



Overview

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Overview of Cisco Nexus 1000V vCenter Plug-in

The Cisco Nexus 1000V virtual switch is a software-based Layer 2 switch for the virtualized server environments that are running VMware ESX. The Cisco Nexus 1000V provides a consistent networking experience across the physical and the virtual environments. It consists of two components: the Virtual Ethernet Module (VEM), a software switch that is embedded in the hypervisor, and a Virtual Supervisor Module (VSM), a module that manages the networking policies and the quality of service for the virtual machines.

With the earlier releases of the Cisco Nexus 1000V, the system administrators had no visibility into the networking aspects of the switch. Starting with Cisco Nexus 1000V Release 4.2(1)SV2(1.1), a plug-in for the VMware vCenter Server, known as vCenter plug-in (VC plug-in) is supported on the Cisco Nexus 1000V virtual switch. It provides the server administrators a view of the virtual network and a visibility into the networking aspects of the Cisco Nexus 1000V virtual switch.

The vCenter plug-in is supported on VMware vSphere Web Clients only. VMware vSphere Web Client enables you to connect to a VMware vCenter Server system to manage a Cisco Nexus 1000V through a browser. The vCenter plug-in is installed as a new tab in the Cisco Nexus 1000V as part of the user interface in vSphere Web Client.

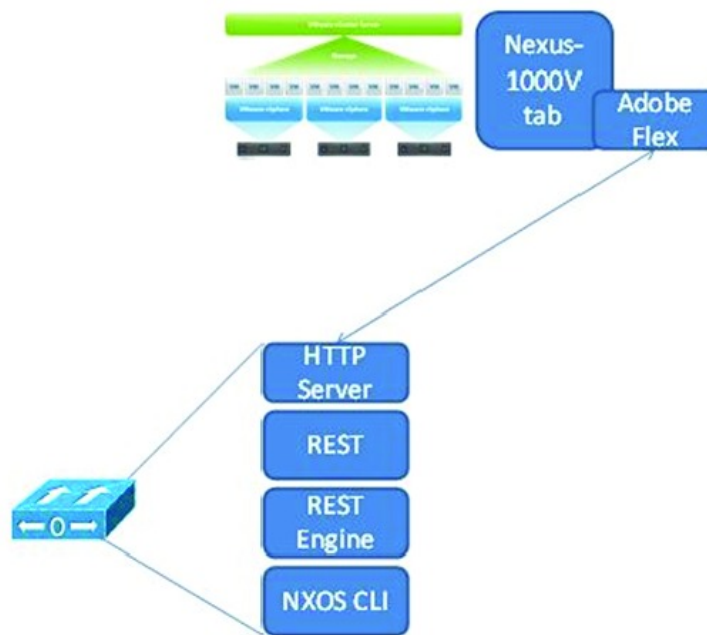
The vCenter plug-in allows the administrators to view the configuration aspects of the VSM. With the vCenter plug-in, the server administrators can export the necessary networking details from the vCenter server, investigate the root cause of and prevent the networking issues, and deploy the virtual machines with suitable policies. The server administrators can monitor and manage the resources effectively with the network details provided in the vCenter plug-in.

REST API Architecture

Starting with Cisco Nexus 1000V Release 4.2(1)SV2(1.1), an extensible REST API architecture is supported on the Cisco Nexus 1000V. The Cisco Nexus 1000V supports the REST API to configure and retrieve the network information from the vCenter Server. The REST APIs are used to implement the vCenter plug-in feature.

See the REST API architecture illustration for the supported architecture on the Cisco Nexus 1000V switch. In the illustration, the VMware vCenter is positioned at the top and the VSM is positioned at the bottom.

Figure 1: REST API Architecture



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Prerequisites for vCenter Plug-in

The vCenter plug-in functionality on the Cisco Nexus 1000V has the following prerequisites:

- VMware vCenter Server 5.0 and later release.
- VMware vCenter Web Client 5.1. The vCenter plug-in does not work with the vCenter 5.0 Web Client.
- The following browsers are supported for version 5.1 of the vSphere Web Client:
 - Microsoft Internet Explorer 7, 8, and 9.
 - Mozilla Firefox 3.6 and later.
 - Google Chrome 14 and later.

- vSphere Web Client requires the Adobe flash player version 11.1.0 and later to be installed for your browser.
- Make sure that the Cisco Nexus 1000V Release 4.2(1)SV2(1.1) is installed and configured to a vCenter.

VMware vSphere Web Client Information

The vCenter plug-in requires the 5.1 version of VMware vSphere Web Client.

**Note**

The vCenter plug-in will not work with the VMware vSphere Web Client 5.0.

**Note**

For more information about installing or upgrading VMware vSphere Web Client, see the VMware documentation: *VMware vSphere ESXi and vCenter Server 5.1 Documentation*.

VMware vSphere Web Client 5.1 requires an SSO or a lookup server to install successfully. You need at least one vCenter Server 5.1 to install the VMware vSphere Web Client 5.1. If you have vCenter Server 5.0 setup, complete the following steps:

- Use vCenter vSphere Server 5.1 to install the VMware vSphere Web Client 5.1
- Use the **admin-app** command to register the vCenter Servers 5.0
- Once registered, you can manage the servers using the vSphere Web Client 5.1

For more details see the *Cisco Nexus 1000V Troubleshooting Guide*.

**Note**

vSphere Web Client 5.1 cannot directly connect to an ESXi host.

vCenter Plug-in Installation Workflow Overview

An overview of the vCenter Plug-in installation workflow is as follows:

- 1 Install the vCenter infrastructure from the general availability ISO file available at the following link: <https://www.vmware.com/products/datacenter-virtualization/vsphere/overview.html>.
- 2 Install the Cisco Nexus 1000V Release 4.2(1)SV2(1.1) software.
- 3 Navigate to the following link with the appropriate IP address and save the file: `http://vsmip/vcplugin/registerVCPlugin.ps1`.
- 4 Execute the file using PowerCLI.

