



Cisco Nexus Virtual Services Appliance Release Notes, Release 4.2(1)SP1(5.1)

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This document describes the features, limitations, and caveats for the Cisco Nexus Virtual Services Appliance management software. Use this document in combination with documents listed in the [“Related Documentation”](#) section on page 5.

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Hardware Features

The Cisco Nexus Virtual Services Appliance is a hardware shell that can host multiple virtual service blades (VSBs), including up to four Cisco Nexus 1000V virtual supervisor modules (VSMs) and a network analysis module (NAM). From a network management perspective, the hosted VSMs appear as a cluster. Each VSM and its associated VEMs make up one virtual switch.

There are two new appliances in the Cisco Nexus Virtual Services Appliance family:

- The Cisco Nexus 1110-S appliance
- The Cisco Nexus 1110-X appliance



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Each of the new appliances is described in the following section.

Cisco Nexus Virtual Services Appliance Features

The Cisco Nexus 1110-S appliance has the following features:

- Memory: 32 GB
- Hard disk: Two 2-TB SATA drives
- Support for up to 6 VSBs

The Cisco Nexus 1110-X appliance has the following features:

- Memory: 64 GB
- Hard disk: Four 4-TB SATA drives
- Support for up to 10 VSBs

Complete hardware feature descriptions and specifications are available in the *Cisco Nexus Virtual Services Appliance Hardware Installation Guide*.

Software Features

This section describes the following new or changed software features:

- [Enhanced Troubleshooting Capabilities, page 2](#)
- [SNMP for PID, page 3](#)

Information about these features can be found in the *Cisco Nexus Virtual Services Appliance Software Configuration Guide* and in the *Cisco Nexus Virtual Services Appliance Troubleshooting Guide*.

Enhanced Troubleshooting Capabilities

The following troubleshooting capabilities are available:

- USB/CD Support for Troubleshooting

In the event of any failure on the Cisco Nexus Virtual Services Appliance or loss in network connectivity, you can access an external USB or CD to copy the logs for troubleshooting. To access an external USB or CD, you must enable the auxiliary feature. By default this feature is disabled.

- Shutdown Command

A **shutdown** command is available to shut down the Cisco Nexus Virtual Services Appliance. When you execute this command, all the VSBs shut down first and then the Cisco Nexus Virtual Services Appliance shuts down. By default, the command shuts down both the primary and the secondary Cisco Nexus Virtual Services Appliance.

- VSB Statistics

The **show virtual-service-blade name name statistics** command displays statistics for a specific virtual service blade (VSB) such as CPU utilization, memory, last reboot time, and total number of reboots.

- Enhanced Log Collection

The **vsa-system get agent logs** command allows you to access agent logs, sos report, and other logs in the bootflash:repository.

- Debug CD

The debug CD is a separate image for debugging purposes. It allows you to boot directly into the host operating system.

SNMP for PID

Each hardware PID is supported by its unique sysObjectId SNMP MIB. The following hardware PIDs exist: N1K-C1010, N1KC1010-X, N1K-C1110-S, and N1K-C1110-X.

Software Compatibility

The Cisco Nexus Virtual Services Appliance management software controls the virtual services and blades running on the Cisco Nexus Virtual Services Appliance. These include up to six Cisco Nexus 1000V VSMs, a NAM, and up to three VSGs.

For more information about modules, see the *Cisco Nexus Virtual Services Appliance Software Configuration Guide, Release 4.2(1)SP1(5.1)*.

Cisco Nexus Virtual Services Appliance software is pre installed as an ISO image that includes the following components:

- Cisco Nexus Virtual Services Appliance kickstart image
This is the Cisco Nexus Virtual Services Appliance Management Software.

The Cisco Nexus Virtual Services Appliance management software is compatible with the following software versions:

- Cisco Nexus 1000V: All releases (no dependency)
- Cisco Network Analysis Module (NAM) Release 5.1.2 and later
- Cisco Virtual Security Gateway (VSG) Release 4.2(1)VSG1(3.1) and later

The Cisco Nexus Virtual Services Appliance management software works with all Ethernet switches.

Limitations and Restrictions

- [Configuration Limits, page 3](#)
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Configuration Limits

The Cisco Nexus 1110-S VSA maximum supported configuration (up to six VSBs total) is either:

- 6 Cisco Nexus 1000V VSMS, each capable of managing 64 VMware ESX or ESXi hosts for a total of 384 VMware ESX or ESXi hosts
- 6 Cisco Virtual Security Gateway (VSG) VSBs

The Cisco Nexus 1110-X VSA maximum supported configuration (up to 10 VSBs total) is either:

- 10 Cisco Nexus 1000V VSMS, each capable of managing 64 VMware ESX or ESXi hosts for a total of 640 VMware ESX or ESXi hosts
- 10 Cisco VSG VSBs

Table 1 provides a weighting matrix that can be used to determine the maximum capacity of VSBs on the Cisco Nexus Virtual Services Appliance.

Table 1 Weighting Matrix (to Determine Maximum Capacity of VSBs on Cisco 1100 Series VSBs)

Cisco Nexus Virtual Services Appliance	VSM	Cisco VSG	NAM	Total Weighting
Cisco Nexus 1110-S	1	1	2	Less than or equal to 6
Cisco Nexus 1110-X	1	1	2	Less than or equal to 10

No Error Message for Upgrade Failure

If an upgrade to Cisco Nexus Virtual Services Appliance Release 4.2(1)SP1(5.1) from an earlier release of the Cisco Nexus 1010 Management Software fails, no error message is displayed. This limitation is associated with CSCub39408.

Domain ID and HA Role Cannot Be Changed

The configured domain ID and high availability (HA) role (standalone, primary, or secondary) can never be changed. To change the domain ID or the HA role, you must use the **write erase** command.

Boot Variables Cannot Be Manually Configured

The boot variables cannot be configured manually. To change the boot variables, you must enter the **install nexus1010** command. This command installs the software from the bootflash:/repository directory and updates the boot variables with the name of the software image.

Changing the Control or Mgmt VLAN Requires a Reload

If you change the control or management VLAN, you must reload the software before the change takes effect.

DNS Resolution

The Cisco Nexus Virtual Services Appliance cannot resolve a domain name or hostname to an IP address.

No Local Copy in bootflash:export-import

Do not make a copy of the tar files in the export-import folder. Copying files locally might cause a split-brain condition and lead to HA issues.

Always copy the tar files to remote storage after entering the **export** command and then delete it from export-import folder.

Caveats

This section includes the following topics:

- [Open Caveats, page 5](#)
- [Resolved Caveats, page 5](#)

Open Caveats

The following are descriptions of the open caveats in Cisco Nexus Virtual Services Appliance Release 4.2(1)SP1(5.1). The Bug ID will link you into the Cisco Bug Toolkit.

Bug ID	Caveat Headline
CSCua80533	NAM login fails and the VSB summary is lost after upgrade.
CSCub60626	A Cisco Nexus 1010 forms HA with a Cisco Nexus 1010-X.

Resolved Caveats

The following are descriptions of the caveats that were resolved in Cisco Nexus Virtual Services Appliance Release 4.2(1)SP1(5.1). The Bug ID will link you into the Cisco Bug Toolkit.

Bug ID	Caveat Headline
CSCtx60069	The Entity MIB reports Nexus 1010-X as Nexus 1010.

Related Documentation

This section lists the documents used with the Cisco Nexus 1000 and available on [Cisco.com](#) at the following URL:

http://www.cisco.com/en/US/products/ps12752/tsd_products_support_series_home.html

General Information

[Cisco Nexus 1000V Documentation Roadmap, Release 4.2\(1\)SV1\(5.2\)](#)

[Cisco Nexus 1000V Release Notes, Release 4.2\(1\)SV1\(5.2\)](#)

Cisco Nexus 1000V Compatibility Information, Release 4.2(1)SVI(5.2)
Cisco Nexus Virtual Services Appliance Release Notes, Release 4.2(1)SP1(5.1a)

Install and Upgrade

Cisco Nexus 1000V Installation and Upgrade Guide, Release 4.2(1)SVI(5.2)
Cisco Nexus Virtual Services Appliance Hardware Installation Guide
Cisco Nexus Virtual Services Appliance Software Installation and Upgrade Guide, Release 4.2(1)SP1(5.1a)

Configuration Guides

Cisco Nexus 1000V High Availability and Redundancy Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V Interface Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V Layer 2 Switching Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V License Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V Network Segmentation Manager Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V Quality of Service Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V Security Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V System Management Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V VXLAN Configuration Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus Virtual Services Appliance Software Configuration Guide, Release 4.2(1)SP1(5.1)

Programming Guide

Cisco Nexus 1000V XML API User Guide, Release 4.2(1)SVI(5.1)

Reference Guides

Cisco Nexus 1000V Command Reference, Release 4.2(1)SVI(5.1)
Cisco Nexus 1000V MIB Quick Reference
Cisco Nexus Virtual Services Appliance Command Reference, Release 4.2(1)SP1(5.1)

Troubleshooting and Alerts

Cisco Nexus 1000V Troubleshooting Guide, Release 4.2(1)SVI(5.1)
Cisco Nexus Virtual Services Appliance Troubleshooting Guide, Release 4.2(1)SP1(5.1)
Cisco Nexus 1000V Password Recovery Guide
Cisco Nexus 1000V Series and Cisco VSG NX-OS System Messages Reference
Cisco NX-OS Password Recovery Guide

Virtual Security Gateway Documentation

Cisco Virtual Security Gateway for Nexus 1000V Series Switch

Virtual Network Management Center

Cisco Virtual Network Management Center

Virtual Wide Area Application Services (vWAAS)

Cisco Virtual Wide Area Application Services (vWAAS)

ASA 1000V Cloud Firewall

Cisco ASA 1000V Cloud Firewall

Network Analysis Module Documentation

Cisco Prime Network Analysis Module Software Documentation Guide, 5.1

Cisco Prime Network Analysis Module (NAM) for Nexus 1010 Installation and Configuration Guide, 5.1

Cisco Prime Network Analysis Module Command Reference Guide 5.1

Cisco Prime Network Analysis Module Software 5.1 Release Notes

Cisco Prime Network Analysis Module Software 5.1 User Guide

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: <http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

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