
- 2.3.3.1
- 2.3.3.3
- 2.3.3.4
- 2.3.3.5
- 2.3.3.6

After you upgrade, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 2   Confirm the following:

- The **Installed Version** field indicates the Cisco DNA Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available.

Step 3   Do one of the following:

- If you want to upgrade to 2.3.3.7, proceed to Step 4.

- If you want to upgrade to a 2.3.3.x version other than 2.3.3.7, complete the following steps:

   a.   Click the **Click here** link.

         The **Choose your target release version** dialog box opens.

   b.   Click the radio button for the version you want to upgrade to, then click **Select**.

   c.   Proceed to Step 4.

Step 4   Click **Download now**.

Step 5   After Cisco DNA Center completes its prechecks, click **Download**.

Step 6   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being downloaded and displays their progress.

Step 7   After the package download completes, click **Install now**.

Step 8   After Cisco DNA Center completes its prechecks, click **Install**.

Step 9   (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 10   Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.3.2.x to Release 2.3.3.7

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.3.7 from 2.3.2.1 or 2.3.2.3.

After you upgrade to 2.3.3.7, you cannot switch back to an earlier release.

Procedure

Step 1   Prepare your system for the upgrade:

> **Important** This step is only valid if you are upgrading from 2.3.2.1. If you are upgrading from 2.3.2.3, start with Step 2 of this procedure.
>
> a) Download a local copy of CSCwb00526.sh.zip from the following URL: https://software.cisco.com/download/specialrelease/46a2ecbbe1219e5184d0094771637b2a
>
> b) Unzip this zip file.
>
> c) Copy the CSCwb00526.sh file to your Cisco DNA Center cluster: **ssh maglev@***cluster's-IP-address***:/data/tmp**
>
> d) If you have restricted shell enabled, run following command to get full shell access:
>
> ```
> _shell
> ```
>
> e) Run the following commands:
>
> > • **sudo chmod 777 CSCwb00526.sh**
> >
> > • **sudo bash CSCwb00526.sh**
>
> f) Confirm that the catalog service is running: **magctl appstack status | grep catalogs**
>
> Your output should look similar to the following example:
>
> ```
> $ magctl appstack status | grep catalogs
> maglev-system catalogserver 1/1 Running
> ```

Step 2 From the top-left corner, click the menu icon and choose **System** > **Software Management**.

Step 3 Confirm the following:

- The **Installed Version** field indicates the Cisco DNA Center version that's currently installed on your appliance.

- The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available.

Step 4 Do one of the following:

- If you want to upgrade to 2.3.3.7, proceed to Step 5.

- If you want to upgrade to a 2.3.3.x version other than 2.3.3.7, complete the following steps:

  a. Click the **Click here** link.

     The **Choose your target release version** dialog box opens.

  b. Click the radio button for the version you want to upgrade to, then click **Select**.

  c. Proceed to Step 5.

Step 5 Click **Download now**.

Step 6 After Cisco DNA Center completes its prechecks, click **Download**.

Step 7 (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being downloaded and displays their progress.

Step 8 After the package download completes, click **Install now**.

Step 9 After Cisco DNA Center completes its prechecks, click **Install**.

Step 10 (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

Step 11   Click the **Currently Installed Applications** link and confirm that each application has been updated.

> **Note**   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.2.3.x to Release 2.3.3.7

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Cisco DNA Center 2.3.3.7 application packages.

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.3.7 from the following releases:

- 2.2.3.0
- 2.2.3.3
- 2.2.3.4
- 2.2.3.5
- 2.2.3.6

After you upgrade to 2.3.3.7, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2   Click **Switch Now**.

Step 3   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 4   A system update appears on the **Software Updates** page. Click **Update**.

> **Note**   The **About** window in the GUI won't show the updated software version until you complete the next step in its entirety.

Step 5   After the system update is complete, install the Cisco DNA Center 2.3.3.7 application packages:

    a) From the top-left corner, click the menu icon and choose **System** > **Software Management**.

    b) The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available. Click **Download now**.

    c) After Cisco DNA Center completes its prechecks, click **Download**.

d) (Optional) Click the **More details** link to open a slide-in pane that lists the application packages that are being downloaded and displays their progress.

e) After the package download completes, click **Install now**.

f) After Cisco DNA Center completes its prechecks, click **Install**.

g) (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.

h) Click the **Currently Installed Applications** link and confirm that each application has been updated.

Note   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

Upgrade from Release 2.2.2.x to Release 2.3.3.7

Initiate the upgrade from the **Software Updates** page. After the update completes, you then navigate to the **Software Management** page and install the Cisco DNA Center 2.3.3.7 application packages.

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.3.3.7 from the following releases:

- 2.2.2.0
- 2.2.2.1
- 2.2.2.3
- 2.2.2.4
- 2.2.2.5
- 2.2.2.6
- 2.2.2.8
- 2.2.2.9

After you upgrade to 2.3.3.7, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.2.3.6 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2   Click **Switch Now**.

Step 3   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

A **Cisco DNA Center 2.3.3.7 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 4   Click **Switch Now**.

Step 5   At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 6   A system update appears on the **Software Updates** page. Click **Update**.

Step 7   After the system update is complete, install the Cisco DNA Center 2.3.3.7 application packages:

   a) From the top-left corner, click the menu icon and choose **System** > **Software Management**.
   b) The **Software Management** window indicates that Cisco DNA Center 2.3.3.7.72328 is available. Click **Download now**.
   c) After Cisco DNA Center completes its prechecks, click **Download**.
   d) (Optional) Click the **More details** link to open a slide-in pane that lists the application packages that are being downloaded and displays their progress.
   e) After the package download completes, click **Install now**.
   f) After Cisco DNA Center completes its prechecks, click **Install**.
   g) (Optional) Click the **More details** link to open a slide-in pane that lists the packages that are being installed and displays their progress.
   h) Click the **Currently Installed Applications** link and confirm that each application has been updated.

   Note   Any new or optional packages that are available to download for the Cisco DNA Center release you upgraded to are displayed at the bottom of the **Software Management** page. Select the packages you want to download.

C H A P T E R 6

Upgrade to Cisco DNA Center 2.2.3.6

To complete any of the upgrade procedures described in this chapter, you'll need to know the latest version of the System package for the relevant Cisco DNA Center release. To determine the latest version, do the following:

1. From the release notes landing page, open the release notes for the appropriate Cisco DNA Center release.

2. Refer to the "Package Versions in Cisco DNA Center" table and note the System package version that's listed for the release.

☞

Important   Before you complete any of the following upgrade procedures, see Cisco ISE Is Required with Cisco DNA Center 2.2.2.9 and Later for a description of the Cisco ISE requirements that must be in place before you upgrade.

Set Up NIC Bonding

Cisco DNA Center 2.2.3.6 provides network interface controller (NIC) bonding support. If you want to enable and use this functionality on your appliance, do the following:

1. Confirm that you have one of the following second-generation Cisco DNA Center appliances:

   - 44-core appliance: Cisco part number DN2-HW-APL

   - 44-core promotional appliance: Cisco part number DN2-HW-APL-U

   - 56-core appliance: Cisco part number DN2-HW-APL-L

   - 56-core promotional appliance: Cisco part number DN2-HW-APL-L-U

   - 112-core appliance: Cisco part number DN2-HW-APL-XL

   - 112-core promotional appliance: Cisco part number DN2-HW-APL-XL-U

2. On the switch that you will connect to your appliance, do the following:

> > > • Ensure that it supports dynamic interface aggregation.
> >
> > > • Enable LACP on the switch and then specify the following settings:
> >
> > > > • LACP mode: **active**—This places the switch port connected to your appliance into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets.
> > >
> > > > • LACP rate: **fast**—This changes the rate at which the LACP control packets are sent to an LACP-supported interface. Instead of the default every 30 seconds, control packets are sent once every second.

> **3.** Complete the procedure that's specific to your appliance:
>
> > • Enable NIC Bonding on a 44- or 56-Core Appliance, on page 54
> >
> > • Enable NIC Bonding on a 112-Core Appliance, on page 55

Enable NIC Bonding on a 44- or 56-Core Appliance

If you are upgrading either a 44- or 56-core appliance to Cisco DNA Center 2.2.3.6, you have two options available when it comes to NIC bonding:

> • If you have decided to enable NIC bonding on your appliance, complete the steps described in Enable NIC Bonding Now, on page 54. The advantage of this option is that it will result in less downtime.
>
> • If you are undecided about enabling NIC bonding, complete Step 1 in Enable NIC Bonding Later, on page 55. If you decide to enable NIC bonding at some point in the future, complete the rest of this procedure, starting with Step 2.

Enable NIC Bonding Now

Procedure

Step 1 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 2 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 3 Upgrade from your current Cisco DNA Center release to 2.2.3.6.

Step 4 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

> • When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.
>
> The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding Later

Procedure

Step 1 Upgrade from your current Cisco DNA Center release to 2.2.3.6.

Step 2 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4 Power cycle the appliance.

Step 5 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding on a 112-Core Appliance

Procedure

Step 1 Upgrade from your current Cisco DNA Center release to 2.2.3.6.

Step 2 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4 Power cycle the appliance.

Step 5 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Upgrade from Release 2.2.3.x to Release 2.2.3.6

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.2.3.6 from the following releases:

- 2.2.3.0

- 2.2.3.3

- 2.2.3.4

- 2.2.3.5

After you upgrade to 2.2.3.6, you cannot switch back to an earlier release.

Procedure

Step 1 From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

Step 2 A system update appears on the **Software Updates** page. Click **Update**.

Step 3 After the system update is complete, at the top of the **Application Updates** field, click **Download All**.
The packages begin downloading.

Step 4 After the packages are downloaded, at the top of the **Application Updates** field, click **Update All**.
The packages begin updating.

Step 5 Ensure that each application has been updated by reviewing its version in the **Installed Apps** page.

Upgrade from Release 2.2.2.x to Release 2.2.3.6

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.2.3.6 from the following releases:

- 2.2.2.0
- 2.2.2.1
- 2.2.2.3
- 2.2.2.4
- 2.2.2.5
- 2.2.2.6
- 2.2.2.8
- 2.2.2.9

After you upgrade to 2.2.3.6, you cannot switch back to an earlier release.

Procedure

Step 1 From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

A **Cisco DNA Center 2.2.3.6 is Here!** banner appears at the top of the page with a **Switch Now** button. **Switch Now** lets you see the system and application packages that are available to update.

Step 2 Click **Switch Now**.

Step 3 At the prompt, click **OK** to proceed with the upgrade.

Wait for approximately 90 seconds for the progress bar to finish and the updated system version and banner to display. Refresh the page several times if the updated system version and banner do not appear.

Step 4 A system update appears on the **Software Updates** page. Click **Update**.

Step 5 After the system update is complete, at the top of the **Application Updates** field, click **Download All**. The packages begin downloading.

Step 6 After the packages are downloaded, at the top of the **Application Updates** field, click **Update All**. The packages begin updating.

Step 7 Ensure that each application has been updated by reviewing its version in the **Installed Apps** page.

C H A P T E R 7

Upgrade to Cisco DNA Center 2.2.2.9

To complete any of the upgrade procedures described in this chapter, you'll need to know the latest version of the System package for the relevant Cisco DNA Center release. To determine the latest version, do the following:

1. From the release notes landing page, open the release notes for the appropriate Cisco DNA Center release.

2. Refer to the "Package Versions in Cisco DNA Center" table and note the System package version that's listed for the release.

☞

Important Before you complete any of the following upgrade procedures, see Cisco ISE Is Required with Cisco DNA Center 2.2.2.9 and Later for a description of the Cisco ISE requirements that must be in place before you upgrade.

Cisco ISE Is Required with Cisco DNA Center 2.2.2.9 and Later

Installation of or upgrade to Cisco DNA Center 2.2.2.9 and later checks to see if Cisco ISE is configured as an authentication and policy (AAA) server. If the correct version of Cisco ISE is already configured, you can start migration of group policy data from Cisco ISE to Cisco DNA Center.

If Cisco ISE is not configured, or if the required version of Cisco ISE is not present, Cisco DNA Center installs, but Group-Based Policy is not enabled. You must install or upgrade Cisco ISE and connect it to Cisco DNA Center. You can then start the data migration.

For more information, see the following:

• To learn how to integrate Cisco DNA Center with Cisco ISE, see the "Integrate Cisco ISE with Cisco DNA Center" topic in the Cisco DNA Center Second-Generation Appliance Installation Guide.

• To view the required versions of Cisco ISE, see the Release Notes for Cisco DNA Center.

• To learn about migrating policy data to Cisco DNA Center, see the "Group-Based Access Control: Policy Data Migration" topic in the Cisco DNA Center Second-Generation Appliance Installation Guide.

Set Up NIC Bonding

Cisco DNA Center 2.2.2.9 provides network interface controller (NIC) bonding support. If you want to enable and use this functionality on your appliance, do the following:

1. Confirm that you have one of the following second-generation Cisco DNA Center appliances:

   - 44-core appliance: Cisco part number DN2-HW-APL

   - 44-core promotional appliance: Cisco part number DN2-HW-APL-U

   - 56-core appliance: Cisco part number DN2-HW-APL-L

   - 56-core promotional appliance: Cisco part number DN2-HW-APL-L-U

   - 112-core appliance: Cisco part number DN2-HW-APL-XL

   - 112-core promotional appliance: Cisco part number DN2-HW-APL-XL-U

2. On the switch that you will connect to your appliance, do the following:

   - Ensure that it supports dynamic interface aggregation.

   - Enable LACP on the switch and then specify the following settings:

     - LACP mode: **active**—This places the switch port connected to your appliance into an active negotiating state, in which the port initiates negotiations with remote ports by sending LACP packets.

     - LACP rate: **fast**—This changes the rate at which the LACP control packets are sent to an LACP-supported interface. Instead of the default every 30 seconds, control packets are sent once every second.

3. Complete the procedure that's specific to your appliance:

   - Enable NIC Bonding on a 44- or 56-Core Appliance, on page 60

   - Enable NIC Bonding on a 112-Core Appliance, on page 62

Enable NIC Bonding on a 44- or 56-Core Appliance

If you are upgrading either a 44- or 56-core appliance to Cisco DNA Center 2.2.2.9, you have two options available when it comes to NIC bonding:

- If you have decided to enable NIC bonding on your appliance, complete the steps described in Enable NIC Bonding Now, on page 61. The advantage of this option is that it results in less downtime.

- If you are undecided about enabling NIC bonding, complete Step 1 in Enable NIC Bonding Later, on page 61. If you decide to enable NIC bonding at some point in the future, complete the rest of this procedure, starting with Step 2.

Enable NIC Bonding Now

Procedure

Step 1 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 2 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 3 Upgrade from your current Cisco DNA Center release to 2.2.2.9.

Step 4 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

  The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

- By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

  For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding Later

Procedure

Step 1 Upgrade from your current Cisco DNA Center release to 2.2.2.9.

Step 2 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4 Power cycle the appliance.

Step 5 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

- When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

• By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Enable NIC Bonding on a 112-Core Appliance

Procedure

Step 1 Upgrade from your current Cisco DNA Center release to 2.2.2.9.

Step 2 Upgrade to the appropriate Cisco IMC firmware version for your Cisco DNA Center release. See Update the Cisco IMC Firmware, on page 4.

Step 3 Enable your appliance's Intel X710-DA4 NIC.

Complete the steps described in Enable NIC on an Upgraded Appliance.

Step 4 Power cycle the appliance.

Step 5 Enable the interfaces that reside on your appliance's Intel X710-DA4 NIC for configuration and use.

Complete the steps described in Reconfigure the Appliance Using the Configuration Wizard.

Note the following points:

• When completing the wizard, the only information you need to enter is the maglev user's Linux password in the **User Account Settings** screen. Choose **Next** to skip through the various wizard screens.

The primary and secondary instances of your appliance's interfaces are properly bonded after you complete the wizard.

• By default, your appliance's interfaces are set to Active-Backup mode after you enable NIC bonding. If desired, you can set LACP mode for the Enterprise and Intracluster interfaces instead. The Internet and Management interfaces do not support this mode.

For a description of the Active-Backup and LACP modes, see NIC Bonding Overview.

Upgrade from Release 2.2.2.8 to Release 2.2.2.9

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.2.2.9 from 2.2.2.8.

After you upgrade to 2.2.2.9, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

Step 2   At the top of the **Application Updates** field, click **Download All**.
The packages begin downloading.

Step 3   After the packages are downloaded, at the top of the **Application Updates** field, click **Update All**.
The packages begin updating.

Step 4   Ensure that each application has been updated by reviewing its version in the **Installed Apps** page.

Upgrade from Release 2.2.2.0 – 2.2.2.6 to Release 2.2.2.9

By completing this procedure, you can upgrade directly to Cisco DNA Center 2.2.2.9 from the following releases:

- 2.2.2.0

- 2.2.2.1

- 2.2.2.3

- 2.2.2.4

- 2.2.2.5

- 2.2.2.6

After you upgrade to 2.2.2.9, you cannot switch back to an earlier release.

Procedure

Step 1   From the top-left corner, click the menu icon and choose **System** > **Software Updates**.

Step 2   A system update appears on the **Software Updates** page. Click **Update**.

Step 3   After the system update is complete, at the top of the **Application Updates** field, click **Download All**.
The packages begin downloading.

Step 4   After the packages are downloaded, at the top of the **Application Updates** field, click **Update All**.
The packages begin updating.

Step 5   Ensure that each application has been updated by reviewing its version in the **Installed Apps** page.