



Cisco Monitor Manager Overview

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About Cisco Extensible Network Controller

Cisco Extensible Network Controller (Cisco XNC) is a software platform that serves as an interface between the network elements (southbound) and third-party applications (northbound). Cisco XNC is a JVM-based application that runs on a Java Virtual Machine (JVM). Cisco XNC is based on a highly available, scalable, and extensible architecture that supports a network. Cisco XNC is built for extensibility using the Open Services Gateway initiative (OSGi) framework, which allows new functionality to be added.

Cisco XNC can support multiple protocol plugins in the southbound direction. In the current release, Cisco Plug-in for OpenFlow 1.0 is available.

Cisco XNC provides the following:

- Multiprotocol capability with the Cisco Plug-in for OpenFlow version 1.0 available in this release.
- Functionality to support network visibility and programmability, such as network topology discovery, network device management, forwarding rules programming, and access to detailed network statistics.
- A Service Abstraction Layer (SAL) that enables modular southbound interface support, such as OpenFlow.
- Consistent management access through the GUI or through Java or Representational State Transfer (REST) northbound APIs.
- Security features, such as role-based access control (RBAC), and integration with an external Active Directory using RADIUS or TACACS for authentication, authorization, and accounting (AAA) functions.
- Troubleshooting tools, such as analytics gathering and diagnostic packet injection.

- Cisco advanced features such as Topology Independent Forwarding (TIF), which enables the administrator to customize the path a data flow takes through the network.
- Cisco network applications such as Network Slicing that allows logical partitioning of the network using flow specification, and Monitor Manager, that provides visibility into the network traffic.
- High-availability clustering to provide scalability and high availability.
- The Cisco Open Network Environment Platform Kit (Cisco onePK) version 1.1.0 is supported in this release of Cisco XNC. The Cisco onePK plug-in communicates with the onePK agent.
- Support for onePK devices in the network and the ability to install TIF rules on onePK devices.
- A CLI framework for Cisco XNC.
- Virtual Patch Panel Application (P2P Forwarding application) provides port-to-port traffic management within a switch or across the network without any need for physical connection changes or rewiring.

About Cisco Monitor Manager

Cisco Monitor Manager is a network application that runs on Cisco XNC. Cisco Monitor Manager, in combination with the Cisco Plug-in for OpenFlow and Cisco Nexus 3000 or 3100 Series switches and , enables you to create a scalable and flexible replacement for matrix switches, which traditionally connect network monitoring devices to points within the network where monitoring is desired.

Cisco Monitor Manager provides management support for multiple disjointed Cisco Monitor Manager networks. You can manage multiple Monitor Manager topologies that may be disjointed using the same Cisco XNC instance. For example, if you have 5 data centers and want to deploy an independent Cisco Monitor Manager solution for each data center, you can manage all these 5 independent deployments using a single Cisco XNC instance by creating a logical partition (network slice) for each monitoring network.

With the Cisco Monitor Manager solution, you can do the following:

- Classify Switched Port Analyzer (SPAN) and Test Access Point (TAP) ports.
- Filter which traffic should be monitored.
- Redirect packets from a single or multiple SPAN or TAP ports to multiple monitoring devices through delivery ports.
- Restrict which users can view and modify the monitoring system.

Configuring User Roles for Edge Ports

To manage which Cisco Monitor Manager application users may create rules for edge ports, you must modify the App-User role settings in the config.ini file. This allows you to enable Role-Based Access Control (RBAC) for application users. After you make the change and Cisco XNC is restarted, the following restrictions will be in force:

- Cisco Monitor Manager App-User role users will be able to create rules only for source ports associated to their role and only for ports assigned to their groups.
- Only Cisco Monitor Manager App-Admin role users will be able create rules with no source.

To enable RBAC for the App-User role, follow these steps:

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- Step 1** Open the config.ini file for editing.
- Step 2** Locate the line `#Enforce restriction on edge/tap ports user can capture (default failse).`
- Step 3** Remove the comment character from the following line:
`monitor.strictAuthorization=true`
- Step 4** Save your work and close the file.
- Step 5** If Cisco XNC is running, restart the application to enable the change.
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Logging in to the Cisco Monitor Manager GUI

You can log into the Cisco Monitor Manager using HTTP or HTTPS:

- The default HTTP web link for the Cisco Monitor Manager GUI is `http://Controller_IP:8080/monitor`
- The default HTTPS web link for the Cisco Monitor Manager GUI is `https://Controller_IP:8443/monitor`



Note Before you can use HTTPS, you must manually specify the `https://` protocol in your web browser. The controller must also be configured for HTTPS.

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- Step 1** In your web browser, enter the Cisco Monitor Manager web link.
- Step 2** On the launch page, do the following:
- a) Enter your username and password.
The default username and password is admin/admin.
 - b) Click **Log In**.
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Cisco Monitor Manager GUI Overview

The Cisco Monitor Manager GUI contains the following areas and panes:

- A menu bar across the top of the window that provides access to the main categories of information in Cisco Monitor Manager.
- A topology map on the right that displays a visual representation of your network.

- Several panes with additional views and information about the selected category.

The menu bar contains the following items:

- The administrative management list—Provides access to different administrative settings, including managing roles and resource groups.



Note This drop-down list displays the username that you used when you logged into Cisco Monitor Manager. In this documentation, it will be referred to as the **Admin** drop-down list.

- A **Save** button to save any additions or changes made in the Monitor Manager application.

Topology Tools

The left side of the topology pane contains a group of tools that allow you to manipulate the content of the topology pane. Hovering over a tool displays its function. From the top of the pane to the bottom, the tools are:

- Move mode—Use this tool to move the entire topology diagram, a single topology element, or a node group. To move an element or a node group, click it and drag it.
- Zoom in—Use this tool to increase the size of the topology diagram.



Note You can also increase the size of the topology diagram by scrolling up with your mouse wheel.

- Zoom out—Use this tool to decrease the size of the topology diagram.



Note You can also decrease the size of the topology diagram by scrolling down with your mouse wheel.

- Zoom by selection—Use this tool to zoom in on a specific topology element. To zoom by selection, click the tool, then click and drag your mouse across the element you want to zoom in on. The zoom element display resets after a few seconds.
- Fit stage—Use this tool to reset the topology diagram in the topology pane.
- Topology Settings—Use this tool to choose the preferred **Display Icons as dots** setting. Select the radio button for the preference you desire.
- Tool tips—Tool tips display information about each tool, or about nodes in the topology. To display tool tip information, hover over a tool or over a node in the diagram.

Pane Resizing

You can resize the panes in the GUI display by clicking the pane resize grippers.

- 1 To increase or decrease the height of either of the left or right bottom pane, click the pane resize grippers at the top of the pane, then drag up or down with your mouse.
- 2 To collapse either the lower right or lower left pane, hover over the pane resize grippers at the top of the pane until a double-ended arrow is displayed, then click your mouse once.
- 3 To restore a collapsed pane, hover over the pane resize grippers at the bottom of the pane until a double-ended arrow is displayed, then click your mouse once.
- 4 To increase or decrease the width of the two left panes at the same time, click the pane resize grippers at the top of the pane, then drag left or right with your mouse.

Saving Configuration Changes

You should periodically save the configuration changes that you make in Cisco Monitor Manager.

**Note**

Any unsaved configuration changes in Cisco Monitor Manager will be lost if you stop the Cisco XNC application.

On the Cisco Monitor Manager menu bar, click **Save**.
