Cisco Nexus Dashboard Fabrics Management, Release 3.2.x

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With Cisco Nexus Dashboard, you can on-board multiple Cisco ACI, Cisco Cloud Network Controller, Cisco NDFC fabrics, as well as NX-OS switches without a controller as " fabrics" to the same cluster. Once the fabrics are on-boarded, they can be used by the applications running on the same Cisco Nexus Dashboard cluster.

To add a fabric, you need its controller’s in-band or out-of-band IP address and credentials. The type of the IP address you will use for fabric onboarding depends on the Nexus Dashboard services that will use the fabric and is described in detail in the following sections. Fabrics added to the Cisco Nexus Dashboard cluster are not enabled in the services by default, so you will need to explicitly enable them directly from each service’s own GUI.

After you on-board one or more fabrics to your Nexus Dashboard, you can view them in the Nexus Dashboard GUI by selecting **Fabrics** from the left navigation sidebar. You can also use the **Fabrics** page to launch directly into any of the fabric’s GUIs by clicking the **Open** link next to the fabric’s name.

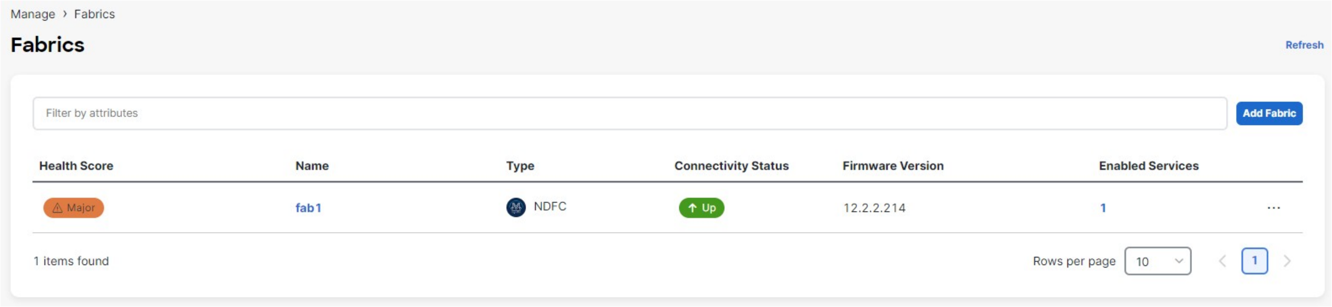
If you are using remote authentication to login to your Nexus Dashboard and you have the same login domain and user configured in the fabric you are launching, you will be able to login to the fabric’s GUI automatically without having to re-authenticate yourself.

Fabrics Health

After you add the fabrics as described in the following sections, you can view their status in the **Manage > Fabrics** page of your Nexus Dashboard **Admin Console**.

In addition to the fabric's **Name**, you can see the following information for each fabric:

- **Health Score**
  - Healthy—if the fabric's health score is 90 or higher.
  - Warning—if the fabric's health score is 76-89.
  - Minor—if the fabric's health score is 50-75.
  - Major—if the fabric's health score is 25-49.
  - Critical—if the fabric's health score is below 25.
- **Type**
  - ACI for fabrics managed by Cisco APIC
  - NDFC for fabrics managed by Cisco NDFC
  - NX-OS for standalone NX-OS switches without a controller
- **Connectivity Status**—shows whether the fabric is reachable from the Nexus Dashboard cluster.
- **Firmware version**—the version of the software running on the fabric's controller or switch.



Health Score	Name	Type	Connectivity Status	Firmware Version	Enabled Services
⚠ Major	fab1	NDFC	↑ Up	12.2.2.214	1

1 items found

Adding ACI Fabrics

Before you begin

- Fabric connectivity must be already configured.
- For specific fabric versions compatible with your services, see the *Services Compatibility Matrix*.
- When adding a Cisco APIC fabric, EPG/L3Out for Cisco Nexus Dashboard data network IP connectivity must be pre-configured.

  Refer to Fabric Connectivity for more information.

- When adding a Cisco APIC fabric and planning to install the Insights service:
  - IP connectivity from Cisco Nexus Dashboard to Cisco APIC Inband IP over data network must be configured.
  - IP connectivity from Cisco Nexus Dashboard to the leaf nodes and spine nodes in-band IPs must be configured.

To add an ACI fabric:

1. Navigate to your Nexus Dashboard's **Admin Console**.
2. From the main navigation menu, select **Manage > Fabrics**.
3. In the main pane, click **Add Fabric**.

   The **Add Fabric** screen opens.

4. In the **Add Fabric** page, provide the fabric's information.
   - **Host Name/IP Address**—provide the IP address used to communicate with the fabric's controller.
   - **User Name** and **Password**—login credentials for a user with admin privileges on the fabric you are adding.
   - (Optional) **Login Domain**—if you leave this field empty, the fabric's local login is used.
   - (Optional) **Validate Peer Certificate**—allows Nexus Dashboard to verify that the certificates of hosts to which it connects (such as fabric controllers) are valid and are signed by a trusted Certificate Authority (CA).

     > ℹ You must have the certificate for this fabric already imported into your Nexus Dashboard before you can add a fabric using this option. If you have not yet added the certificates, cancel the **Add Fabric** wizard and follow the instructions described in Validating Peer Certificates first; then after you have imported the certificates, add the fabric as described here.
     > If you enable the **Verify Peer Certificate** option but don't import the valid certificate, fabric onboarding will fail.

   After you've provided the required information, click **Next** to continue.

5. In the **Detail** page, provide the additional fabric details.

- **Name**—a descriptive name for the fabric.
- **Location**—fabric's geographical location. This option is available only for on-premises fabrics.

After you've provided the required information, click **Next** to continue.

6. In the **Summary** page, verify the information and click **Save** to finish adding the fabric.

Adding NDFC Fabrics

Before you begin

- Fabric connectivity must be already configured.
- For specific fabric versions compatible with your services, see the *Services Compatibility Matrix*.
- When adding a Cisco NDFC fabric:
  - You must configure Layer 3 connectivity to the fabric and switches.
  - If you cluster is deployed in AWS or Azure, you must configure inbound rules on the data interface.

    This is typically done during initial cluster deployment and described in detail in the *Cisco Nexus Dashboard Deployment Guide*.

To add an NDFC fabric:

1. Navigate to your Nexus Dashboard's **Admin Console**.
2. From the main navigation menu, select **Manage > Fabrics**.
3. In the main pane, click **Add Fabric**.

   The **Add Fabric** screen opens.

4. In the **Add Fabric** page, provide the fabric's information.
   - **Host Name/IP Address**—provide the IP address used to communicate with the fabric's controller.

     For NDFC fabrics, this must be the in-band IP address of NDFC.
     When providing the address, do not include the protocol (http:// or https://) as part of the URL string or fabric addition will fail.

   - **User Name** and **Password**—login credentials for a user with admin privileges on the fabric you are adding.
   - (Optional) **Login Domain**—if you leave this field empty, the fabric's local login is used.
   - (Optional) **Validate Peer Certificate**—allows Nexus Dashboard to verify that the certificates of hosts to which it connects (such as fabric controllers) are valid and are signed by a trusted Certificate Authority (CA).

     You must have the certificate for this fabric already imported into your Nexus Dashboard before you can add a fabric using this option. If you have not yet added the certificates, cancel the **Add Fabric** wizard and follow the instructions described in Validating Peer Certificates first; then after you have imported the certificates, add the fabric as described here.
     If you enable the **Verify Peer Certificate** option but don't import the valid certificate, fabric onboarding will fail.

   After you've provided the required information, click **Next** to continue.

5. In the **Detail** page, provide the additional fabric details.

    - **Name**—a descriptive name for the fabric.
    - **Location**—fabric's geographical location. This option is available only for on-premises fabrics.

    After you've provided the required information, click **Next** to continue.

6. In the **Summary** page, verify the information and click **Save** to finish adding the fabric.

Adding NX-OS Switches Without Controller

Before you begin

- Connectivity to a seed switch must be already configured.

  Seed switch is used to discover other switches in your fabric.

- NX-OS switches without a controller (such as APIC or NDFC) are supported by Nexus Dashboard Insights service only.
- NX-OS discovery is not available when NDI is cohosted with NDFC or NDO.

To add NX-OS switches as a fabric:

1. Navigate to your Nexus Dashboard’s **Admin Console**.
2. From the main navigation menu, select **Manage > Fabrics**.
3. In the main pane, click **Add Fabric**.

   The **Add Fabric** screen opens.

4. In the **Add Fabric** screen, choose **NX-OS Standalone Fabric**.

   > If this is the first time you are onboarding NX-OS switches without a controller, click Enable Fabric Discovery.

5. In the **Add Fabric** page, provide the fabric’s information.
   - **Seed Switch IP Address** – provide the IP address of the seed switch used to discover other switches in the fabric.
   - **Username** and **Password** – login credentials on the seed switch.

   After you’ve provided the required information, click **Next** to continue.

6. In the **Detail** page, provide the additional fabric details.
   - **Name**—a descriptive name for the fabric.
   - **Location**—fabric’s geographical location. This option is available only for on-premises fabrics.

   After you’ve provided the required information, click **Next** to continue.

7. In the **Switch Selection** page, select one or more switches to add as a " Fabric" .

   By default, the switch discovery process will show switches that are 2 hops away from the seed switch. You can change the default setting using the **Number of Hops** dropdown and clicking **Rediscover Switches**.

   After the switches are discovered, simply select all the switches you want to add as a fabric to your Nexus Dashboard and click Next.

8. In the **Summary** page, verify the information and click **Save** to finish adding the fabric.

Editing Fabrics

To edit a fabric:

1. Navigate to your Nexus Dashboard's **Admin Console**.
2. From the main navigation menu, select **Manage > Fabrics**.
3. From the **Actions** (**...**) menu for the fabric you want to edit, select **Edit Fabric**.

   The **Edit Fabric** screen opens.

4. In the **Edit Fabric** screen, make the required changes.
   - To remove a security domain, click the **Delete** icon next to an existing domain.
   - To add one or more security domains, click **+Add Security Domain**.
   - To re-provision the fabric, check the **Re-register Fabric** checkbox and provide the required information.

     Re-registering a fabric may be required for Cloud Network Controller fabrics used with Nexus Dashboard Orchestrator in case the Cloud Network Controller's public IP address changes.

     You can also use this option if you changed the IP address information for a NDFC fabric managed by the Orchestrator service.

     > ℹ Re-registering a fabric is not supported for the Nexus Dashboard Insights service.

5. Click **Save** to save the changes

Deleting Fabrics

Before you begin

- Ensure that the fabric is not used by any applications installed in your Nexus Dashboard.

  Deleting a fabric will cause an interruption to all applications using this fabric.

- When a Cisco ACI fabric is added as a fabric to Nexus Dashboard, some policies may be created in the Cisco APIC. If the Nexus Dashboard is clean rebooted without deleting the on-boarded fabric, the policies created on Cisco APIC will not be deleted. To clean up these policies on Cisco APIC, the fabric should be re-added and deleted.

To remove one or more fabrics:

1. Navigate to your Nexus Dashboard's **Admin Console**.
2. From the main navigation menu, select **Manage > Fabrics**.
3. From the **Actions** (**...**) menu for the fabric you want to remove, select **Remove Fabric**.
4. In the **Confirm Delete** window, provide the login information for the fabric
5. Click **OK** to remove the fabric.

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