

Upgrading Nexus Dashboard

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Prerequisites and Guidelines

Before you upgrade your existing Nexus Dashboard cluster:

- Ensure that you have read the target release's *Release Notes* for any changes in behavior, guidelines, and issues that may affect your upgrade.

  The upgrade process is the same for all Nexus Dashboard form factors. Regardless of whether you deployed your cluster using physical servers, VMware ESX, Linux KVM, Azure, or AWS, you will use the target release's ISO image to upgrade.

- Ensure that you have read the *Release Notes* for any services you run in the existing cluster and plan to run on the target release for service-specific changes in behavior, guidelines, and issues that may affect your upgrade.

- You must be running Cisco Nexus Dashboard, Release 2.0.1d or later to upgrade to this release..

  If you are running Cisco Application Services Engine, you must upgrade to Nexus Dashboard as described in *Cisco Nexus Dashboard Deployment Guide, Release 2.0.x* before upgrading to this release. In this case, we recommend upgrading your Application Services Engine cluster to Nexus Dashboard release 2.0.2h and then to this release.

- You must have valid DNS and NTP servers configured and reachable by all cluster nodes.

- Ensure that your current Nexus Dashboard cluster is healthy.

  You can check the system status on the **System Overview** page of the Nexus Dashboard GUI or by logging in to one of the nodes as `rescue-user` and ensuring that the `acs health` command returns `All components are healthy`.

- We recommend that you create a backup of the existing configuration prior to the upgrade.

- If you are running Nexus Insights service, you must disable it before the upgrade and re-enable it after the upgrade completes successfully.

  After you disable the service, ensure the cluster stabilizes and is healthy before you proceed with the upgrade.

- Ensure that no configuration changes are made to the cluster, such as adding worker or standby nodes, while the upgrade is in progress.
- If you are upgrading from Release 2.1.1 or earlier, you may need to clear your browser cache for the new event monitoring page to properly show in the UI.
- After upgrading to this release, we recommend upgrading all the applications to their latest versions.

  For a complete list of Nexus Dashboard and services interoperability support, see the Nexus Dashboard and Services Compatibility Matrix.
- Downgrading from this release is not supported.

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This section describes how to upgrade an existing Nexus Dashboard cluster.

Before you begin

- Ensure that you have completed the prerequisites described in Prerequisites and Guidelines, on page 1

Procedure

Step 1 Download the Nexus Dashboard image.

a) Browse to the Software Download page.

https://software.cisco.com/download/home/286327743/type/286328258

b) Choose the Nexus Dashboard version you want to download.

c) Download the Cisco Nexus Dashboard image for your target release.

Note

- If your Nexus Dashboard is deployed in Red Hat Enterprise Linux, you must download the `.tar` image (`nd-rhel-<version>.tar`) to perform the upgrade.

  More information about RHEL deployments is available in Deploying in Existing Red Hat Enterprise Linux Installation.
- For all other form factors, you must download the `.iso` image (`nd-dk9.<version>.iso`) to perform the upgrade.

  For example, even if you used the virtual form factors, such as the `.ova` image for deploying in VMware ESX, or a cloud provider's marketplace for initial cluster deployment, you must still use the `.iso` image for upgrades.

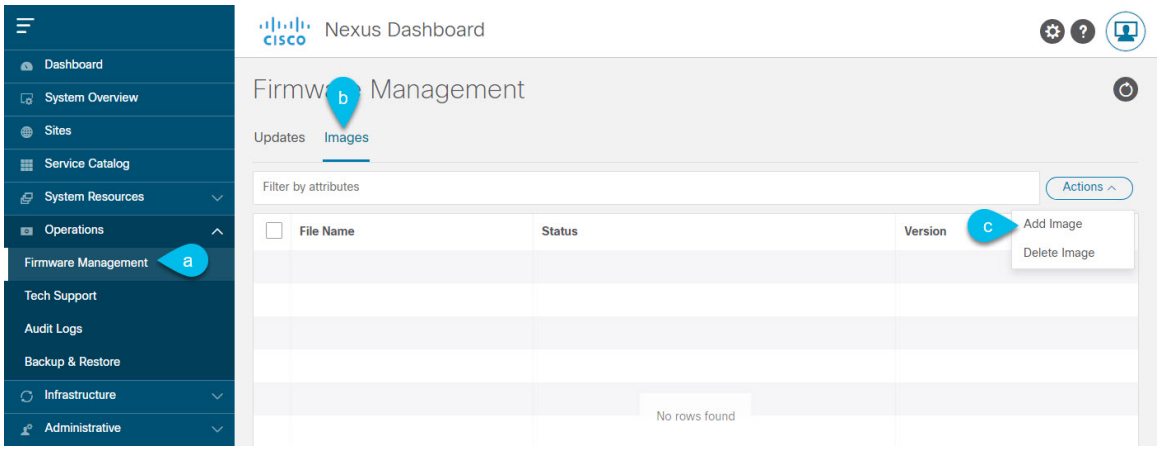
d) (Optional) Host the image on a web server in your environment.

When you upload the image to your Nexus Dashboard cluster, you will have an option to provide a direct URL to the image.

Step 2 Log in to your current Nexus Dashboard GUI as an `Administrator` user.

Step 3 Upload the new image to the cluster.

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a) Navigate to **Operations** > **Firmware Management**.
b) Select the **Images** tab.
c) From the **Actions** menu, select **Add Image**.

Step 4 Select the new image.

a) In the **Add Firmware Image** window, select **Local**.

Alternatively, if you hosted the image on a web server, choose **Remote** instead.

b) Click **Select file** and select the `.iso` or `.tar` image you downloaded in the first step.

For RHEL deployments, use the `.tar` file to upgrade. For all other deployment factors, use the `.iso` file.

If you chose to upload a remote image, provide the file path for the image on the remote server.

c) Click **Upload** to add the image.

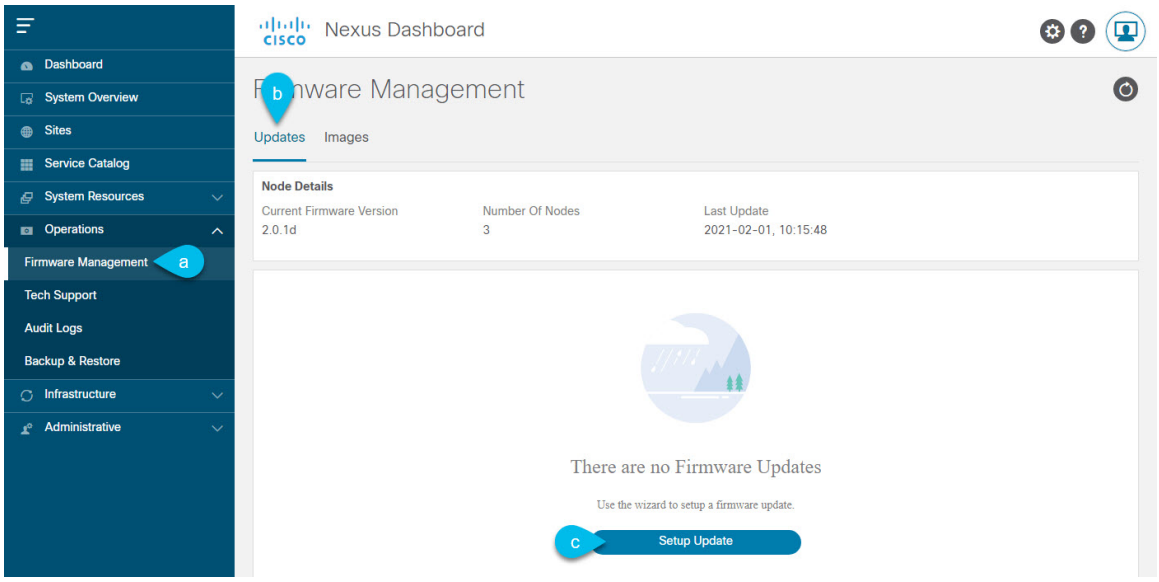
The image will be uploaded to the Nexus Dashboard cluster, unpacked, processed, and made available for the upgrade. The whole process may take several minutes and you will be able to see the status of the process in the **Images** tab.

Step 5 Wait for the image status to change to `Downloaded`.

You can check the status of the image download progress in the **Images**.

Step 6 Set up the update.

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a) Navigate to **Operations** > **Firmware Management**.
b) Select the **Updates** tab.
c) Click **Setup Update**.

The **Firmware Update** screen opens.

Step 7 Choose the upgrade image.

a) In the **Firmware Update** > **Version selection** screen, select the firmware version you uploaded and click **Next**.
b) In the **Firmware Update** > **Confirmation** screen, verify the details and click **Begin Install**.

The installation progress window is displayed. You can navigate away from this screen while the update is in progress. To check on the update status at a later time, navigate to the **Firmware Management** screen and click **View Details** in the **Last Update Status** tile.

This will set up the required Kubernetes images and services but will not switch the cluster to the new version. The cluster will continue to run the existing version until you activate the new image in the next step. The entire process may take up to 20 minutes.

Step 8 Activate the new image.

a) Navigate back to the **Operations** > **Firmware Management** screen
b) In the **Last Update Status** tile, click **View Details**.
c) Click **Activate**.
d) In the **Activation Confirmation** window, click **Continue**.

It may take up to 20 additional minutes for all the cluster services to start and the GUI to become available. The page will automatically reload when the process is completed.

Step 9 If you upgraded a virtual cluster deployed in VMware ESX, convert the nodes to the new profile.

Note
If you upgraded from release 2.1(1) or later or your cluster is deployed using a different form factor, skip this step.

Starting with Release 2.1(1), Nexus Dashboard supports two different node profiles for virtual nodes deployed in VMware ESX. After the upgrade, you must convert all the nodes of the existing cluster to one of the new profiles:

- **Data node**—node profile designed for data-intensive applications, such as Nexus Dashboard Insights
- **App node**—node profile designed for non-data-intensive applications, such as Nexus Dashboard Orchestrator

The profile you choose depends on your use case scenario:

- If you plan to run only the Nexus Dashboard Orchestrator service, convert all nodes to the `App` node profile.
- If you plan to run Nexus Dashboard Insights or co-host applications, you must convert the nodes to the `Data` profile.

You convert the nodes to the new profile by deploying brand new nodes using that profile and replacing existing nodes with them one at a time.

a) Bring down one of the nodes.

   You must replace one node at a time.

b) Deploy a new node in VMware ESX and select the `App` or `Data` profile during OVF deployment.

   When deploying the new node, you must use the same exact network configuration parameters as the node you are replacing.

c) Log in to the existing Nexus Dashboard GUI.

   You can use the management IP address of one of the remaining healthy master nodes.

d) From the left navigation pane, select **System Resources** > **Nodes**.

   The node you are replacing will be listed as `Inactive`.

e) Click the **(...)** menu next to the inactive master node you want to replace and select **Replace**.

   The **Replace** window will open.

f) Provide the **Management IP Address** and **Password** for the node, then click **Verify**.

   The cluster will connect to the new node's management IP address to verify connectivity.

g) Click **Replace**.

   It may take up to 20 minutes for the node to be configured and join the cluster.

h) Wait for the cluster to become healthy, then repeat this step for the other two nodes.

Step 10 If you are hosting multiple applications in the same cluster, configure deployment profiles for the App Infra Services.

If you are hosting only a single application in your Nexus Dashboard cluster, skip this step.

If you are co-hosting multiple applications in the same cluster, you must configure the App Infra Services with deployment profiles appropriate for your combination of applications and fabric sizes.

After the cluster upgrade is completed, follow the instructions described in the "App Infra Services" section of the *Cisco Nexus Dashboard User Guide*, which is also available in the products GUI.

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