



## Viewing and Adding Devices

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## Viewing and Adding Devices

On the **Devices** screen, the following tabs are displayed:

- Nodes Learned
- Device Connections
- Device Groups
- SPAN Management
- Subnet Gateway Configuration

On the **Nodes Learned** tab, the following details are displayed for each node:

- The name of the node
- The ID of the node
- IP Address of the node
- The number of ports on the node

When you click the node name under the tab **Node Name**, the **Update Node Information** window is displayed. Update the following fields in the window:

- **Node ID**: Enter the node ID.
- **Node Name**: The name of the node.
- **Tier**: Select the tier of the node from the following options in the drop-down list: Unknown, Access, Distribution, and Core.
- **Operation Mode**: Choose how the traffic is handled based on the flows. This can be one of the following:

Allow reactive forwarding—No default flows are programmed. How traffic that does not match a flow is treated depends upon the switch implementation.

Proactive forwarding only—The following default flows are programmed on the switch:

- Punt Link Layer Discovery Protocol (LLDP) packets.
- Drop all other traffic.

On the **Device Connections** tab, click **Add Device** to add a device, click **Remove Devices** to remove a device, or click **Rediscover Devices** to rediscover a device. When you click **Rediscover Devices** tab, the **Rediscover Device** window is displayed. Click **Rediscover Device** so that the device gets deleted and rediscovered again.

In each device window, click **View**, **Edit**, or **Delete** to add a device, edit an existing device, or delete a device. The following details are displayed for each device in each device window:

- The name of the device and its IP address
- The username on the device
- The type of the mode, for example, NX-API
- The uptime on the device, for example, date and time
- The hardware on the node

On the **Device Groups** tab, click + **Group** to add a group of devices. In each group window, click **View**, **Edit**, or **Delete** to add a group of devices, edit an existing group of devices, or delete a group of devices respectively. The following details are displayed in each group window:

- The name of the node group, for example, Node Group Name One
- The names of the nodes in the group, for example, nx-tap-agg-sw1 and nx-tap-agg-sw2

On the **SPAN Management** tab, click + **Add Device** to add an APIC device or the production switch to the network. Click **Remove Devices** to delete the devices or click **Rediscover Devices** to rediscover the devices. The production switch should be a Cisco Nexus 9000 Series switch or Cisco Nexus 3000 Series switch in NXOS mode. The feature NXAPI has to be enabled on these production switches.




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**Note** If a device is unreachable and disconnects from NDB, NDB tries to locate and connect to the device after every 30 seconds.

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The following columns are displayed on the **SPAN Management** tab to display the information about the devices:

- IP Address
- Username
- Type: The APIC device is listed as AC and the production switch will belated here is listed as PS.
- Active IP
- Secondary IP Address
- Tertiary IP Address

- Action

You must add an APIC controller before you can set up SPAN session and SPAN destination.

Starting with Cisco NDB release 3.6, Global deny ACLs are automatically added to all non-configured (Edge SPAN/TAP & Monitor) interfaces on a device. The Global deny ACL feature is equivalent to Block Rx feature. By default, Global Deny ACL feature is enabled for a device. To disable the Global Deny ACL feature, you need to add the `configure.global.acls` parameter and set it to *false* in the `config.ini` file. After setting the `configure.global.acls` parameter, you need to restart the system to disable Global Deny ACLs on the newly added devices.



**Note** To disable Global Deny ACL during CLI upgrade, run the CLI upgrade command and then configure the `configure.global.acls` parameter to *false* in the `config.ini` file before restarting the NDB. For example:

```
/xnc upgrade --perform --target-home {xnc_directory_to_be_upgraded} [--verbose] [--backupfile
{xnc_backup_location_and_zip_filename}]
// In the config.ini file//
configure.global.acls=false
```

To disable Global Deny ACL features during configuration upload, set the `configure.global.acls` parameter to *false* in the `config.ini` file before restarting the NDB.

Starting with Cisco NDB release 3.6, when a new switch is discovered on NDB, the following connections are installed on the ISL interfaces:

- Default-Deny-ISL connection with Default-Deny-All, Default-Deny-MPLS, and Default-Deny-ARP filters. This connection is supported on all the types of switches in NXAPI mode.
- Default-Deny-ISL-ICMP connection with Default-Deny-ICMP and Default-Deny-ICMP-All filters. This connection is supported on 9200, 9300EX, 9300FX, 9500EX, and 9500FX switches in NXAPI mode.

All the ACLs related to the default filters are installed on the ISL interfaces of the new switch. By default, this feature is enabled for all the new ISL interfaces.



**Note** You can manage this feature using the `mm.addDefaultISLDenyRules` parameter in `config.ini` file. By default, `themm.addDefaultISLDenyRules` parameter is not be present in `config.in` file. To disable this feature, you need to add the `mm.addDefaultISLDenyRules` parameter to `config.ini` file and set it to *false* and restart the device. For example:

```
mm.addDefaultISLDenyRules = false
```



**Note** To disable Default-Deny-ISL Default-Deny-ISL-ICMP features during CLI upgrade, run the CLI upgrade command and then configure the `mm.addDefaultISLDenyRules` parameter to `false` in the `config.ini` file before restarting the NDB. For example:

```
./xnc upgrade --perform --target-home {xnc_directory_to_be_upgraded} [--verbose] [--backupfile
{xnc_backup_location_and_zip_filename}]
// In the config.ini file//
mm.addDefaultISLDenyRules=false
```

To disable Default-Deny-ISL Default-Deny-ISL-ICMP features during configuration upload, set the `mm.addDefaultISLDenyRules` parameter to `false` in the `config.ini` file before restarting the NDB.

## Managing a Device in NDB

You can add, remove, or edit a device using NDB.

- Adding a Device
- Removing a Device
- Rediscovering a Device
- Managing Profile for a Device

## Adding a Device

Complete these steps to add a device.

### Procedure

- Step 1** Navigate to **ADMINISTRATION > Device Connections** tab.
- Step 2** Click **Add Device**, the **Add Device** dialog box opens.
- Step 3** In the **Add Device** dialog box, enter the following details:

**Table 1: New Device Details**

Field	Description
<b>IP address/Hostname</b>	The name or IP address of the device. To add multiple devices, add the hostnames or IP Addresses separated with the comma. For example, <code>ndb1.cisco.com, ndb2.cisco.com, ndb3.cisco.com</code> .
<b>Username/Password</b>	Select this option to add a device using username and password credentials.

Field	Description
<b>Profile</b>	Select this option to add a device using a profile. For more information about adding a device using profiles, see <a href="#">Profile Management, on page 8</a>
<b>Username</b>	Username for authenticating the device.
<b>Password</b>	Password for authenticating the device.
<b>Connection Type</b>	Type of connection supported. Currently, <b>NXAPI</b> is supported.
<b>Port</b>	The device communication port. For example, use port 80 for NX-API over HTTP and 443 for HTTPS.
<b>Set Auxiliary Node</b>	Indicates whether this NX-API connection is Auxiliary for the OpenFlow device.
<b>Device Prerequisites</b>	To set the device to default configuration required for NX-API type of connection. This option is available for NXAPI connection type only without Auxiliary mode. To know more about the Device Prerequisites, see <a href="#">Device Prerequisites</a> section.

**Step 4** Click **Add Device** to create and add the new device to NDB. The new device is listed on the **DEVICE CONNECTION** tab.

Global deny ACLs are automatically added to all non-configured interfaces (Edge SPAN/TAP, Packet Truncation, Remote Source, and Local and Remote Monitor) on a device. By default, Global Deny ACL feature is enabled on all the devices. You can disable the Global Deny ACL feature by setting the `configure.global.acls` parameter to **false** in the config.ini file. Ensure that you restart NDB after making changes in the configuration file.

By default, deny ACL is enabled on all the Inter Switch Links (ISL) interfaces causing all the traffic in the ISL interfaces to be dropped if there is no connection installed. The following connections are installed on the ISL interfaces:

- Default-Deny-ISL connection with Default-Deny-All, Default-Deny-MPLS, and Default-Deny-ARP filters. This connection is supported on all the types of switches in NXAPI mode.
- Default-Deny-ISL-ICMP connection with Default-Deny-ICMP and Default-Deny-ICMP-All filters. This connection is supported on Nexus 9200, 9300EX, 9300FX, 9500EX, and 9500FX switches in NXAPI mode.

You can disable deny ACL on all the ISL interfaces by setting the `configure.global.acls` parameter to **false** in the config.ini file. Ensure that you restart NDB after making changes in the configuration file.

You can disable Global deny ACL or ISL deny ACL during the CLI upgrade or configuration upload by using the CLI upgrade command and setting the `configure.global.acls` parameter to **false** in the config.ini file. For example:

```
xnc upgrade --perform --target-home {xnc_directory_to_be_upgraded} [--verbose] [--backupfile {xnc_backup_location_and_zip_filename}]
```

```
Path:<NDBhome>/configuration/configure.global.acls=false
```

**Note** You can also disable Global deny ACL or ISL deny ACL by uploading the configuration in a Web browser.

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## Removing a Device

To remove a device from NDB, complete these steps

### Procedure

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- Step 1** Navigate to **Device Connections** tab.
  - Step 2** Select the device to remove from the table.
  - Step 3** Click **Remove Devices**. The **Remove Devices** dialog box opens.
  - Step 4** Verify the selected device(s) in the **Remove Devices** dialog box and click either of the two options:
    - **Remove Device**: Use this option to remove the device connection from NDB while retaining the device configuration.
    - **Purge & Remove Device**: Use this option to remove the device connection from NDB along with the device configuration.
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## Rediscovering a Device

To rediscover a device from NDB, complete these steps:

### Procedure

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- Step 1** Navigate to **Device Connections** tab.
  - Step 2** Select the device(s) to rediscover from the table under the **Device Connections** tab.
  - Step 3** Click **Rediscover Devices**, the **Rediscover Devices** window appears.
  - Step 4** Verify the selected devices in the **Rediscover Devices** window.
  - Step 5** Click **Rediscover Devices** to rediscover the device(s).
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## Managing Profile for a Device

You can attach a profile to an existing device or change the profile attached to a device using NDB. Complete these steps to add or change a profile to a device:



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**Note** This feature is currently supported in NXAPI mode only.

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### Procedure

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- Step 1** Navigate to **Device Connections** tab.
- Step 2** Click **Add/Change Profile to Device**, the **Add/Change Profile to Device** window appears.
- Step 3** Verify the selected devices in the **Add/Change Profile to Device** window. You can edit the following details in the **Add/Change Profile to Device** window:
- **Profile:** Select a profile to attach. For more information about the profiles, see [Profile Management](#) section.
  - **Connection Type:** Specify the supported connection type. Currently, **NXAPI** is supported.
  - **Port:** The device communication port. For example, use port 80 for NX-API over HTTP and 443 for HTTPS.
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## Device Prerequisites

Starting with Cisco NDB release 3.8, NDB pushes basic configuration to a newly added switch into NDB. Manual configuration of the NX-API devices to make it ready for NDB is not required. As a part of the adding a new device, the prerequisites are configured by NDB on the devices.

You need to ensure that NX-API is enabled on the new device for NDB to push prerequisite configuration successfully.

Following configurations are pushed into the new switch by NDB.

- TCAM configurations based on the device platform
- MST mode is enabled on the Spanning Tree
- Basic VLAN Configuration
- LLDP feature is enabled (only for the centralized mode of NDB)



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**Note** Device is rebooted after all the configurations are successfully pushed by NDB. The device reboot is required because of the TCAM configurations. The reboot is supported from NX-OS 9.2(3) and above

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The Device Prerequisites can be configured when you add or edit a device, or when you add or change profile to device.

# Profile Management

Starting with Cisco NDB release 3.8, you can add, edit, or delete a profile through NDB. A profile allow you to manage multiple switches attached to a NDB. You can attach multiple switches to a profile. The profile configuration is applied to all the member switches.

## Adding a Profile

Complete these steps to add a profile:

### Procedure

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- Step 1** Navigate to **ADMINSTRATION > User Management**.
  - Step 2** On the **User Management** page, click **Profile** tab.
  - Step 3** Click **Add Profile** to open the **Add Profile** dialog-box.
  - Step 4** Enter name of the profile in the **Profile Name** text-field.
  - Step 5** Enter the user name to be configured for the member switches in the **User Name** text-field.
  - Step 6** Enter the password to be configured for the member switches in the **Password** text-field.
  - Step 7** Click **Create** to create a new profile.
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## Editing a Profile

To edit a profile using NDB, complete these steps:

### Procedure

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- Step 1** Navigate to **ADMINSTRATION > User Management > Profile** tab.
  - Step 2** Click **Edit** to edit a profile. The **Edit Profile** dialog box opens.
  - Step 3** Enter new name of the profile in the **Profile Name** text-field.
  - Step 4** Enter the new user name to be configured for the member switches in the **User Name** text-field.
  - Step 5** Enter the new password to be configured for the member switches in the **Password** text-field.
  - Step 6** Click **Submit**. All the devices that are part of the profile are rediscovered with the updated credentials.
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## Deleting a Profile

Complete these steps to delete a profile:



## Procedure

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- Step 1** Navigate to **ADMINISTRATION > User Management > PROFILE**.
- Step 2** On the **Profile** page, click **Delete** for the profile to delete it. The deleted profile is removed from the **Profile** page.
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