



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

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This document describes how to identify and resolve problems with the Cisco Nexus Virtual Services Appliance product family and includes the following topics:

- [Information About Cisco Nexus Virtual Services Appliance](#)
- [Overview of the Troubleshooting Process](#)
- [Troubleshooting with Logs](#)
- [Cisco Support Communities](#)
- [Contacting Cisco Customer Support](#)
- [Problems with Cisco Nexus Virtual Services Appliance](#)
- [Cisco Nexus Virtual Services Appliance Troubleshooting Commands](#)
- [Additional References](#)
- [Related Documentation](#)
- [Obtaining Documentation and Submitting a Service Request](#)

Information About Cisco Nexus Virtual Services Appliance

For detailed information about the overview of the Cisco Nexus Virtual Services Appliance product family and how to install and upgrade Cisco Nexus Virtual Services Appliance, see the *Cisco Nexus Virtual Services Appliance Software Installation and Upgrade Guide, Release 4.2(1)SP1(5.1)*.

For detailed information about how to configure the Cisco Nexus Virtual Services Appliance product family, see the *Cisco Nexus Virtual Services Appliance Software Configuration Guide, Release 4.2(1)SP1(5.1)*.



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Overview of the Troubleshooting Process

To troubleshoot your network, follow these general steps:

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- Step 1** Gather information that defines the specific symptoms.
 - Step 2** Identify all potential problems that could be causing the symptoms.
 - Step 3** Systematically eliminate each potential problem (from most likely to least likely) until the symptoms disappear.

Overview of Best Practices

Best practices are the recommended steps you should take to ensure the proper operation of your network. We recommend the following general best practices for most networks:

- Maintain a consistent Cisco Nexus Virtual Services Appliance release across all network devices.
- Refer to the release notes for your Cisco Nexus Virtual Services Appliance release for the latest features, limitations, and caveats.
- Enable system message logging.
- Verify and troubleshoot any new configuration changes after implementing the change.

Troubleshooting with Logs

Cisco Nexus Virtual Services Appliance generates many types of system messages on the switch and sends them to a syslog server. These messages can be viewed to determine what events may have led up to the current problem condition you are facing.

Use the following commands to access and view logs in the Cisco Nexus Virtual Services Appliance:

- To view logs enter the following command:
show logging
- To view Cisco Nexus Virtual Services Appliance information enter the following command:
show tech-support nexus1010
- To access agent logs, enter the following command:
nexus-1010-system get agent logs
- To access agent logs, sos report, and other logs enter the following command:
vsa-system get agent logs
- To access redundancy logs, enter the following command:
show system internal redundancy trace
show system redundancy status
- To access default enabled logs, enter the following command:
show nexus1010-mgr internal event-history errors > bootflash:log

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**Note**

The output of `nexus-1010-system get agent logs` and `vsa-system get agent logs` command is the same. In the future, `nexus-1010-system get agent logs` command will be deprecated.

Accessing External USB/CD to View Troubleshooting Logs

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.

You can use the following procedure to copy the logs

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- Step 1** Enable the auxillary feature using the following command:
- ```
switch# configure terminal
switch# [no] feature auxillary [cdrom|usb]
```
- Step 2** Access an external USB or CD. The physical parameter represents a physical USB or CD drive. The virtual parameter represents a virtual drive that is mapped through the KVM console on the CIMC.
- ```
switch# [no] mount [physical |virtual]
```
- Step 3** Copy the logs to the repository.
- ```
switch# copy bootflash:usb|v-usb|cdrom|v-cdrom| bootflash:repository
```

## Cisco Support Communities

For additional information, visit one of the following support communities:

- [Cisco Support Community for Server Networking](#)
- [Cisco Communities: Nexus 1000V](#)

## Contacting Cisco Customer Support

If you are unable to solve a problem after using the troubleshooting suggestions in this guide, contact a customer service representative for assistance and further instructions. Before you call, have the following information ready to help your service provider assist you as quickly as possible:

- Version of the Cisco Nexus Virtual Services Appliance software that you are running
- Contact phone number.
- Brief description of the problem
- Brief explanation of the steps you have already taken to isolate and resolve the problem

After you have collected this information, see the [Obtaining Documentation and Submitting a Service Request](#), page 9.

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# Problems with Cisco Nexus Virtual Services Appliance

This section includes symptoms, possible causes and solutions for the following problems with Cisco Nexus Virtual Services Appliance product family..

**Table 1-1** *Problems with Cisco Nexus Virtual Services Appliance Product Family*

| Symptom                                                                                                                                                                                                                                                                     | Possible Causes                                                                                                             | Verification and Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The output of the <b>show system redundancy status</b> command, displays the standby Cisco Nexus Virtual Services Appliance in warm standby state.                                                                                                                          | This may occur when there is no control traffic communication between the Cisco Nexus Virtual Services Appliance HA pair.   | <ol style="list-style-type: none"> <li>1. Verify if the control VLAN configuration of both primary and secondary Cisco Nexus Virtual Services Appliance is the same.<br/><b>show svcs domain</b></li> <li>2. Verify if the upstream switch for both primary and secondary Cisco Nexus Virtual Services Appliance is configured by allowing the control VLAN in the list of VLAN permitted in the upstream trunk port.<br/><b>interface name</b><br/><b>switchport trunk allowed vlan add id</b></li> <li>3. Verify the status of the ports.<br/><b>show network uplink</b></li> </ol> |
| The output of the <b>show virtual-service-blade summary</b> command displays the status of the VSB on the active Cisco Nexus Virtual Services Appliance as power in progress and the status of the VSB on the standby Cisco Nexus Virtual Services Appliance as powered on. | This may occur after the reload or upgrade of Cisco Nexus Virtual Services Appliance.                                       | <ol style="list-style-type: none"> <li>1. Manually sync the state of the VSB on the Cisco Nexus Virtual Services Appliance. Enter the command in the virtual service blade configuration mode.<br/><b>description " "</b></li> <li>2. Verify the status of the VSB.<br/><b>show virtual-service-blade summary</b></li> </ol>                                                                                                                                                                                                                                                          |
| Removal of a VSB fails and the following error message is logged:<br><br>Previous command in progress                                                                                                                                                                       | Multiple operations were carried out on the VSB before it was removed.                                                      | <ol style="list-style-type: none"> <li>1. Manually remove the VSB using the following command:<br/><b>no enable force</b></li> <li>2. Verify the removal of the VSB.<br/><b>show virtual-service-blade summary</b></li> </ol>                                                                                                                                                                                                                                                                                                                                                         |
| Cisco Nexus Virtual Services Appliance reboots continuously and the following error message is logged:<br><br>Failed To boot server                                                                                                                                         | In the flexible network uplink types, invalid network uplink types were assigned to Cisco Nexus Virtual Services Appliance. | Ensure that only valid uplinks are assigned to Cisco Nexus Virtual Services Appliance.<br><br>See the <i>Cisco Nexus Virtual Services Appliance Software Configuration Guide, Release 4.2(1)SP1(5.1)</i> for valid uplink types.                                                                                                                                                                                                                                                                                                                                                      |

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**Table 1-1 Problems with Cisco Nexus Virtual Services Appliance Product Family**

| Symptom                                                                                                                                                                                                                   | Possible Causes                                                                                                            | Verification and Solution                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Any changes to network uplink type assignment fails with the following error message:</p> <p>Cannot assign a port or a port channel with itself or member port in administratively shut state to control interface</p> | <p>One of the members of the port channel is administratively down.</p>                                                    | <ol style="list-style-type: none"> <li>1. Verify if any of the port is in administratively down state.<br/><b>show network summary</b></li> <li>2. Bring the port to administratively up state.<br/><b>no shut</b></li> <li>3. Reassign network uplink type in Cisco Nexus Virtual Services Appliance.</li> </ol> <p>See the <i>Cisco Nexus Virtual Services Appliance Software Configuration Guide, Release 4.2(1)SP1(5.1)</i> for assigning uplink types.</p> |
| <p>Removal of port channel fails with the following error message:</p> <p>Interface (GigabitEthernet1) pc in use by rt mgr while trying to remove a Gig member from a port channel.</p>                                   | <p>The port channel is in use by Cisco Nexus Virtual Services Appliance.</p>                                               | <p>Verify if the port channel is in use in the Cisco Nexus Virtual Services Appliance</p> <p><b>Show network summary</b><br/><b>Show network port-channel summary</b></p>                                                                                                                                                                                                                                                                                       |
| <p>VSB is not created on the secondary Cisco Nexus Virtual Services Appliance even if the Cisco Nexus Virtual Services Appliance is in sync and in HA mode.</p>                                                           | <p>An error occurred during the automatic creation of the VSB on the secondary Cisco Nexus Virtual Services Appliance.</p> | <p>Manually create the VSB on the secondary Cisco Nexus Virtual Services Appliance.</p> <p>See the <i>Cisco Nexus Virtual Services Appliance Software Configuration Guide, Release 4.2(1)SP1(5.1)</i> for creating VSBs.</p>                                                                                                                                                                                                                                    |
| <p>After rebooting the Cisco Nexus Virtual Services Appliances, the configured VSBs do not appear.</p>                                                                                                                    | <p>Cisco Nexus Virtual Services Appliance configuration may not have been saved after creating the VSBs.</p>               | <p>Contact a customer service representative for assistance to recover pointers to the VSBs.</p> <p><b>Note</b> Do not attempt to modify the Cisco Nexus Virtual Services Appliance configuration or reload the VSB.</p>                                                                                                                                                                                                                                        |

## Cisco Nexus Virtual Services Appliance Troubleshooting Commands

You can use the commands in this section to troubleshoot problems related to Cisco Nexus Virtual Services Appliance.

**Table 2 Cisco Nexus Virtual Services Appliance Troubleshooting Commands**

| Command                  | Purpose                                                                      |
|--------------------------|------------------------------------------------------------------------------|
| <b>show tech-support</b> | Displays switch information for Cisco TAC to assist you in diagnosing issues |
| <b>show network</b>      | Displays information about the network.                                      |

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**Table 2** Cisco Nexus Virtual Services Appliance Troubleshooting Commands (continued)

| Command                                  | Purpose                                                                                                                                           |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>show virtual-service-blade</b>        | Displays information about the virtual service blade.                                                                                             |
| <b>show cdp</b>                          | Displays the CDP configuration and capabilities for your device                                                                                   |
| <b>show interface</b>                    | Displays information about interface configuration.                                                                                               |
| <b>show network port-channel summary</b> | Displays summary information of port channels in the network.                                                                                     |
| <b>show system redundancy status</b>     | Displays the redundancy state (active or standby) and the redundancy role (primary or secondary) for the Cisco Nexus Virtual Services Appliances. |
| <b>show network cdp neighbors</b>        | Displays uplink connectivity for the active or standby Cisco Nexus Virtual Services Appliance.                                                    |

For detailed information about show command output, see the *Cisco Nexus Virtual Services Appliance Command Reference, Release 4.2(1)SP1(5.1)*.

## Shutting Down Cisco Nexus Virtual Services Appliance

To shut down Cisco Nexus Virtual Services Appliance including the VSBs, use the following command:

```
switch# shutdown [primary| secondary]
```

When you execute this command, first all the VSBs will shutdown and then the Cisco Nexus Virtual Services Appliance will shutdown. By default, the command will shutdown both the primary and the secondary Cisco Nexus Virtual Services Appliance.

To shutdown the primary Cisco Nexus Virtual Services Appliance, use the following command:

```
switch# shutdown primary
```

To shutdown the secondary Cisco Nexus Virtual Services Appliance, use the following command:

```
switch# shutdown secondary
```

This command prevents the abrupt shutdown of the VSBs

When the Cisco Nexus Virtual Services Appliance is powered off from CIMC, some of the VSBs may not receive the signal to power down. This command prevents the abrupt shutdown of the VSBs.

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## Additional References

| Related Topic                                                 | Document Title                                                                                                                                                                              |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Hardware installation                                         | <i>Cisco Nexus Virtual Services Appliance Hardware Installation Guide</i>                                                                                                                   |
| Software installation and upgrade                             | <i>Cisco Nexus Virtual Services Appliance Software Installation and Upgrade Guide, Release 4.2(1)SP1(5.1)</i>                                                                               |
| Cisco Nexus Virtual Services Appliance software configuration | <i>Cisco Nexus Virtual Services Appliance Software Configuration Guide, Release 4.2(1)SP1(5.1)</i>                                                                                          |
| Cisco Nexus Virtual Services Appliance commands               | <i>Cisco Nexus Virtual Services Appliance Command Reference, Release 4.2(1)SP1(5.1)</i>                                                                                                     |
| CIMC management                                               | <i>CIMC Firmware Management on UCS C-Series Servers</i>                                                                                                                                     |
| Password Recovery Procedure for Cisco NX-OS                   | <a href="http://www.cisco.com/en/US/docs/switches/datacenter/sw/password_recovery/nx_os_pw.html">http://www.cisco.com/en/US/docs/switches/datacenter/sw/password_recovery/nx_os_pw.html</a> |

## Related Documentation

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

[http://www.cisco.com/en/US/products/ps12752/tsd\\_products\\_support\\_series\\_home.html](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)SV1(5.2)*

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

### Install and Upgrade

*Cisco Nexus 1000V Installation and Upgrade Guide, Release 4.2(1)SV1(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(5.1)*

### Configuration Guides

*Cisco Nexus 1000V High Availability and Redundancy Configuration Guide, Release 4.2(1)SV1(5.1)*

*Cisco Nexus 1000V Interface Configuration Guide, Release 4.2(1)SV1(5.1)*

*Cisco Nexus 1000V Layer 2 Switching Configuration Guide, Release 4.2(1)SV1(5.1)*

*Cisco Nexus 1000V License Configuration Guide, Release 4.2(1)SV1(5.1)*

*Cisco Nexus 1000V Network Segmentation Manager Configuration Guide, Release 4.2(1)SV1(5.1)*

*Cisco Nexus 1000V Port Profile Configuration Guide, Release 4.2(1)SV1(5.1)*

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*Cisco Nexus 1000V Quality of Service Configuration Guide, Release 4.2(1)SV1(5.1)*  
*Cisco Nexus 1000V Security Configuration Guide, Release 4.2(1)SV1(5.1)*  
*Cisco Nexus 1000V System Management Configuration Guide, Release 4.2(1)SV1(5.1)*  
*Cisco Nexus 1000V VXLAN Configuration Guide, Release 4.2(1)SV1(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)SV1(5.1)*

## Reference Guides

*Cisco Nexus 1000V Command Reference, Release 4.2(1)SV1(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)SV1(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*



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## Obtaining Documentation and Submitting a Service Request

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<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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