CISCO

Add Switches for SAN Fabrics, Release 4.1.1

Table of Contents

New and changed information

The following table provides an overview of the significant changes up to this current release. The table does not provide an exhaustive list of all changes or of the new features up to this release.

Release Version	Feature	Description
Nexus Dashboard 4.1.1	Improved navigation and workflow when adding switches for SAN fabrics	Beginning with Nexus Dashboard 4.1.1, the navigation and workflow when adding switches for SAN fabrics in Nexus Dashboard have been enhanced.

Switches

1. Navigate to **Inventory**:

   Manage > Inventory

2. Click **Switches**.

   - Click the **Settings** icon on the right corner of the **Switches** table to change the number of columns that you would like to display for information on Switches.

   - Use the **Filter by attributes** search bar to filter the Switch information display based on the selected attribute values.

     The following table describes the fields that appear for **Switches**.

Field	Description
Switch Name	Specifies the name of the switch.
IP Address	Specifies the IP address of the switch.
Fabric Name	Specifies the associated fabric name for the switch.
Status	Specifies the status of the switch.
Health	Specifies the health status of the switch. The following are the potential values: · Healthy · Critical · Warning · OK
Ports	Specifies the total number of ports on the switch.
Used Ports	Specifies the total number of used ports on the switch.
NPV Enabled	Specifies the switch is enabled for N-Port Virtualization (NPV). A "Yes" value indicates the switch is enabled for NPV and "No" value indicates this switch is not enable for NPV.
Optics Power Control Capable	Specifies if the Optics Power Control feature is support for a switch. Support status is indicated with a "Yes" or "No" value.
Model	Specifies the switch model.
Serial Number	Specifies the serial number of the switch.
Release	Specifies the release number of the switch.
Up Time	Specifies the switch up time details.

     The following table describes the action items in the **Actions** menu drop-down list.

Action Item	Description

Device Manager	You can log in to the Device Manager for the required switch. The **Device Manager** login window appears, enter credentials, and log in. See Device Manager to view descriptions and instructions for using the Cisco MDS 9000 Device Manager.
Tech Support	Allows you to initiate log collection. For more information, see Tech Support.
Execute CLI	Allows you to run multiple CLI commands on multiple switches and collect output as a zipped text file for each switch. For more information, see Execute CLI.
Purge Down Switch	Allows you to purge a switch infomation from the system. For more information, see [Purge Down Switch].
Download Device Manager	Allows you to download the Device Manager files. For more information, see Download Device Manager.
Migrate Brocade Parameters	Allows you to run migrage Brocade parameters. For more information, see [Migrate Brocade Parameters].
Optics Power Control	Allows you to manage power consumption on Optics Power Control capable switches from the Nexus Dashboard. For more information, see Managing optics power on switches.

SAN analytics support on new switch models

The Nexus Dashboard supports SAN analytics on the following 96 port 64G fabric switch models:

Model Name	Switch OS Version
case DS_C9396VK9	9.4(1)
case DS_C9396VK9_IBM_244	9.4(1)
case DS_C9396VK9_IBM_254	9.4(1)

You can view the switch models and supported OS versions on the Nexus Dashboard **Fabric Overview** page.

- Navigate to **Manage > Fabrics**.
- Double-click the SAN fabric to view the switch information on the **Fabric Overview** page.
- Choose the **Switches** tab to view the switch model name and release number listed under the **Model** and **Release** columns.

After you confirm the switch model names and release versions, you can configure SAN insights for this switch. See Configuring SAN Insights for more information.

Provisioning return material authorization (RMA) manually

This section describes the process of replacing a faulty switch. It also discusses the process to remove a switch if it is no longer needed.

Replace a switch

You can manually replace a switch that is still operational with a new switch.

Follow these steps to replace a switch.

1. Discover your fabric.

2. Secure a backup of the switch that you wish to replace.

3. Bring down the management connectivity of the switch.

   When you bring down the management connectivity of the switch, it becomes unreachable.

4. Bring up a new switch of the same model and the same port connectivity.

5. Restore the backup taken in Step 2.

6. Wait a few minutes for rediscovery. The new switch will be discovered as a replacement switch with a new serial number and switch World Wide Name (WWN).

Replace an operationally down switch

You can manually replace a switch that is not operational with a new switch.

Follow these steps to replace an operationally down switch.

1. Discover the fabric

2. Bring up a new switch to replace the operationally down switch.

   Ensure the new switch model and version match the model and version of the switch you want to replace.

3. Make sure the connectivity of ports is replicated and configured to match the configuration of the switch you are replacing.

4. Configure the 'IP address/mask/gw' to match the configuration on the switch you are replacing.

5. Bring up the Management (mgmt) interface.

6. Wait a few minutes for rediscovery. The new switch will be discovered as a replacement switch with a new serial number and switch WWN.

Device Manager

The **Device Manager** provides a graphical representation of the installed switching modules, the supervisor modules, the status of each port within each module, the power supplies, and the fan assemblies.

In addition to the **Device Manager** service available on the **Switches** dashboard, you can download and install a standalone **Device Manager** application on your local system. For more information, see Download Device Manager.

Download Device Manager

Before you begin

The client computer is installed with a Windows or a Linux operating system.

This section describes the steps to download the **Device Manager** to your local system.

> ℹ️ You can install a standalone device manager by choosing **Device Manager** from the **Actions** drop-down list.

1. Navigate to **Switches**.

   Manage > Inventory > Switches

2. Check the checkbox for the selected switch.

3. From the **Actions** drop-down list, choose **Download Device Manager**.

   This will download the device manager client file in *tar.gz* format to your system.

   You can then extract the archive file to view its contents.

4. Depending on the operating system installed, run the script or the batch file to install the **Device Manager** application on your system.

   - On a Linux system, the script file (*.sh) file resides in the */bin directory*.

   - On a Windows system, the script file (*.bat) file resides in the */bin directory*.

     The **Device Manager** login dialog box appears.

5. Log on to the **Device Manager** application.

   Nexus Dashboard downloads the **Device Manager** as a standalone application on your local system.

   See Device Manager to view descriptions and instructions for using the Cisco MDS 9000 Device Manager.

Tech Support

From the **Actions** drop-down list, select **Tech Support** to initiate log collection. A window appears.

- Enter time in **Session timeout** field in minutes, by default time is 20 minutes.
- Enter the command in **Command** text field and click **Run**.
- A confirmation window appears stating 'Data submitted successfully, tech support starting', click **Confirm** and status changes to **Completed**.
- You can download the report, click **Download Tech Support**.

Execute CLI

Nexus Dashboard allows you to execute CLI commands on switches. You can collect the output from the CLI commands in a zip file for each switch.

To execute CLI commands on switches, do the following:

1. On the Nexus Dashboard UI, choose **Manage > Inventory > Switches**.

2. Select the switches on which you want to execute the CLI commands.

   You can select more than one switch to run the set of CLI commands simultaneously.

3. From the **Actions** drop-down list, choose **Execute CLI** .

   The **Execute Switch CLI** screen is displayed.

4. On the **Configure** tab, click on the hyperlink under **Selected Switches** to view the selected switches on which the CLIs will be executed.

5. In the **Session Timeout** area, enter the length of time before the session timeout.

   Valid options are 2-10 minutes. The default entry is 5 minutes.

6. Determine how you will provide the CLI commands to be executed on the switches.

   - Enter the CLI commands to be executed on the switches in the **CLI Commands** text box, or
   - Click on the **Read Commands File** button and upload a file with a .txt extension that has a list of CLI commands to be executed.

   Ensure that you enter one command per line in the **CLI Commands** text box or in the .txt file.

7. Click **Execute**.

   When the command execution is completed on all the switches, a popup window appears, showing the **Execute CLI Output**.

8. Click **Close**.

   You are returned to the **Execute Switch CLI** window, where the table displays the switch, the associated fabric and the CLI execution status.

   - Click on **Show Output** to bring up the popup window again, showing the **Execute CLI Output**.

     When an output is larger than a few MB, the **show output** is truncated. In that case, you must download the file to see the complete output. **Show output** is meant for light output to allow for faster debugging with little to display, and is not meant for offline debugging done with a downloaded file.

   - Click on **Download output** to download the command output as a zip file.

   - Click **Done** when you are finished with the procedures in this window.

     > If the switch is not reachable via CLI, then the output in the zip file will indicate an error.

Managing optics power on switches

The Optics Power Control feature allows you to power off unused ports on Optics Power Control capable switches to reduce energy consumption. You can apply this feature on switches with Optics Power Control capability.

Manage optics power on a switch

Follow these steps to manage optics power on a switch:

1. Navigate to **Manage >Inventory > Switches**.

2. Check the checkbox for switch names for which you want to apply the optics power control configuration.

3. Navigate to the **Optics Power Control Capable** column in the switches table and verify if the selected switch has the optics power control capability.

   Switches with Optics Power Control capability are indicated with a **Yes**.

4. Click the **Actions** drop down list and choose **Optics Power Control** .

   The **Optics Power Control** dialog box appears with the following two options:

   To power off the Optics Power Control setting: **admin state** has no affect. This function will power on all interfaces on the selected device(s).

   Off

   To turn on the Optics Power Control setting: the **admin state** must be set to **down**. This function will power off all interfaces set to admin state: down on the selected device(s)

   On

5. Choose the **Off** or **On** option.

   - The **Off** option turns off the Optics Power Control setting on the switch, where the admin state has no effect on the power status. All interfaces on the chosen switches will remain powered on.

   - The **On** option turns on the Optics Power Control setting on the switch, where the **admin state** must be set to **down** for each interface. This option will power off all interfaces set to admin state **down** on the chosen switches.

     The following F64 platform switch models are supported for the Optics Power Control feature:

     DS-C9148V-K9, DS-C9124V-K9, DS-C9396V-K9, and the MDS 9700 family with DS-X97-SF4-K9 sup when with DS-X9748-3072K9

6. Click **Ok**.

Apply optics power control on a fabric

You can apply the optics power control configuration on switches in a specific fabric.

Follow these steps to apply the optics power control setting on a fabric:

1. Navigate to **Manage > Fabrics**. Double click on the required fabric.

   The **Fabric Overview** page appears.

2. Choose a switch from the **Switches** tab.

3. Navigate to the **Optics Power Control Capable** column in the **Switches** tab on the fabric overview page and verify if the chosen switch has the optics power control capability.

   Switches with optics power control capability are indicated with a **Yes**.

4. Check the checkbox for switch names for which you want to apply the optics power control configuration.

5. Click the **Actions** drop down list and choose **Optics Power Control** .

   The **Optics Power Control** dialog box appears with the following two options:

   To power off the Optics Power Control setting: **admin state** has no affect. This function will power on all interfaces on the selected device(s).

   Off

   To turn on the Optics Power Control setting: the **admin state** must be set to **down**. This function will power off all interfaces set to admin state: down on the selected device(s)

   On

6. Choose the **Off** or **On** option.

   - The **Off** option turns off the Optics Power Control setting on the switch, where the **admin state** has no effect on the power status. All interfaces on the chosen switch will remain powered on.

   - The **On** option turns on the Optics Power Control setting on the switch, where the **admin state** must be set to **down** for each interface. This option will power off all interfaces set to admin state **down** on the chosen switches.

7. Click **Ok**.