Cisco Nexus Cloud Services Platform Troubleshooting Guide Release 4.2(1) SP1(6.2)

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

- Information About Cisco Nexus Cloud Services Platform
- Overview of the Troubleshooting Process
- Troubleshooting with Logs
- Cisco Support Communities
- Contacting Cisco Customer Support
- Problems with Cisco Nexus Cloud Services Platform
- Cisco Nexus Cloud Services Platform Troubleshooting Commands
- Related Documentation
- Obtaining Documentation and Submitting a Service Request

Information About Cisco Nexus Cloud Services Platform

For detailed information about the overview of the Cisco Nexus Cloud Services Platform product family and how to install and upgrade Cisco Nexus Cloud Services Platform, see the *Cisco Nexus Cloud Services Platform Software Installation and Upgrade Guide*.

For detailed information about how to configure the Cisco Nexus Cloud Services Platform product family, see the *Cisco Nexus Cloud Services Platform Software Configuration Guide*.

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 Cloud Services Platform release across all network devices.
- Refer to the release notes for your Cisco Nexus Cloud Services Platform 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 Cloud Services Platform 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 Cloud Services Platform:

- To view logs enter the following command:

  show logging
- To view Cisco Nexus Cloud Services Platform 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

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.**

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Accessing External USB/CD to View Troubleshooting Logs

In the event of any failure on the Cisco Nexus Cloud Services Platform 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

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 Cloud Services Platform 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 Cloud Services Platform

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

Table 1 Problems with Cisco Nexus Cloud Services Platform Product Family

Symptom	Possible Causes	Verification and Solution
The output of the **show system redundancy status** command, displays the standby Cisco Nexus Cloud Services Platform in warm standby state.	This may occur when there is no control traffic communication between the Cisco Nexus Cloud Services Platform HA pair.	1. Verify if the control VLAN configuration of both primary and secondary Cisco Nexus Cloud Services Platform is the same. **show svs domain** 2. Verify if the upstream switch for both primary and secondary Cisco Nexus Cloud Services Platform is configured by allowing the control VLAN in the list of VLAN permitted in the upstream trunk port. **interface** *name* **switchport trunk allowed vlan add** *id* 3. Verify the status of the ports. **show network uplink**
The output of the **show virtual-service-blade summary command** displays the status of the VSB on the active Cisco Nexus Cloud Services Platform as power in progress and the status of the VSB on the standby Cisco Nexus Cloud Services Platform as powered on.	This may occur after the reload or upgrade of Cisco Nexus Cloud Services Platform.	1. Manually sync the state of the VSB on the Cisco Nexus Cloud Services Platform. Enter the command in the virtual service blade configuration mode. **description** " " 2. Verify the status of the VSB. **show virtual-service-blade summary**
Removal of a VSB fails and the following error message is logged: `Previous command in progress`	Multiple operations were carried out on the VSB before it was removed.	1. Manually remove the VSB using the following command: **no enable force** 2. Verify the removal of the VSB. **show virtual-service-blade summary**
Cisco Nexus Cloud Services Platform reboots continuously and the following error message is logged: `Failed To boot server`	In the flexible network uplink types, invalid network uplink types were assigned to Cisco Nexus Cloud Services Platform.	Ensure that only valid uplinks are assigned to Cisco Nexus Cloud Services Platform. See the *Cisco Nexus Cloud Services Platform Software Configuration Guide* for valid uplink types.

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Table 1 Problems with Cisco Nexus Cloud Services Platform Product Family

Symptom	Possible Causes	Verification and Solution
Any changes to network uplink type assignment fails with the following error message: `Cannot assign a port or a port channel with itself or member port in administratively shut state to control interface`	One of the members of the port channel is administratively down.	1. Verify if any of the port is in administratively down state. **show network summary** 2. Bring the port to administratively up state. **no shut** 3. Reassign network uplink type in Cisco Nexus Cloud Services Platform. See the *Cisco Nexus Cloud Services Platform Software Configuration Guide* for assigning uplink types.
Removal of port channel fails with the following error message: `Interface (GigabitEthernet1) pc in use by rt mgr while trying to remove a Gig member from a port channel.`	The port channel is in use by Cisco Nexus Cloud Services Platform.	Verify if the port channel is in use in the Cisco Nexus Cloud Services Platform **Show network summary** **Show network port-channel summary**
VSB is not created on the secondary Cisco Nexus Cloud Services Platform even if the Cisco Nexus Cloud Services Platform is in sync and in HA mode.	An error occurred during the automatic creation of the VSB on the secondary Cisco Nexus Cloud Services Platform.	Manually create the VSB on the secondary Cisco Nexus Cloud Services Platform. See the *Cisco Nexus Cloud Services Platform Software Configuration Guide* for creating VSBs.

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Table 1 Problems with Cisco Nexus Cloud Services Platform Product Family

Symptom	Possible Causes	Verification and Solution
After rebooting the Cisco Nexus Cloud Services Platforms, the configured VSBs do not appear.	Cisco Nexus Cloud Services Platform configuration may not have been saved after creating the VSBs.	Contact a customer service representative for assistance to recover pointers to the VSBs. **Note** Do not attempt to modify the Cisco Nexus Cloud Services Platform configuration or reload the VSB.
Migrating from a static topology (where the control and data traffic are on the same uplink) to flexible topology with Passthrough configuration requires a minimum of 2 reboots.	Expected behavior.	1. Verify that the Cisco Nexus Cloud Services Platform is set up in a topology where the control and data traffic are on the same uplink. **show network uplink** 2. Copy the running configuration to the startup configuration **copy running-configuration startup-configuration** 3. Reload Cisco Nexus Cloud Services Platform. **reload** 4. Configure the svs domain **configure svs-domain** 5. Migrate your Cisco Nexus Cloud Services Platform to flexible topology. See the *Migrating from Static Network Uplink to Flexible Network Uplink* section in the *Cisco Nexus Cloud Services Platform Software Configuration Guide*. 6. Assign the uplink of ctrl0 to Port channel 1 (Po1). **interface** *name* **uplink** *name* 7. Reload Cisco Nexus Cloud Services Platform. **reload**

Cisco Nexus Cloud Services Platform Troubleshooting Commands

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

Table 2 Cisco Nexus Cloud Services Platform Troubleshooting Commands

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

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Table 2 Cisco Nexus Cloud Services Platform Troubleshooting Commands (continued)

Command	Purpose
show virtual-service-blade	Displays information about the virtual service blade.
show cdp	Displays the CDP configuration and capabilities for your device
show interface	Displays information about interface configuration.
show network port-channel summary	Displays summary information of port channels in the network.
show system redundancy status	Displays the redundancy state (active or standby) and the redundancy role (primary or secondary) for the Cisco Nexus Cloud Services Platforms.
show network cdp neighbors	Displays uplink connectivity for the active or standby Cisco Nexus Cloud Services Platform.
show virtual-service-blade *name*	Displays all configured virtual service blades.
show network summary	Displays a summary of all VSBs including the ones configured in passthrough mode.

For detailed information about show command output, see the *Cisco Nexus Cloud Services Platform Command Reference*.

Shutting Down Cisco Nexus Cloud Services Platform

To shut down Cisco Nexus Cloud Services Platform 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 Cloud Services Platform will shutdown. By default, the command will shutdown both the primary and the secondary Cisco Nexus Cloud Services Platform.

To shutdown the primary Cisco Nexus Cloud Services Platform, use the following command:

switch# shutdown primary

To shutdown the secondary Cisco Nexus Cloud Services Platform, use the following command:

switch# shutdown secondary

This command prevents the abrupt shutdown of the VSBs

When the Cisco Nexus Cloud Services Platform 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	*Cisco Nexus Cloud Services Platform Hardware Installation Guide*
Software installation and upgrade	*Cisco Nexus Cloud Services Platform Software Installation and Upgrade Guide*
Cisco Nexus Cloud Services Platform software configuration	*Cisco Nexus Cloud Services Platform Software Configuration Guide*
Cisco Nexus Cloud Services Platform commands	*Cisco Nexus Cloud Services Platform Command Reference*
CIMC management	CIMC Firmware Management on UCS C-Series Servers
Password Recovery Procedure for Cisco NX-OS	http://www.cisco.com/en/US/docs/switches/datacenter/sw/password_recovery/nx_os_pw.html

Related Documentation

This section lists the documents used with the Cisco Nexus Cloud Services Platform 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 Cloud Services Platform Release Notes

Install and Upgrade

Cisco Nexus Cloud Services Platform Hardware Installation Guide

Cisco Nexus Cloud Services Platform Software Installation and Upgrade Guide

Regulatory Compliance and Safety Information for the Cisco Nexus 1000 Series

Cisco Nexus Cloud Services Platform Quick Start Guide

Configuration Guide

Cisco Nexus Cloud Services Platform Software Configuration Guide

Reference Guides

Cisco Nexus Cloud Services Platform Command Reference

Cisco Nexus Cloud Services Platform Compatibility Information Guide

Troubleshooting and Alerts

Cisco Nexus Cloud Services Platform Troubleshooting Guide

Nexus 1000V Documentation

For the Cisco Nexus 1000V for VMware vSphere Documentation:

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http://www.cisco.com/en/US/products/ps9902/tsd_products_support_series_home.html

For the Cisco Nexus 1000V for Microsoft Hyper-V Documentation:

https://www.cisco.com/en/US/products/ps13056/tsd_products_support_series_home.html

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

http://www.cisco.com/en/US/products/sw/cscowork/ps5401/tsd_products_support_series_home.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

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

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